Online ISSN: 2249-4618
Print ISSN: 0975-5888

Global Journal of Medical Research: J

Dentistry and Otolaryngology

Highlights

Choanal Polyps of Unusual

Self Inflicted Cut Throat Injury

Characteristics of Alveolar

Knowledge, Attitude & Practices

Discovering Thoughts, Inventing Future

VOLUME 15 ISSUE 2 VERSION 1.0

© 2001-2015 by Global Journal of Medical Research , USA

Volume 15 Issue 21 was originally issued as J2

Volume 15 Issue 21
Originally issued as J2

Global Journal of Medical Research: J
Dentistry and Otolaryngology

Volume 15 Issue 2 (Ver. 1.0)

Open Association of Research Society

© Global Journal of Medical Research . 2015.

All rights reserved.

This is a special issue published in version 1.0 of "Global Journal of Medical Research." By Global Journals Inc.

All articles are open access articles distributed under "Global Journal of Medical Research"

Reading License, which permits restricted use. Entire contents are copyright by of "Global Journal of Medical Research" unless otherwise noted on specific articles.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission.

The opinions and statements made in this book are those of the authors concerned. Ultraculture has not verified and neither confirms nor denies any of the foregoing and no warranty or fitness is implied.

Engage with the contents herein at your own risk.

The use of this journal, and the terms and conditions for our providing information, is governed by our Disclaimer, Terms and Conditions and Privacy Policy given on our website http://globaljournals.us/terms-and-condition/menu-id-1463/

By referring / using / reading / any type of association / referencing this journal, this signifies and you acknowledge that you have read them and that you accept and will be bound by the terms thereof.

All information, journals, this journal, activities undertaken, materials, services and our website, terms and conditions, privacy policy, and this journal is subject to change anytime without any prior notice.

Incorporation No.: 0423089
License No.: 42125/022010/1186
Registration No.: 430374
Import-Export Code: 1109007027
Employer Identification Number (EIN):
USA Tax ID: 98-0673427

Global Journals Inc.

*(A Delaware USA Incorporation with "Good Standing"; **Reg. Number: 0423089**)*

Sponsors: Open Association of Research Society
Open Scientific Standards

Publisher's Headquarters office

Global Journals Headquarters
301st Edgewater Place Suite, 100 Edgewater Dr.-Pl,
Wakefield MASSACHUSETTS, Pin: 01880,
United States of America
USA Toll Free: +001-888-839-7392
USA Toll Free Fax: +001-888-839-7392

Offset Typesetting

Global Journals Incorporated
2nd, Lansdowne, Lansdowne Rd., Croydon-Surrey,
Pin: CR9 2ER, United Kingdom

Packaging & Continental Dispatching

Global Journals
E-3130 Sudama Nagar, Near Gopur Square,
Indore, M.P., Pin:452009, India

Find a correspondence nodal officer near you

To find nodal officer of your country, please email us at *local@globaljournals.org*

eContacts

Press Inquiries: *press@globaljournals.org*
Investor Inquiries: *investors@globaljournals.org*
Technical Support: *technology@globaljournals.org*
Media & Releases: *media@globaljournals.org*

Pricing (Including by Air Parcel Charges):

For Authors:
22 USD (B/W) & 50 USD (Color)
Yearly Subscription (Personal & Institutional):
200 USD (B/W) & 250 USD (Color)

Integrated Editorial Board
(Computer Science, Engineering, Medical, Management, Natural Science, Social Science)

John A. Hamilton,"Drew" Jr.,
Ph.D., Professor, Management
Computer Science and Software Engineering
Director, Information Assurance Laboratory
Auburn University

Dr. Henry Hexmoor
IEEE senior member since 2004
Ph.D. Computer Science, University at Buffalo
Department of Computer Science
Southern Illinois University at Carbondale

Dr. Osman Balci, Professor
Department of Computer Science
Virginia Tech, Virginia University
Ph.D.and M.S.Syracuse University, Syracuse, New York
M.S. and B.S. Bogazici University, Istanbul, Turkey

Yogita Bajpai
M.Sc. (Computer Science), FICCT
U.S.A.Email:
yogita@computerresearch.org

Dr. T. David A. Forbes
Associate Professor and Range Nutritionist
Ph.D. Edinburgh University - Animal Nutrition
M.S. Aberdeen University - Animal Nutrition
B.A. University of Dublin- Zoology

Dr. Wenying Feng
Professor, Department of Computing & Information Systems
Department of Mathematics
Trent University, Peterborough,
ON Canada K9J 7B8

Dr. Thomas Wischgoll
Computer Science and Engineering,
Wright State University, Dayton, Ohio
B.S., M.S., Ph.D.
(University of Kaiserslautern)

Dr. Abdurrahman Arslanyilmaz
Computer Science & Information Systems Department
Youngstown State University
Ph.D., Texas A&M University
University of Missouri, Columbia
Gazi University, Turkey

Dr. Xiaohong He
Professor of International Business
University of Quinnipiac
BS, Jilin Institute of Technology; MA, MS, PhD,. (University of Texas-Dallas)

Burcin Becerik-Gerber
University of Southern California
Ph.D. in Civil Engineering
DDes from Harvard University
M.S. from University of California, Berkeley & Istanbul University

Dr. Bart Lambrecht
Director of Research in Accounting and FinanceProfessor of Finance
Lancaster University Management School
BA (Antwerp); MPhil, MA, PhD (Cambridge)

Dr. Carlos García Pont
Associate Professor of Marketing
IESE Business School, University of Navarra
Doctor of Philosophy (Management), Massachusetts Institute of Technology (MIT)
Master in Business Administration, IESE, University of Navarra
Degree in Industrial Engineering, Universitat Politècnica de Catalunya

Dr. Fotini Labropulu
Mathematics - Luther College
University of ReginaPh.D., M.Sc. in Mathematics
B.A. (Honors) in Mathematics
University of Windso

Dr. Lynn Lim
Reader in Business and Marketing
Roehampton University, London
BCom, PGDip, MBA (Distinction), PhD, FHEA

Dr. Mihaly Mezei
ASSOCIATE PROFESSOR
Department of Structural and Chemical Biology, Mount Sinai School of Medical Center
Ph.D., Etvs Lornd University
Postdoctoral Training,
New York University

Dr. Söhnke M. Bartram
Department of Accounting and FinanceLancaster University Management SchoolPh.D. (WHU Koblenz)
MBA/BBA (University of Saarbrücken)

Dr. Miguel Angel Ariño
Professor of Decision Sciences
IESE Business School
Barcelona, Spain (Universidad de Navarra)
CEIBS (China Europe International Business School).
Beijing, Shanghai and Shenzhen
Ph.D. in Mathematics
University of Barcelona
BA in Mathematics (Licenciatura)
University of Barcelona

Philip G. Moscoso
Technology and Operations Management
IESE Business School, University of Navarra
Ph.D in Industrial Engineering and Management, ETH Zurich
M.Sc. in Chemical Engineering, ETH Zurich

Dr. Sanjay Dixit, M.D.
Director, EP Laboratories, Philadelphia VA Medical Center
Cardiovascular Medicine - Cardiac Arrhythmia
Univ of Penn School of Medicine

Dr. Han-Xiang Deng
MD., Ph.D
Associate Professor and Research Department Division of Neuromuscular Medicine
Davee Department of Neurology and Clinical NeuroscienceNorthwestern University Feinberg School of Medicine

Dr. Pina C. Sanelli
Associate Professor of Public Health
Weill Cornell Medical College
Associate Attending Radiologist
NewYork-Presbyterian Hospital
MRI, MRA, CT, and CTA
Neuroradiology and Diagnostic Radiology
M.D., State University of New York at Buffalo,School of Medicine and Biomedical Sciences

Dr. Roberto Sanchez
Associate Professor
Department of Structural and Chemical Biology
Mount Sinai School of Medicine
Ph.D., The Rockefeller University

Dr. Wen-Yih Sun
Professor of Earth and Atmospheric SciencesPurdue University Director
National Center for Typhoon and Flooding Research, Taiwan
University Chair Professor
Department of Atmospheric Sciences, National Central University, Chung-Li, TaiwanUniversity Chair Professor
Institute of Environmental Engineering, National Chiao Tung University, Hsin-chu, Taiwan.Ph.D., MS The University of Chicago, Geophysical Sciences
BS National Taiwan University, Atmospheric Sciences
Associate Professor of Radiology

Dr. Michael R. Rudnick
M.D., FACP
Associate Professor of Medicine
Chief, Renal Electrolyte and Hypertension Division (PMC)
Penn Medicine, University of Pennsylvania
Presbyterian Medical Center, Philadelphia
Nephrology and Internal Medicine
Certified by the American Board of Internal Medicine

Dr. Bassey Benjamin Esu
B.Sc. Marketing; MBA Marketing; Ph.D Marketing
Lecturer, Department of Marketing, University of Calabar
Tourism Consultant, Cross River State Tourism Development Department
Co-ordinator , Sustainable Tourism Initiative, Calabar, Nigeria

Dr. Aziz M. Barbar, Ph.D.
IEEE Senior Member
Chairperson, Department of Computer Science
AUST - American University of Science & Technology
Alfred Naccash Avenue – Ashrafieh

President Editor (HON.)

Dr. George Perry, (Neuroscientist)
Dean and Professor, College of Sciences
Denham Harman Research Award (American Aging Association)
ISI Highly Cited Researcher, Iberoamerican Molecular Biology Organization
AAAS Fellow, Correspondent Member of Spanish Royal Academy of Sciences
University of Texas at San Antonio
Postdoctoral Fellow (Department of Cell Biology)
Baylor College of Medicine
Houston, Texas, United States

Chief Author (HON.)

Dr. R.K. Dixit
M.Sc., Ph.D., FICCT
Chief Author, India
Email: authorind@computerresearch.org

Dean & Editor-in-Chief (HON.)

Vivek Dubey(HON.)
MS (Industrial Engineering),
MS (Mechanical Engineering)
University of Wisconsin, FICCT
Editor-in-Chief, USA
editorusa@computerresearch.org

Sangita Dixit
M.Sc., FICCT
Dean & Chancellor (Asia Pacific)
deanind@computerresearch.org

Suyash Dixit
(B.E., Computer Science Engineering), FICCTT
President, Web Administration and
Development , CEO at IOSRD
COO at GAOR & OSS

Er. Suyog Dixit
(M. Tech), BE (HONS. in CSE), FICCT
SAP Certified Consultant
CEO at IOSRD, GAOR & OSS
Technical Dean, Global Journals Inc. (US)
Website: www.suyogdixit.com
Email:suyog@suyogdixit.com

Pritesh Rajvaidya
(MS) Computer Science Department
California State University
BE (Computer Science), FICCT
Technical Dean, USA
Email: pritesh@computerresearch.org

Luis Galárraga
J!Research Project Leader
Saarbrücken, Germany

Contents of the Issue

i. Copyright Notice
ii. Editorial Board Members
iii. Chief Author and Dean
iv. Contents of the Issue

1. Characteristics of Alveolar Inter-Cortical Osteotomy Technique on the Maxilla. *1-9*
2. Choanal Polyps of Unusual Presentation – A Series of 4 Cases. *11-14*
3. Assessment of Short Term Chloroquine-Induced Ototoxicity in Malaria Patients. *15-17*
4. Knowledge, Attitude and Practices Regarding Consumption of Carbonated Beverages among School Children Residing in New Delhi and Ghaziabad. *19-23*
5. Perceived Competency towards Dental Practice among Interns of Various Dental Colleges in Delhi NCR. *25-30*
6. Self Inflicted Cut Throat Injury – A Series of 2 Cases. *31-33*

v. Fellows and Auxiliary Memberships
vi. Process of Submission of Research Paper
vii. Preferred Author Guidelines
viii. Index

Global Journal of Medical Research: J
Dentistry and Otolaryngology
Volume 15 Issue 2 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Characteristics of Alveolar Inter-Cortical Osteotomy Technique on the Maxilla

By Ananian S.G., Zakaryan A.V., Gunko M.V. & Gvetadze S.R.

Russian Medical Academy of Postgraduate Education Studies, Russia

Abstract- Main statements of inter-cortical osteotomy technique of the alveolar crest with its horizontal atrophy are envisioned. Criteria for patient selection for the technique utilization are presented. Some aspect of prophylaxis against postoperative adverse effects and complications are discussed.

Keywords: alveolar crest splitting, vestibular advance-ment of the cortical plate, dental implant, osteoplastic material.

GJMR-J Classification: NLMC Code: WU 240

Strictly as per the compliance and regulations of:

© 2015. Ananian S.G., Zakaryan A.V., Gunko M.V. & Gvetadze S.R. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Characteristics of Alveolar Inter-Cortical Osteotomy Technique on the Maxilla

Ananian S.G. [α], Zakaryan A.V. [σ], Gunko M.V. [ρ] & Gvetadze S.R. [ω]

Abstract- Main statements of inter-cortical osteotomy technique of the alveolar crest with its horizontal atrophy are envisioned. Criteria for patient selection for the technique utilization are presented. Some aspect of prophylaxis against postoperative adverse effects and complications are discussed.

Keywords: alveolar crest splitting, vestibular advancement of the cortical plate, dental implant, osteoplastic material.

I. Introduction

Among various techniques of atrophied alveolar crest augmentation, currently a particular place is occupied by transversal expansion obtained by corticotomies and vestibular advancement of the outer cortical plate in the edentulous region [1, 2, 3, 4, 5, 6].

Its advantages in acquiring long-term results in the field of dental implantation are described in numerous publications [7, 8, 9, 10]. Though it is reported about potential difficulties associated with attaining a primary stability of the dental implantand the optimal thickness of the covering soft tissues or the so-called biological width of the adjacent gingiva, which assumes an existence of a zone (surface) of connective and epithelial tissues attachments to the coronal part of the bony crest [11, 12, 13]. Controversial are the opinions about the structure of the dissected flap which is most favorable for the blood supply of the osteotomized fragment [13, 14], and the rationales for immediate soft-tissue deficit management [15, 16, 17].

In this paper the surgical stages of the alveolar inter-cortical osteotomy (AICO) are presented as well as patient selection principles and aspects of postoperative complications prophylaxis.

After local anesthesia is introduced the operation begins with a development of a compound flap (caudally a full-thickness and cranially – split-thickness) on the outer aspect of the alveolar crest in the site of the future implant placement, after that the inter-cortical osteotomy is utilized for providing the vestibular advancement of the outer cortical plate of alveolar thickness augmentation.

Author α σ ρ ω: Department of Consulting and Diagnostics, Central Research Institute of Dentistry and Maxillofacial Surgery, Moscow, Russia, Department of Oral and Maxillofacial Surgery, Russian Medical Academy of Postgraduate Education Studies, Moscow, Russia.
e-mail: shalvagvetadze@yandex.ru

Incision and soft tissue stripping

A linear horizontal incision is made:

- within the keratinized fixed gingiva;
- on the top or the palatal cranial margin of the crest in the gap between the two neighboring teeth or the two purposed vertical incisions (if the site is edentulous);
- to the bone with the cutting of the periosteum;
- at the gingival papillae of the adjacent teeth the incisions should be performed in intrasulcal and marginal fashion with the gingival margin of the dental crown should be left intact (Fig. 1).

Technical note: an important condition in incision design is to avoid the coincidence of the osteotomy and the suture lines, this decreases the possibility of wound dehiscence and infection.

The dissection of the compound flap begins with dismantling of the bony alveolar crest in the extent of 3-4 mm on the vestibular (slightly beyond the muco-gingival junction) and palatal sides, as well as at the projection of the adjacent teeth. At this stage the coronal part of the vestibular flap containing the periosteum is established (Fig. 2). Next the periosteum is cut and the muscular attachments are divided along the whole length of the flap, the tip of the blade should permeate the wound for no more than 2 mm in the direction parallel to the surface of the bone (this is done to elude the undesired perforation of the mucous membrane which is particularly thin in these locations). Further flap elevation is performed: with sharp dissection; over the periosteum, i.e. in the submucous layer; to the level of the upper vestibule holding the scalpel parallel to the mobile mucous membrane. The larger apical part of the compound flap has the split-thickness surface approximately 6-7 mm wide. By keeping the periosteum intact the blood supply of the bone is preserved and the flap mobility is increased, this also helps to avoid placing the verticalmucosal releasing incisions, which is favorable for the trophism of the local soft tissues (Fig. 3).

If augmentation of the fixed gingiva (in cases where its thickness is >2 mm) and/or correction of gingival recession is desired, a bilaminar technique, described by Zucchelli G. (2013) may be utilized. In this technique a coronal advancement of the vestibular flap in conjunction with a free connective tissue graft is employed [18].

Global Journal of Medical Research (J) Volume XV Issue II Version I Year 2015

© 2015 Global Journals Inc. (US)

Augmentation of the width of a narrow edentulous alveolar crest in the maxillary frontal region it should be considered that its external contour is concave, which is an uncomplimentary factor for achieving aesthetically pleasing results. Reconstruction of the convex shape of the maxillary front is executed as follows: immediately after the horizontal opening is made to the depth of 8-10 mm a wedge-shaped chisel is used to widen the intra-bony gap for about 2 mm. Then, at the site of the planned implant placement the future implant bed is drilled using a 2.0 mm drill, the opening is steadily widened in buccal-lingual directions with special expanders. Consecutively applyingthe expanders with increasing diameter induces surrounding marrowcompression, relocation and "straightening" of the outer cortical plate. Next vertically orientated osteotomies are performed in the described fashion via the intra-bony access. Besides, another particularity of surgery in the maxillary frontal region is that the implant's neck must be buried 3 mm deeper to the cement-enamel junction which, in turn, corresponds to the biological width of the gingiva. This is set up from three anatomic elements of the gingiva: the gingival sulcus, and the zones of epithelial and connective tissue attachments.

Inter-cortical osteotomy starts with a horizontal saw cut in the middle of the top of the bony alveolar crest, after that two additional cut are placed on its medial and lateral ends. The splitting if the crest within the bonycuts is achieved by vestibular advancement of the outer cortical plate after a sub-periosteal fracture at its base (Fig. 4). For successful horizontal cut one must establish the following: a) to minimize bony loss during splitting by using sophisticated instruments (piezo-surgery, diamond discs, fine sharp chisels etc.); b) osteotomy of the crest must be performed to the marrow and somewhat in an external direction for securing the vestibular plate's thickness of 2 – 2.5 mm; c) all bony cuts are made beyond the distance of ≥ 2 mm from the adjacent tooth roots.

Vertical releasing saw cuts of the cortex (Fig. 5) are done as follows: a) with a piezo-surgery instrument or a fissure carbide bur placed intra-bony by its gradual translocation vestibulary; b) perpendicular to the horizontal cut (on both ends of the horizontal cut) starting from the top of the crestapproximately for 8-10 mm caudally; c) beyond at least 2 mm to the periodontal ligaments of the adjacent teeth; d) special care must be taken not to injury the overlying periosteum.

Osteotomy is finished with a thin acicular chisel which is introduced into the opening between the inner and outer cortical plates developed by the horizontal cut. Achieved such an intra-bony position the chisel is advanced vestibulary from the basal aspect of the crest and at the base of the osteotomiezed fragment a fracture is developed (a "green stick" fracture) and relocated on its periosteal pedicle. The control for this relocation is achieved by putting the index finger on the surface of the vestibular cortical plate. The palatal cortical plate should be kept intact (Fig. 6).

At this point the developed defect is assessed to define if an immediate or delayed implantation can be performed. Depending on the degree of stability of the relocated vestibular plate on its periosteal pedicle implant placement may be immediate or delayed. An obligate for immediate implantation is that the thickness of the bony walls after splitting should remain ≥ 2 mm, otherwise a delayed implant placement is recommended. In the two-stage treatment protocol the defect is filled with osteoplastic material and implantation is performed at the second stage after achieving bone regeneration. Utilization of the osteoplastic material helps prevent the returning of the splintered cortical plates. Small openings 1 – 3 mm wide usually are filled without adding bone wedges. In immediate implant placement the osteoplastic material is mixed with the bone chips which were gained during the operation. For improving the stability of the augmented site a barrier collagen membrane is used.

Implant bed development and implant placement
Immediate implant placement may be undertaken only if a proper stability of the relocated vestibular plate has been achieved. After finishing the inter-cortical osteotomy the guiding openingsat the level of the crest's base are drilled with 2 – 2,5 mm diameter drills, depending on the implant system. While forming the bed attention must be taken to minimize the vestibular plate's injury by: a) keeping some marrow attached to it; b) the osteotomy for the bed directed palatally (according to the dento-alveolararch and occlusion); c) accurate implant insertion (Fig. 7). There are two obligate factors for achieving primary stability of the implant in the lateral maxillary region. The implant should be covered by bone at least for two thirds of its length and must be located 0,5 – 1 mm lower to the free coronal margin of the alveolar crest. For this reason the mobile vestibular plate may be additionally fixed to the palatal cortical plate with micro-screws. To prevent mucosa ingrowth the cappingis installed.

If delayed implantation is planned the surgically created cleft between the two cortical plates is filled with osteoinductive and /or osteoconductive material which is left for healing for 4 – 6 months. For osteoplastic purposes the autogenous bone chips are combined with xenogenic material. The augmented site may be in certain cases covered with a barrier membrane, which is placed under the muco-periosteal flap and covering all the exposed osteoplastic material (Fig. 8).

II. Wound Closure

After completing the augmentation or the implant installation the flap is moved caudally and

© 2015 Global Journals Inc. (US)

without tension sutured to the wound margin with fine thread (5/0 or 6/0 diameter). At this stage the rebasing of the dentures is made to prevent the denture's contacts with the wound (Fig. 9).

Patients should avoid using the removable dentures before sutures are kept (usually for 10-14 days postoperatively). Later on the dentures must be corrected not press on the surgery site.

III. Criteria for Patient Selection, Advantages and Disadvantages of AICO

The main indication for AICO is the existence of an edentulous site which possesses the following conditions:

1) moderate atrophy of the residual crest in the horizontal plane*,IV class of Cawood and Howell classification (1988) [19] (to obviate small bone chips scabbing during osteotomy);
2) sufficient vertical dimensions of the residual crest to assure the choice of optimal length of the implant;
3) bone density of D2 – D4 according to Misch **[20];
4) the presence of some marrow between the outer and inner cortical plates.

Considering the possibility of damaginglocal tissue perfusion the procedure should planned in a limited zone, within 1-3 absent teeth, which approves the mobilization of a relative small fragment of bone. Depending on the thickness of the alveolar crest the one-staged or two-staged surgery is performed.

*Minimal preoperative thickness of the apical part of the alveolar crest in cases of delayed implant placement must be no less 3 mm, because for resorption prophylaxis the minimal thickness of the outer cortical plate of the developed intra-bony gap must comprise at least 2 mm.

**In this type of bone density alveolar splitting often can be performed with expanders only without vertical saw cuts.

Indications for delayed implant placement

- Not possible to ensure the conditions for primary stabilization of the dental implant;
- the thickness of the vestibular cortical plate after splitting is no less than 1,5 – 2 mm (the significant horizontal resorption of the crest may be noticed consequently to the paradontal pathology, tooth extraction and vestibulary directed teeth roots);
- insufficient volume of soft tissue available for surgical defect coverage;
- residual inflammatory process at the apex of the previously extracted tooth.

Delayed implant placement is performed after 4 – 6 months after the first operation.

Indications for immediate implant placement

- Sufficient height of residual bone (no less than 8 – 10 mm);
- enough bone in the basal part of the crest;
- the alveolar width within 4 – 5 mm;
- primary mechanical stabilization of the advanced vestibular cortical plate.

In the lateral maxillary region if vertical dimensions of the alveolar crest are no less than 5 mm AICO can be combined by a sinus-lift with a window creation and antral floor augmentation and dental implant placement. This protocol is not utilized if the implant can not be optimally positioned in the palatal bony wall and/or the primary stability of the implant is unattainable.

Hence, AICOwith or without the use of osteoplastic material is performed for augmentation the thickness of an edentulous site of the alveolar crest to develop the conditions for dental implant placement.

IV. Contra-Indications

Utilization of AICO technique is unsuitable in the following conditions: a) vertical crest augmentation at the certain site; b) no marrow between the two cortical plates at the site; c) excessive horizontal atrophy of the crest (thickness less than 3 mm), as it may be a cause of improper implant positioning resulting in difficulties during the prosthetic stage; d) signs of maxillary sinus infection.

Advantages and limitations of AICO technique

1. In most cases it helps to achieve widening (for 2 – 5 mm) of a narrow alveolar crest without a need for bone block grafting;
2. The following conditions are accomplished: a) for immediate implant placement (without clinical contra-indications); b) proper osseous regeneration, stable fixation and osseointegration of the installed implant; c) optimal positioning of the dental implant (in the view of future functional loading);
3. High aesthetic result is executed by: a) significant outer advancement of the vestibular cortical plate, possibility for an implant with larger diameter to be installed, new bone formation at the site of implantation and selective modeling of soft tissues; b) immediate increase of keratinized gingiva volume, muco-gingival junction line restoration, and creation of natural soft tissue profile around the neck of the implant and at the site of gingival papillae (if a connective tissue transplant is used);
4. Comparatively little time needed for osseous wound healing (usually take no more 4-6 months);
5. In the two-staged protocol AICO can be combined with a sinus-lift, because outer cortical plate advancement does not lead to significant deterioration of the blood supply to the bone.

© 2015 Global Journals Inc. (US)

The main disadvantage is that only horizontal dimensions can be augmented. Clinicians should also be aware of possible risk associated with technical details of the operation the dislocated bony fragment may experience resorption, in case of complete reattachment of the covering muco-periosteal flap.

Altogether, the use of the compound flap described in cases that allow larger apical parts of the vestibular cortical plate to be attached to periosteum allows to expand the indications for AICO, it means that immediate implant placement is possible if the cortical bony plates possess the thickness of 1 – 1,5 mm. But as far as a durable result is desired one must be sure the gingival thickness is no less 2 mm. Technical difficulty of the surgical interference is among the disadvantages of the method. The most difficult point is the dissection of the compound flap because in the zone of the mobile mucous membrane a risk exists to perforate it. Performance of the three saw cuts with consequent inter-cortical osteotomy is a tedious procedure, especially in cases of incorporated single tooth defects in the lateral mandibular region (because of the alveolar crest inclination and limited space for instrument usage). It is also worth to recommend that magnifying technique (binoculars or a an operating microscope) should be used during 6/0 thickness suture placement.

It must be accepted that for a certain group of patients the alveolar inter-cortical osteotomy is the most realistic treatment option which effectively can lead to optimal results. Deep knowledge of the anatomical relationships of bony and soft tissue structures, and analyzing clinical and radiographic details help to decrease the risks of unforeseen technical difficulties and undesired side effects in the postoperative period.

V. Acknowledgements

No conflict of interest declared among the authors.

References Références Referencias

1. Alfaro F. Bone plasty in dental implantation. Methods' description and clinical application. Moscow: Azbuka; 2006. (inRussian).
2. Gonzales-Garcia R, Monje F, Moreno C. Alveolar split osteotomy for the treatment of the severe narrow ridge maxillary atrophy: a modified technique. Int J Oral Maxillofac Surg 2011; 40: 57-64.
3. Shcherchkov SV. Characteristic of inter-cortical osteotomy of the alveolar bone in dental implantation within conditions of bone tissue atrophy [dissertation]. Moscow: Central Research Institute of Dentistry and Maxillofacial Surgery, 2013. (in Russian).
4. Elian N, Jalbout Z, Ehrich B et al. A two-stage full-arch ridge expansion technique: review of literature and clinical guidelines. ImplantDent 2008; 17: 16-22.
5. Jensen J, Sindet-Pederson S, Oliver AJ. Varying treatment strategies for reconstruction of maxillary atrophy with implants: results in 98 patients. J Oral Maxillofac Surg 1994; 52: 210-6.
6. Khoury F, Hensher R. The bony lid approach for the apical root resection of lower molars. Int J Oral Maxillofac Surg 1987; 16: 166-70.
7. Tolstunov L, Hicke B. Horizontal augmentation through the ridge-split procedure: a predictable surgical modality in implant reconstruction. J Oral Implantol 2013; 39: 59-68.
8. Kulakov AA, Losev FF, Gvetadze RS. Dental implantation. Moscow: MIA, 2006. (in Russian).
9. Chiapasco M, Ferrini F, Casentini P, Accardi S, Zaniboni M. Dental implants placed in expanded narrow edentulous ridges with the extension crest device. A 1-3- year multicenter follow-up study. Clin Oral Implants Res 2006; 17: 265-72.
10. Duncan JM, Westwood RM. Ridge widening for the thin maxilla: a clinical report. Int J Oral Maxillofac Implants 1997; 12: 224-7.
11. Cook DR, Mealey BL, Verret RG et al. Relationship between clinical periodontal biotype and labial plate thickness: an in vivo study. Int J Periodontics Restorative Dent 2011; 31: 345-54.
12. Esfahrood ZR, Kadkhodaseh M, Talebi Ardakani MR. Gingival biotype: a review. Gen Dent 2013; 61: 14-7.
13. Fu JH, Yeh CY, Chan HL, Tatarakis N, Leong DJ, Wang HL. Tissue biotype and its relation to the underlying bone morphology. J Periodontol 2010; 81: 569-74.
14. Berglundh T, Lindhe J. Dimension of the periimplant mucosa. Biological width revisited. J Clin Periodontol 1996; 23: 971-3.
15. Scipioni A, Bruschi GB, Calesini G, Bruschi E, De Martino C. Bone regeneration in the edentulous ridge expansion technique: histologic and ultrastructural study of 20 clinical cases. Int J Periodontics Restorative Dent 1999; 19: 269-77.
16. Calesini G., Micarelli C., Coppe S., Scipioni A. Edentulous site enhancement: a regenerative approach to the management of edentulous areas. Part 2: peri-implant tissues. Int J Periodontics Restorative Dent 2009; 29: 49-57.
17. Engelke WG, Diederichs CG, Jacobs HG, Deckwer I. Alveolar reconstruction with splitting osteotomy and micro-fixation of implants. Int J Oral MaxillofacImplants 1997; 12: 310-8.
18. Zucchelli G, Mazzotti C, Mounssif I, Marzadori M, Stefanini M. Esthetic treatment of peri-implant soft tissue defects: a case report of a modified surgical-prosthetic approach. Int J Periodontics Restorative Dent 2013; 33:327-35.

© 2015 Global Journals Inc. (US)

19. Cawood JI, Howell RA. A classification of the edentulous jaws. Int J Oral MaxillofacSurg 1988; 17: 232-6.

20. Misch CA. Density of bone: effect on treatment plans, surgical approach, healing, and progressive bone loading. Int J Oral Implantol 1990; 6: 23-31.

Figures

Figure 1 : Incision along the crest and dismantling the vestibular surface of its coronal aspect.

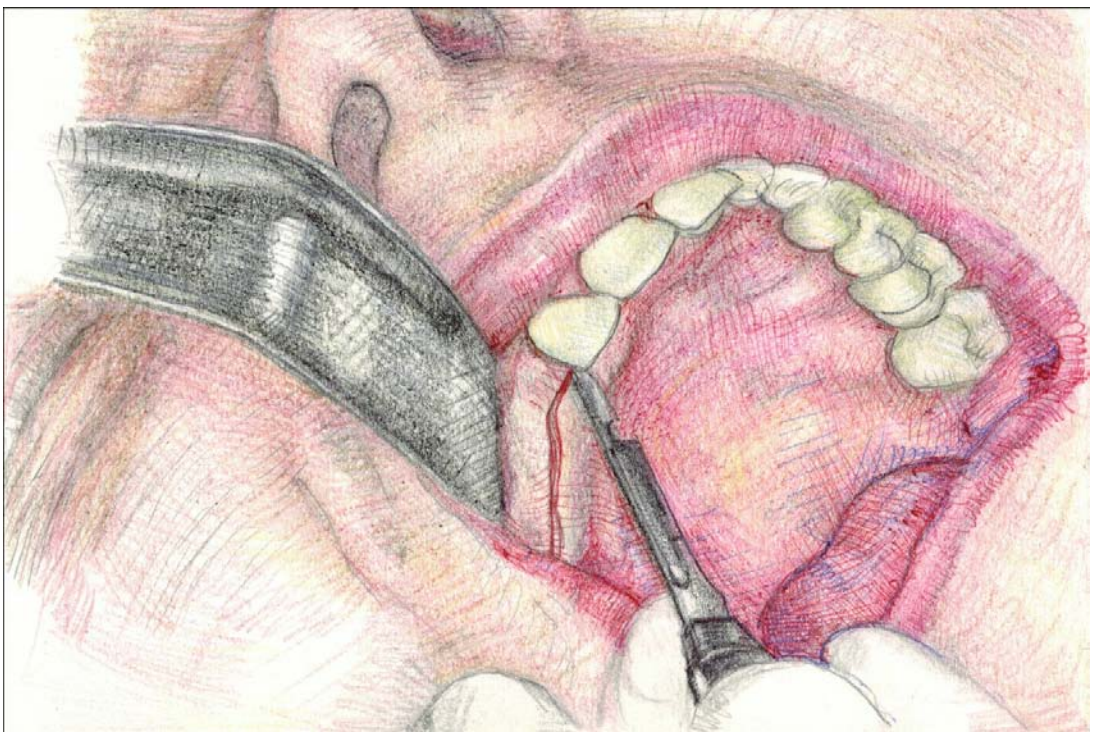

Figure 2 : The compound flap is designed with the muco-periosteum contained in its upper part and split-thickness in the apical part.

© 2015 Global Journals Inc. (US)

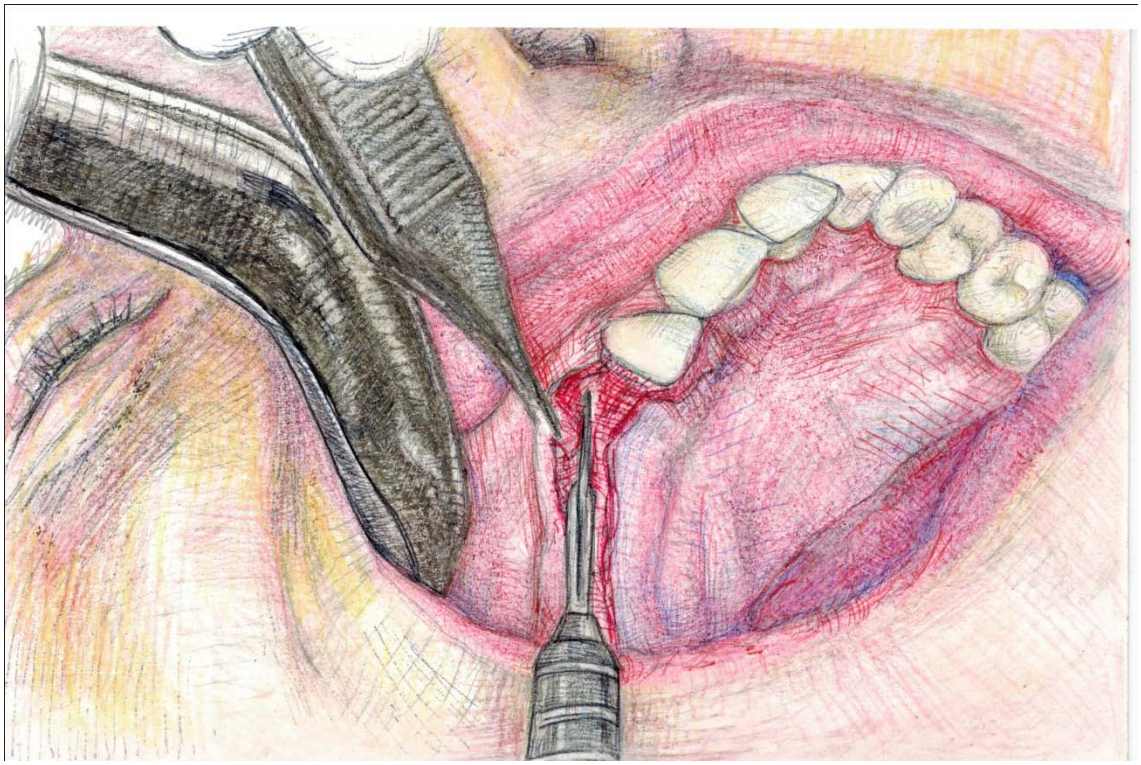

Figure 3 : Flap mobilization with linear periosteum hacking.

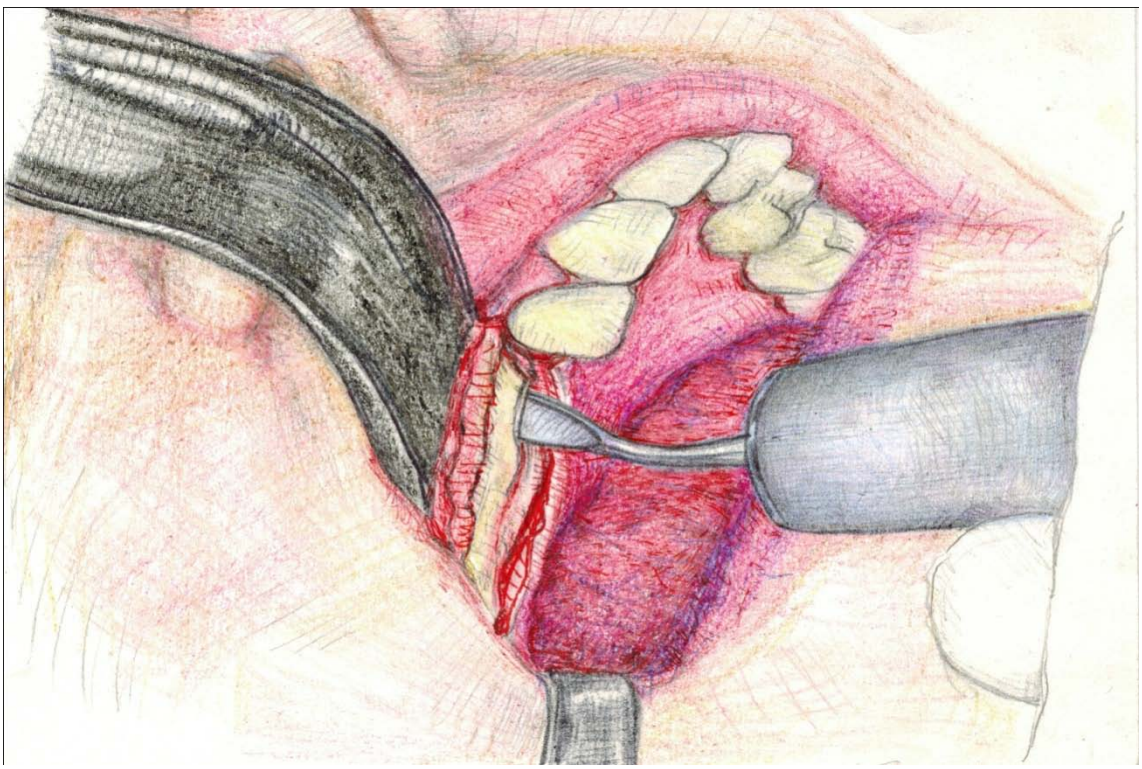

Figure 4 : Horizontal midcrestal saw cut performed with piezo-scalpel.

© 2015 Global Journals Inc. (US)

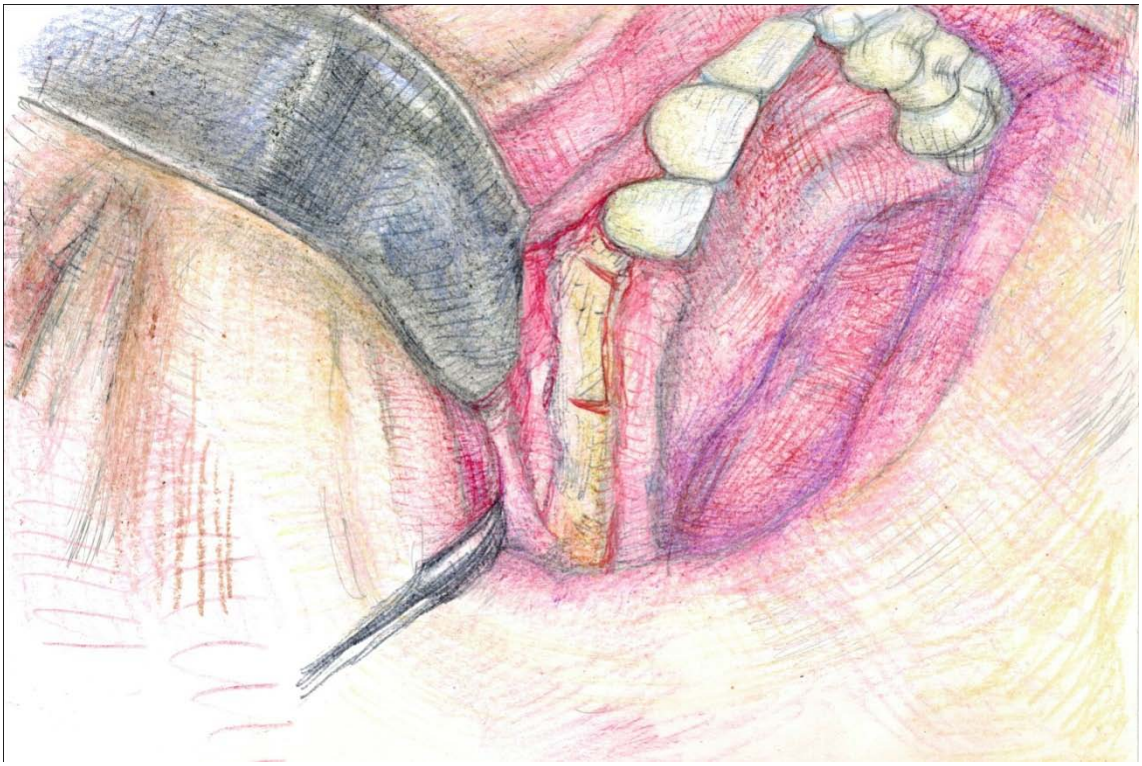

Figure 5 : Vertical bone cuts through the cortical layer.

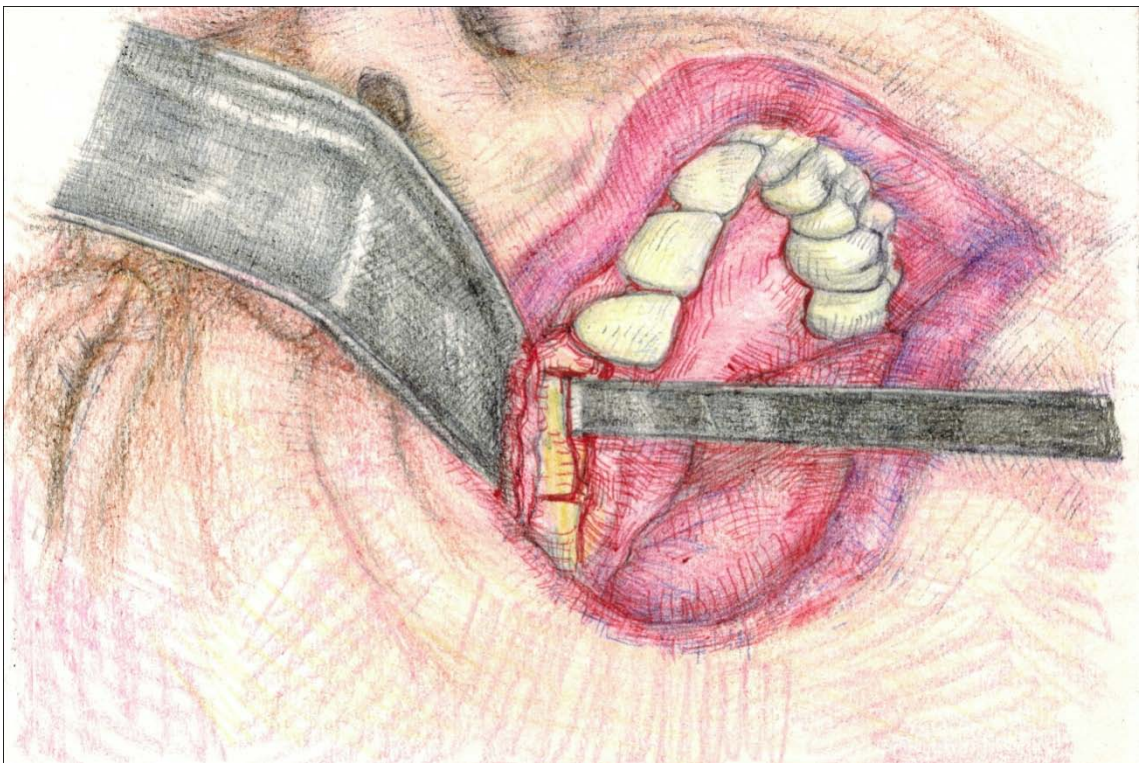

Figure 6 : Fine chisel is introduced in the saw cat for executing the final stage of the osteotomy.

© 2015 Global Journals Inc. (US)

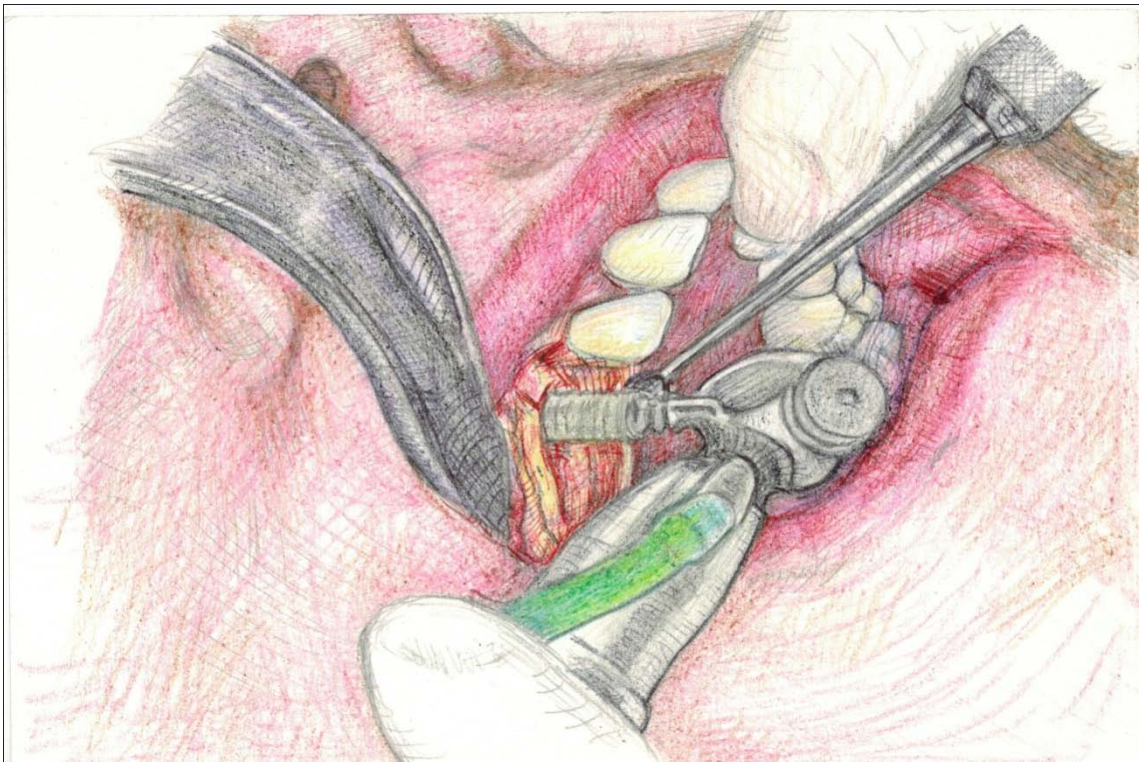

Figure 7 : Dental implant placement.

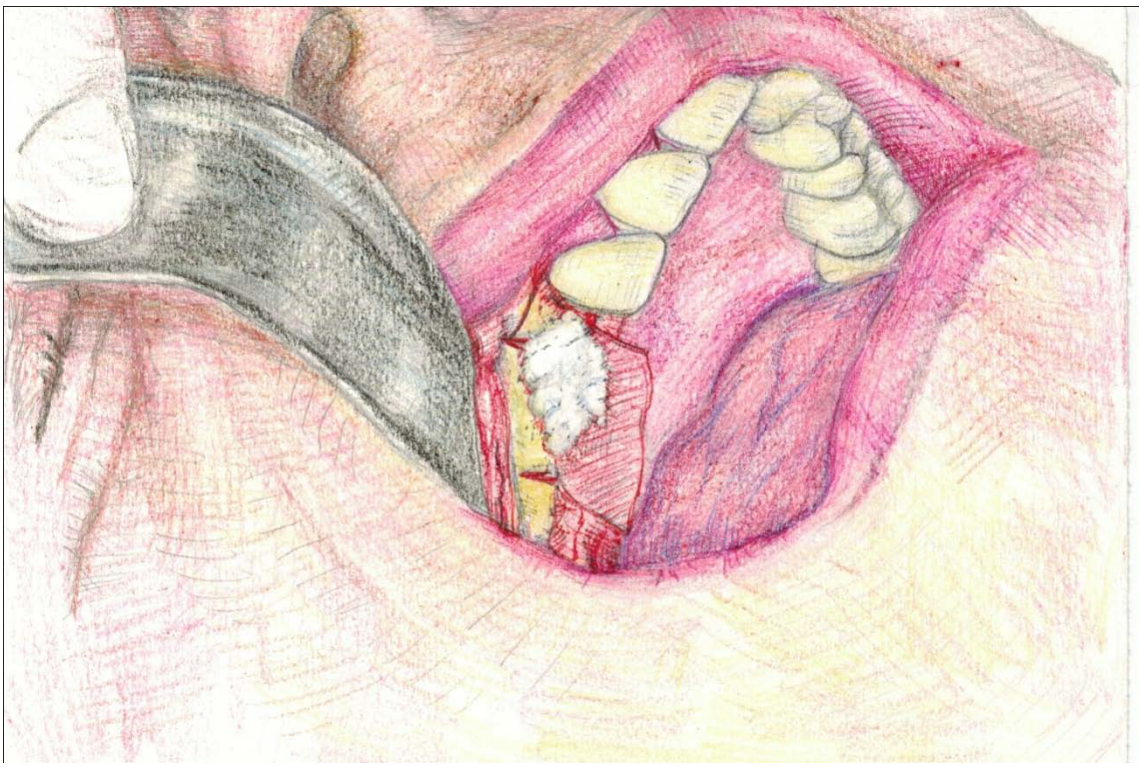

Figure 8 : Bone deficiency is addressed by filling with osteoplastic material, a bioresorbing barrier membrane is arranged.

© 2015 Global Journals Inc. (US)

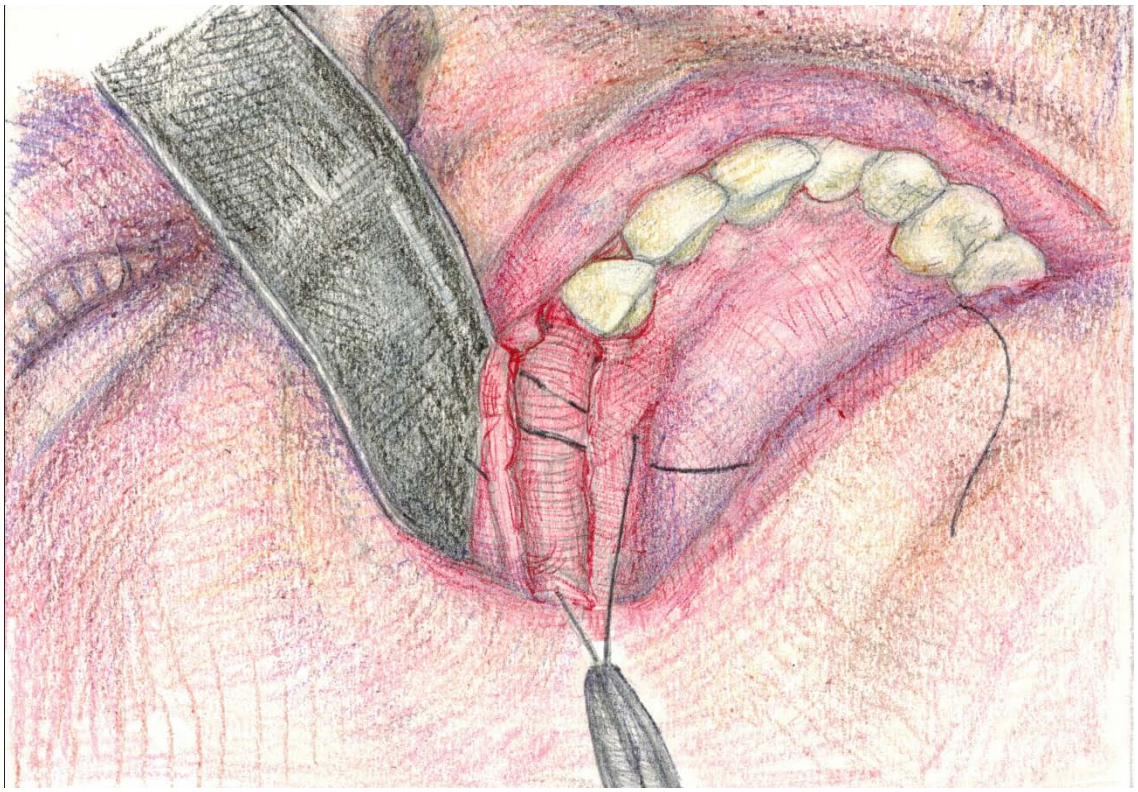

Figure 9 : Wound closure.

© 2015 Global Journals Inc. (US)

This page is intentionally left blank

© 2015 Global Journals Inc. (US)

Global Journal of Medical Research: J
Dentistry and Otolaryngology
Volume 15 Issue 2 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Choanal Polyps of Unusual Presentation – A Series of 4 Cases

By Ajay Manickam, Shaswati Sengupta, Debangshu Ghosh, Sebananda Haldar, Jayanta saha, SK Basu & Souradeep Ray

RG Kar Medical College And Hospital, India

Abstract- Choanal polyps are the solitary benign tumours that originate from the sinus or nasal mucosa projecting into the nasal cavity, choana and even up to the oropharynx. The exact aetiology of choanal polyps is unknown. Several theories have been formulated in the past years to describe the aetiology of choanal polyps. It is more commonly seen in young age patients. In young patients with a history of unilateral progressive nasal obstruction, it is always necessary to rule out choanal polyp. Although antrochoanal polyps are the most common, it is not a rule. Choanal polyp can also originate from sphenoid sinus and ethmoidal sinus, nasal septum and lateral wall of nose. Rare cases of these presentations are also reported. Endoscopy assisted surgery is the treatment of choice. Endoscopy can also be used as a diagnostic guide when CT scan findings are inconclusive in differentiating antrochoanal and sphenochoanal polyp. One must also keep in mind the other possible differential diagnosis.

GJMR-J Classification: NLMC Code: WI 430

CHOANALPOLYPSOFUNUSUALPRESENTATIONASERIESOFFCASES

Strictly as per the compliance and regulations of:

© 2015. Ajay Manickam, Shaswati Sengupta, Debangshu Ghosh, Sebananda Haldar, Jayanta saha, SK Basu & Souradeep Ray. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Choanal Polyps of Unusual Presentation – A Series of 4 Cases

Ajay Manickam [α], Shaswati Sengupta [σ], Debangshu Ghosh [ρ], Sebananda Haldar [ω], Jayanta saha [¥], SK Basu [§] & Souradeep Ray [χ]

Abstract- Choanal polyps are the solitary benign tumours that originate from the sinus or nasal mucosa projecting into the nasal cavity, choana and even up to the oropharynx. The exact aetiology of choanal polyps is unknown. Several theories have been formulated in the past years to describe the aetiology of choanal polyps. It is more commonly seen in young age patients. In young patients with a history of unilateral progressive nasal obstruction, it is always necessary to rule out choanal polyp. Although antrochoanal polyps are the most common, it is not a rule. Choanal polyp can also originate from sphenoid sinus and ethmoidal sinus, nasal septum and lateral wall of nose. Rare cases of these presentations are also reported. Endoscopy assisted surgery is the treatment of choice. Endoscopy can also be used as a diagnostic guide when CT scan findings are inconclusive in differentiating antrochoanal and sphenochoanal polyp. One must also keep in mind the other possible differential diagnosis.

I. Introduction

Choanal polyps are the solitary benign tumours that originate from the sinus or nasal mucosa projecting into the nasal cavity, choana and even up to the oropharynx. Most common presentation is choanal polyp originating from maxillary antrum[1]. Sphenochoanal, ethmoidochoanal, septochoanal polyps are uncommon. The exact aetiology of choanal polyps is unknown. Several theories have been formulated in the past years to describe the aetiology of choanal polyps. It is more commonly seen in young age patients. When a young patient is presenting with complaints of unilateral nasal obstructionor hawking sensation we should have a high suspicion about Sino nasal polyposis. Diagnostic nasal endoscopy (DNE) and radiological study should be carried out followed by endoscopic sinus surgery forms the protocol of management for choanal polyps.

Author α: Junior resident Department of ENT and Head neck surgery.
e-mail: ajaymanickam87@gmail.com
Author ρ: RMO Department of ENT and head neck surgery.
e-mail: drshaswati@gmail.com
Author σ: RMO Department of ENT and head neck surgery.
e-mail: ghoshdr.d777@ymail.com
Author ω: MOTR Department of ENT and head neck surgery.
e-mail: Sebananda.76@gmail.com
Author ¥: Asst professor Department of ENT and head neck surgery.
e-mail: drsaha_jayanta@rediffmail.com
Author §: HOD Department of ENT and head neck surgery.
e-mail: basugora@gmail.com
Author χ: Asst professor Department of ENT and head neck surgery, RG kar medical college Kolkata. e-mail: drsouradeepray@gmail.com

II. Aims and Objectives

To identify and study about choanal polyps of unusual origin and their management and to review with relevant available literature and studies.

III. Materials and Methods

To record all patients presenting to the department of ENT RG Kar Medical college hospital with different types of nasal polyposis from 1/08/2013 to 1/06/2014 and taking into consideration, confirmed cases of choanal polyposis of unusual presentations. Cases of usual presentations like AFRS, pan polyposis, bilateral ethmoidal polyposis were excluded from the study. After taking the informed consent, history and clinical findings were recorded and diagnostic nasal endoscopy and CT scan of nose and PNS were done. Pre-operative and post-operative endoscopy was done and recorded for future follow up and further study. All surgically excised polypoidal mass were send for histopathological examination. After surgery patients were discharged from ward on day 5, and were regularly followed up after 15 days, 1 month, 3 months, 6 months and 1 year.

IV. Results

One among the 4 patients in the study was female and other 3 were male. Age limit of the patients were from 17 years to 38 years. Nasal obstruction was the most common complaint in all the 5 patients. In all patients diagnostic nasal endoscopy and CT scan were done. The most common clinical presentation in all patients was nasal obstruction followed by hawking sensation, anosmia and mouth breathing. The clinical presentation with relevant history, management and follow up illustrated in table 1.

© 2015 Global Journals Inc. (US)

Table 1 : Grand chart

S.No	Age/ Sex	Clinical presentation	DNE	CT Scan	Surgical procedure	Histopathological study	Follow up
Case 1	27/ M	Nasal obstruction Mouth breathing	Polypoidal mass arising from nasal septum	Septochoanal polyp	Endoscopy assisted polypectomy with excision of mucoperiosteal layer	Nasal part was polypoidal, choanal part was rhinosporidiosis (dual pathology)	15 days, 3months, 6 months, 1 year – no recurrence
Case 2	23/M	Nasal obstruction	Polypoidal mass arising from the inferior turbinate	Polypoidal mass from the lateral wall of nose filling the choana	Endoscopy assisted polyp excision with cauterization of stalk	Nasal inflammatory polyposis	15 days, 3months, 6 months, 1 year – no recurrence
Case 3	38/F	Hawking sensation Epistaxis 1 episode	Polypoidal mass from the septum entering into choana	Polypoidal irregular mass filling the choana	Endoscopy assisted polypectomy with excision of mucoperiosteal layer	Respiratory epithelial hamartoma	15 days, 3months, 6 months, 1 year – no recurrence
Case 4	17/M	Nasal obstruction, hawking sensation, mouth breathing	Polypoidal mass from the sphenoidal ostium filling the choana	Polypoidal mass site of origin mostly sphenoidal air cell filling whole choana	Endoscopy assisted polypectomy with widening of sphenoid ostium	Nasal inflammatory polyposis	15 days, 3months, 6 months, 1 year – no recurrence

V. Review of Literature

The majority (100%) of the patients with choanal polyp in our study presented with nasal obstruction, followed by snoring, sleeping with the mouth open (25.0%), and nasal discharge (50%), epistaxis (25%). Association of epistaxis can be very well related with the rhinosporidiosis.

Kizil et al in his study about choanalpolyposis, analysed and summarised that Choanal polypsare unilateral benign masses usually originating from paranasal sinuses. Maxillary, ethmoid, and sphenoid sinuses are involved in order of decreasing frequency. A total of 98 patients with a mean age 24.3 years were analyzed. Histopathologic diagnoses were CP in 94 patients and inverted papilloma in 4 patients. The sites of origin were maxillary sinus in 89 patients (90.8%), sphenoid sinus in 6 patients (6.1%), bulla ethmoidalis, inferior concha, and uncinate process in 1 patient each (1.0%)[2]. The most common symptoms were nasal obstruction (98.0%) and postnasal drip (30.6%).Thus hereby from the various literatures we can conclude that choanal polyps most common presentation is nasal obstruction and choanal polyps of sphenoid and lateral wall of nose are very rare.

17 year old male patient the polyp was seen arising from the sphenoidal ostium and entering into choana causing obstructive symptoms to the patient. FESS was done and specimen was sent for histopathological study. And the report was nasal polyposis. It is a very rare presentation with very few literatures available worldwide[3]. (figure 1)

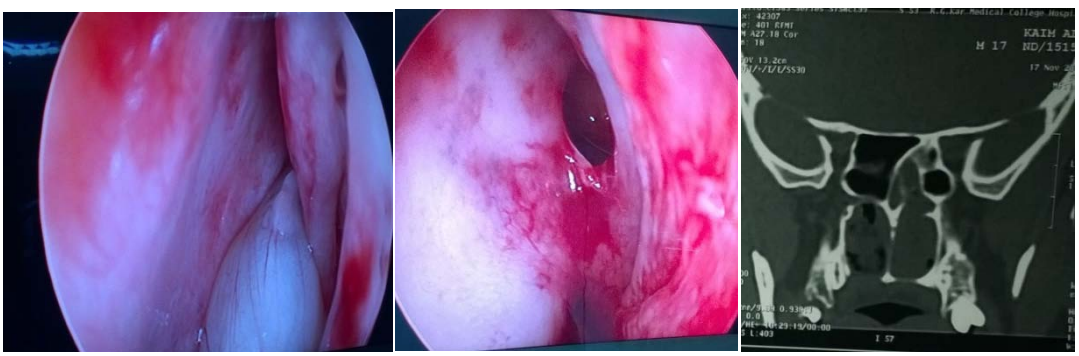

Figure 1 : Sphenochoanal polyp

© 2015 Global Journals Inc. (US)

Dual pathology of nasal polyposis and rhinosporidiosis from the same patient is a very rare scenario not reported in literature. The young male patient 27 years old had complaints of nasal obstruction on DNE polypoidal mucosa was arising from the nasal septum and was filling the choana. The choanal part of the polyp was found to have rhinosporidium embedded. The mass was carefully excised. The excised mass was clearly labelled as macroscopically it contained to different tissue and the reports were turned out to be specimen labelled as strawberry like growth in the choana was rhinosporidiosis and the specimen labelled as stalk of the polyp was found to be polypoidal mass, hence confirming the macroscopical finding (figure 2). Earlier rhinosporidiosis presenting as a urethral polyp has been reported[4].

Figure 2 : Rhinosporidiosis as a polyp

The young male 23 years old was found to have a polypoidal mass seen arising from the lateral wall of nose. It consisted of two stalks both were found attached to the inferior turbinate. The mass was found extending along the floor of nasal cavity and presenting as choanal polyp from lateral wall of nose. Choanal polyps arising from the lateral wall of nose is very rare. Very few cases have been reported world-wide.

The female patient 38 years old found to have a polypoidal mass arising from the septum and the mass was found entering into nasopharynx. The mass was excised along with the muco periosteal layer of the bony septum were the stalk was attached and sent for HPE. (Figure 3) The reports turned out to be respiratory epithelial hamartoma. These benign tumours will usually mimic polyps. Proper histopathological study is necessary to rule out the diagnosis. Immunohistochemistry studies were done to confirm the diagnosis. The etiology of respiratory epithelial adenomatoidhamartoma (REAH) is unknown although inflammation may induce gland proliferation observed in hamartomas. One of our cases was associated with nasal polyposis. REAH is a self-limiting disease, so it is important to differentiate REAH from other pathologic process, including inverted papilloma and low-grade adenocarcinoma. The treatment of choice is complete excision through a conservative approach[5]. REAH is one among the rare presentation of choanal polyps. Proper histopathological differentiation is very necessary.

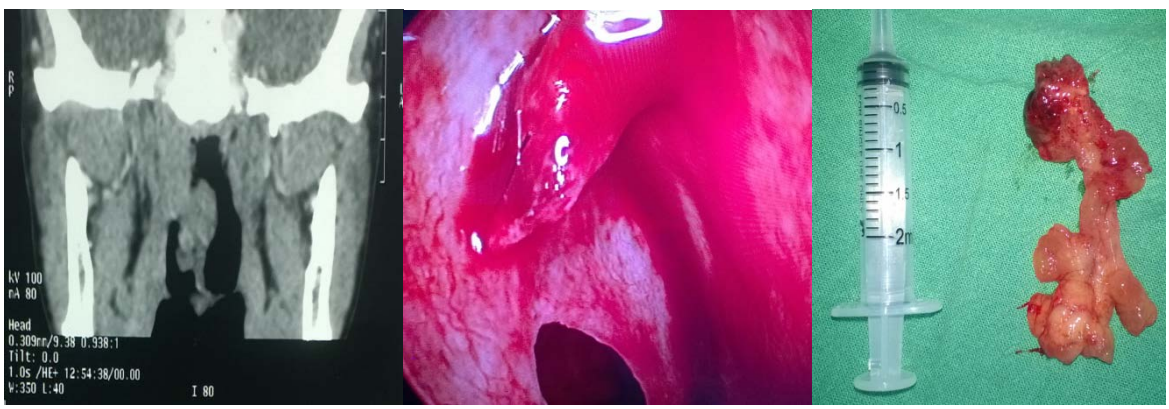

Figure 3 : Respiratory epithelial adenamatoid hamartoma (REAH)

The main differential diagnosis is the antochoanal polyp. These polyps are more common compared to polyps from sphenoids or ethmoids. With the help of CT scan it is very easy to establish the diagnosis of polyp, whether it originates from maxillary antrum or sphenoid or from the ethmoidal air cells[6]. Even if we are seeing opacification of both maxillary and sphenoidal sinuses in the CT scan, diagnostic nasal endoscopy will be very clearly describing the polyp where it is from either maxillary antrum or from the

© 2015 Global Journals Inc. (US)

sphenoethmoidal recess. It is very important because the non-diseased sinus can be left out without doing any surgery. Thus by clearly understanding the pathology only the diseased air cells are removed and its ostium is widened and so normal sinuses are left untouched thereby restoring the proper function of the Para nasal air sinuses.

Ilia K et al in their retrospective analysis of surgical approach for choanal polyps have proved that there is no significant difference in outcome in open procedures and endoscopic procedures.they have also finalised that Endoscopic approach is a safe and effective procedure for choanal polyp treatment. There was no significant difference between the success rates of the endoscopic approach and combined approach. Hence Endoscopic procedures can be said as the treatment modality of choice in choanal polyposis[7].

The other common differential diagnosis that we have to keep in mind is meningoencephalocele, nasal angiofibroma and inverted papilloma. Meningoencephalocele can be diagnosed as they present with imperfection of the skull base and may be having communication between nasal cavity and cerebral cortex. It can be confirmed by radiological study and diagnostic nasal endoscopy [8]. Angiofibromas will usually present with recurrent epistaxis. Inverted papilloma will be usually presenting in old age patients.

Thus points of interest to be noted from this study are (1) nasal polyposis of unusual presentation and rare pathology has to be evaluated properly. (2) Though radiological study is done in all patients it is of prime importance to go for Diagnostic nasal endoscopy before planning for surgery. (3) Endoscopic sinus surgery is the treatment of choice with least morbidity and no recurrence (4) macroscopically if we are suspecting some unusual entities as listed above should be properly labelled and sent clearly for proper histopathological confirmation.

VI. Conclusion

In young patients with a history of unilateral progressive nasal obstruction, it is always necessary to rule out choanal polyp. Although antrochoanal polyps are the most common, it is not a rule. Choanal polyp can also originate from sphenoid sinus and ethmoidal sinus, nasal septum and lateral wall of nose. Rare cases of these presentations are also reported. Endoscopy assisted surgery is the treatment of choice. Endoscopy can also be used as a diagnostic guide when CT scan findings are inconclusive in differentiating antrochoanal and sphenochoanal polyp. One must also keep in mind the other possible differential diagnosis.

References Références Referencias

1. Aldin O, Ketang G, Ustudang E et al sinochoanal polyp a clinical study Am J Rhinology 2007 mar-apr 21(2) 164-8
2. Kizi Y et alChoanal polyps a case study of 98 patients, Journal of craniofacial surg 2014 apr2015(Epub) Pubmed ID 24739747
3. Wang ZM, Kanoh N, Dai CF et al isolated sphenoid sinus disease analysis of 122 cases Ann otorhinolaryngology 2002 April 111(4) 323-7
4. Pandey P, Shukla S, Kundu A, Sarkar P. Urethral polyp: an uncommon presentation of rhinosporidiosis. Indian J dermatol. 2014 Jan 59 (1); 95 -6. Pub Med id 24470673.
5. Park IH, Lee H, Lee HM respiratory epithelial adenomatoidhamartoma from nasal septum. Clin Exp otorhinolaryngol 2013 mar (6) 1 ; 45 - 7
6. Loy P et al choanal polyp of sphenoidal origin act a otorhinolaryngology Belg 1996-50 (3) 183-9
7. Ilia K et al Retrospective analysis of surgical treatment of choanal polyp. Kwak Boron Hugoz 2015. May – Jun 25(3); 144 – 51 doi – 10.5606/kbbihtis.as.2015.68878
8. Tosun F Yetiser S et al sphenochoanal polyp and endoscopic surgery Indian J of paediatric otolaryngology 2001 April 6: 58 (1) 87-90

© 2015 Global Journals Inc. (US)

Global Journal of Medical Research: J
Dentistry and Otolaryngology
Volume 15 Issue 2 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Assessment of Short Term Chloroquine-Induced Ototoxicity in Malaria Patients

By Vijayalakshmi Subramaniam & Ravi N Vaswani

Yenepoya University, India

Abstract- Objective: To evaluate the effects of chloroquine phosphate on cochlear function using clinical and audiometric studies when administered in regular doses and in the recommended regimens, for the treatment of malaria.

Study design and setting: Prospective, cohort, observational study, with convenience sampling, in a tertiary care hospital.

Methodology: All subjects proved or presumed to be suffering from malaria and who received chloroquine phosphate treatment were inducted into the study. Base line clinical examination with detailed ear examination was carried out. Audiometric evaluation was carried out prior to treatment. All patients were treated with chloroquine phosphate tablets (1200mg) stat followed by 600 mg every 12 hours for 4 doses and paracetamol on a qrn basis. The study endpoints were development of ototoxic symptoms/signs or completion of the course as prescribed by the treating physician. Upon achieving any of the endpoints, the clinical examination and audiometric test battery was repeated.

Keywords: ototoxicity, chloroquine, malaria.

GJMR-J Classification: NLMC Code: WV 21

ASSESSMENTOFSHORTTERMCHLOROQUINEINDUCEDOTOTOXICITYINMALARIAPATIENTS

Strictly as per the compliance and regulations of:

© 2015. Vijayalakshmi Subramaniam & Ravi N Vaswani. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Assessment of Short Term Chloroquine-Induced Ototoxicity in Malaria Patients

Vijayalakshmi Subramaniam [α] & Ravi N Vaswani [σ]

Abstract- Objective: To evaluate the effects of chloroquine phosphate on cochlear function using clinical and audiometric studies when administered in regular doses and in the recommended regimens, for the treatment of malaria.

Study design and setting: Prospective, cohort, observational study, with convenience sampling, in a tertiary care hospital.

Methodology: All subjects proved or presumed to be suffering from malaria and who received chloroquine phosphate treatment were inducted into the study. Base line clinical examination with detailed ear examination was carried out. Audiometric evaluation was carried out prior to treatment. All patients were treated with chloroquine phosphate tablets (1200mg) stat followed by 600 mg every 12 hours for 4 doses and paracetamol on a *qrn* basis. The study endpoints were development of ototoxic symptoms/signs or completion of the course as prescribed by the treating physician. Upon achieving any of the endpoints, the clinical examination and audiometric test battery was repeated.

Results: Only 2 subjects showed a change in hearing thresholds on high frequency audiometry following administration of chloroquine. The Auditory Brainstem Response (ABR) and Otoaccoustic Emission (OAE) were also abnormal in these 2. All the others showed no change in clinical or audiometric profile following administration of chloroquine. Only one subject showed vestibular side effects in the form of giddiness and nystagmus which spontaneously resolved on completion of therapy.

Conclusions: Chloroquine is not significantly ototoxic when administered in regular doses for treatment of uncomplicated malaria. The ototoxic effects of chloroquine which are rarely encountered are fully reversible.

Keywords: ototoxicity, chloroquine, malaria.

I. Introduction

Chloroquine is a drug with wide spread clinical applications. It has long been used in the treatment or prevention of malaria. As it mildly suppresses the immune system, it is used in some autoimmune disorders, such as rheumatoid arthritis and lupus erythematosus. Chloroquine is in clinical trials as an investigational antiretroviral in humans with HIV/AIDS and as a potential antiviral agent against chikungunya fever.[1,2] The radio-sensitizing and chemo-sensitizing properties of chloroquine are beginning to be exploited in anticancer strategies in humans.[3,4] Ototoxicity due to chloroquine (cochlear and sometimes vestibular) has been reported by many. This is usually but not always, dose –dependent and reversible.[5,6]

Mangalore is endemic for malaria. Not just in numbers but also in terms of unusual presentations. Considering that many clinicians empirically prescribe chloroquine for febrile patients, it is one of the most prescribed drugs in this area. This cohort study was designed to investigate the effect of chloroquine on cochlear function using clinical and audiometric studies when used in the regular treatment of malaria.

II. Methods

This prospective, cohort, convenience sampling study comprised 30 patients to be treated with chloroquine phosphate at the Yenepoya Medical College Hospital, Mangalore. All patients (whether admitted or not) proved or presumed to be suffering from malaria who were to receive chloroquine phosphate treatment were included in the study after informed valid consent. Patients were excluded from the study if they had received a course of chloroquine, in the past seven days. Also, those suffering from complicated malaria, hearing disorders, receiving any other ototoxic drug (including quinine), baseline audiometry showing any form of hearing loss, history of allergy to chloroquine, those who refused participation in the study or those who were lost to follow-up were excluded from the study.

Before starting treatment with chloroquine, baseline clinical examination with detailed ear examination was carried out. Functional assessment of hearing was done using tuning fork tests. Pre-treatment audiometric evaluation comprised pure tone audiometry with high frequency audiogram, brain stem evoked response audiometry (BERA) and otoacoustic emissions. All patients enrolled in the study were administered chloroquine phosphate. The course consisted of a stat dose of chloroquine phosphate 1200 mg, followed by 600 mg every 12 hours for 4 doses. The only other medicine administered was paracetamol (acetaminophen) which was given only on qrn basis. No other anti malarial or antibiotic was administered, unless clinically determined and in such a case the subject was subsequently excluded from the study. The clinical examination and audiometric test battery was repeated upon completion of treatment.

Author α: Associate Professor in Otorhinolaryngology, Yenepoya Medical College, Yenepoya University, Mangalore, Karnataka, India.
e-mail: vijisubbu@gmail.com
Author σ: Professor in Internal Medicine, Yenepoya Medical College, Yenepoya University, Mangalore, Karnataka, India.
e-mail: mirdad365@gmail.com

© 2015 Global Journals Inc. (US)

The data obtained was tabulated and analysed for incidence, type, severity and course of chloroquine induced ototoxicity.

III. Results

Within the data collection period, 45 patients with a definitive or presumed diagnosis of malaria were to be given chloroquine phosphate. Of these 6 were excluded on account of discharging ears with clinical diagnosis of chronic suppurative otitis media (CSOM) and abnormal audiometry. Furthermore, 9 patients were lost to follow up. Thus a total of 30 patients in the age range of 14-58 years were included in the study, of which 28 were males and 2 were females.

None of the patients had any ear abnormality on clinical examination before treatment. None of the subjects reported diminished hearing or tinnitus following therapy. Tuning fork tests did not reveal any form of hearing loss prior to or after treatment with chloroquine. Hearing thresholds on pure tone audiometry were reported to be normal in all subjects prior to and after treatment with chloroquine. However, high frequency audiogram revealed bilateral mild hearing loss at 12 kHz in one subject and bilateral mild to moderate hearing loss at 8 kHz in another following treatment, not accountable to any other obvious cause.

ABR was normal in all subjects prior to treatment. Abnormal wave V latency was observed in the 2 subjects who had high frequency hearing loss. OAEs were found to be abnormal only in the 2 subjects who reported high frequency hearing loss following treatment. A follow- up audiogram after one month of therapy was found to be normal. Only one patient reported giddiness on the second day of therapy. He was found to have spontaneous nystagmus, fast component to the left. His symptoms and nystagmus disappeared spontaneously on completion of treatment.

IV. Discussion

Drugs that induce ototoxicity have been a well-recognised cause of cochlear hearing loss. Ototoxicity because of classic antimalarial drugs such as quinine have been well established for many years. It manifests as both auditory and vestibular dysfunction, and it is typically mild to moderate, bilateral and symmetric; hearing is usually restored after cessation of the drug.[9] Despite reports of chloroquine resistance, it is the most widely used anti malarial in the world. It is also being used widely in the treatment of rheumatoid arthritis and other connective tissue diseases. Ototoxicity is a rare but well-established side effect of hydroxychloroquine when used in rheumatoid arthritis, idiopathic pulmonary hemosiderosis and other connective tissue diseases. Sensorineural hearing loss following chloroquine therapy has been reported to be dependent on dose and duration of treatment and observed to be reversible by many [5,6,7,8] while some have reported it to be irreversible.[10,11] Chloroquine sulphate was found to be highly toxic in guinea pigs when administered in single doses in excess of 40mg/kg. The spiral organ was assessed in segments each of 100 outer hair cells in length and the percentage of damaged inner and outer hair cells for each segment was calculated. No evidence was found to suggest that chloroquine causes permanent damage to the hair cells.[12]

This study was conducted to evaluate the effects of chloroquine on cochlear function when used in regular doses for the treatment of malaria in Mangalore which is endemic for malaria, not just in numbers, but also in terms of unusual presentations, mixed and occult infections. Apart from baseline clinical examination with detailed ear examination including functional assessment of hearing by way of tuning fork tests, all subjects enrolled into the study were subjected to an audiometric test battery comprising of pure tone and high frequency audiometry, brain stem evoked response audiometry and otoacoustic emissions. Ototoxicity has been reported to be generally detected by high frequency auditory testing before it can be detected by conventional audiometric procedures.[13] While brain-evoked response audiometry has been reported to be the most sensitive test in detecting early manifestations of cochlear injury caused by chloroquine when still in a reversible stage[2], transient evoked acoustic emissions have been proposed recently as a better way of monitoring hearing loss produced by ototoxicity and can be suggested as an alternative to monitor hearing loss.[14,15,16]

Only 2 out of the 30 subjects studied developed hearing loss in the high frequencies after chloroquine therapy. The follow up audiogram of these individuals showed that the ototoxic effects of chloroquine were reversible. The sole subject who developed vestibular side effects in the form of giddiness and nystagmus had spontaneous resolution of symptoms on completion of therapy. This shows that chloroquine is not significantly ototoxic when used in regular doses in the treatment of uncomplicated malaria. Ototoxic effects if any are reversible in nature.

V. Conclusion

Chloroquine may be used safely in regular doses in the treatment of uncomplicated malaria as ototoxic side effects are very rare and reversible in nature. Audiometric evaluation could be performed prior to and after therapy in patients at-risk for ototoxicity, receiving therapy in order to document and monitor hearing loss due to chloroquine.

References Références Referencias

1. Savarino A, Boelaert JR, Cassone A, Majori G, Cauda R. (2003). Effects of chloroquine on viral

© 2015 Global Journals Inc. (US)

infections: an old drug against today's diseases? Lancet Infectious Diseases. 3(11), pp.722-7.
2. National Institute of Allergy and Infectious Diseases (NIAID) - NCT00819390): http://clinicaltrials.gov
3. Savarino A, Lucia MB, Giordano F, Cauda R. (2006). Risks and benefits of chloroquine use in anticancer strategies. Lancet Oncology. 7(10), pp.792-3.
4. Sotelo J, Briceño E, López-González MA. (2006).Adding chloroquine to conventional treatment for glioblastoma multiforme: a randomized, double-blind, placebo-controlled trial. Annals of Internal Medicine. 144(5), pp. 337-43.
5. Bortoli R, Santiago M. Chloroquine ototoxicity. (2007) Clinical Rheumatology. 26(11), pp. 1809-10.
6. Mukherjee DK. Chloroquine ototoxicity--a reversible phenomenon? (1979). Journal of Laryngology and Otology. 93(8), pp. 809-15.
7. Seçkin U, Ozoran K, Ikinciogullari A, Borman P, Bostan EE. (2000) Hydroxychloroquine ototoxicity in a patient with rheumatoid arthritis. Rheumatology International. 19(5), pp. 203-4.
8. Bernard P. Alterations of auditory evoked potentials during the course of chloroquine treatment. (1985).Acta Otolaryngologica.; 99(3-4), pp. 387-92
9. Norris CH. (1988). Drugs affecting the inner ear. A review of their clinical efficacy, mechanisms of action, toxicity, and place in therapy. Drugs.36(6), pp. 754-72.
10. Coutinho MB, Duarte I. (2002). Hydroxychloroquine ototoxicity in a child with idiopathic pulmonary haemosiderosis. International Journal of Pediatric Otorhinolaryngology. 62(1), pp. 53-7.
11. Johansen PB, Gran JT. (1998). Ototoxicity due to hydroxychloroquine: report of two cases. Clinical and Experimental Rheumatology.; 16(4), pp. 472-4.
12. Sykes H. The ototoxicity of chloroquine sulphate in the guinea pig. (1984). British Journal of Audiology. 18(2), pp. 59-69.
13. Fausti SA, Rappaport BZ, Schechter MA, Frey RH, Ward TT, Brummett RE. (1984). Detection of aminoglycoside ototoxicity by high-frequency auditory evaluation: selected case studies. American Journal of Otolaryngology.5(3) pp.177-82.
14. Zorowka P, Schmitt HJ, Eckel HE, Lippert KL, Schönberger W, Merz E. (1993). Serial measurements of transient evoked otoacoustic emissions (TEOAEs) in healthy newborns and in newborns with perinatal infection. International Journal of Pediatric Otorhinolaryngology. 27(3), pp. 245-54.
15. Riga M, Psarommatis I, Korres S, Lyra CH, Papadeas E, Varvutsi M et al. (2006). The effect of treatment with vincristine on transient evoked and distortion product otoacoustic emissions. International Journal of Pediatric Otorhinolaryngology. 70 (6), pp.1003-8.
16. Stavroulaki P, Apostolopoulos N, Dinopoulou D, Vossinakis I, Tsakanikos M, Douniadakis D. (1999). Otoacoustic emissions--an approach for monitoring aminoglycoside induced ototoxicity in children. International Journal of Pediatric Otorhinolaryngology. 50 (3), pp. 177-84.

© 2015 Global Journals Inc. (US)

This page is intentionally left blank

© 2015 Global Journals Inc. (US)

Global Journal of Medical Research: J
Dentistry and Otolaryngology
Volume 15 Issue 2 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Knowledge, Attitude and Practices Regarding Consumption of Carbonated Beverages among School Children Residing in New Delhi and Ghaziabad

By Nitya Rai, Meera Sandhu & Vinod Sachdev
ITS-CDSR Muradnagar, Ghaziabad, India

Abstract- Aim: The aim of the study was to assess the Knowledge, Attitude and Practices regarding consumption of carbonated drinks among school children, of different socio-economic group.

Material and Method: 350 students in the age group (8-17 yrs.) were included in the study, divided into two groups based upon their socio-economic status. Self-structured objective type questionnaire containing 11 questions, were prepared and distributed.

Stastical Analysis Used: The data was analysed statistically using Pearson Chi-Squares test.

Results: Children of upper income group had more knowledge regarding ill effects of beverages as compared to lower income group ($p<0.05$). Beverages were more popular among upper income whereas milk was favorite among lower income group ($p<0.001$). In upper income group taste was the most influencing factor for the choice of the drink whereas in lower income friends and family were ($p<0.001$).

Keywords: carbonated beverages, erosion, school children.

GJMR-J Classification: NLMC Code: WU 300

KNOWLEDGEATTITUDEANDPRACTICESREGARDINGCONSUMPTIONOFCARBONATEDBEVERAGESAMONGSCHOOLCHILDRENRESIDINGINNEWDELHIANDGHAZIABAD

Strictly as per the compliance and regulations of:

© 2015. Nitya Rai, Meera Sandhu & Vinod Sachdev. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Knowledge, Attitude and Practices Regarding Consumption of Carbonated Beverages among School Children Residing in New Delhi and Ghaziabad

Nitya Rai [α], Meera Sandhu [σ] & Vinod Sachdev [ρ]

Abstract- Aim: The aim of the study was to assess the Knowledge, Attitude and Practices regarding consumption of carbonated drinks among school children, of different socio-economic group.

Material and Method: 350 students in the age group (8-17 yrs.) were included in the study, divided into two groups based upon their socio-economic status. Self-structured objective type questionnaire containing 11 questions, were prepared and distributed.

Stastical Analysis Used: The data was analysed statistically using Pearson Chi-Squares test.

Results: Children of upper income group had more knowledge regarding ill effects of beverages as compared to lower income group ($p<0.05$). Beverages were more popular among upper income whereas milk was favorite among lower income group ($p<0.001$). In upper income group taste was the most influencing factor for the choice of the drink whereas in lower income friends and family were ($p<0.001$).

Conclusion: The frequency of consumption is alarming and the target group is still unaware of the fatal health effects of these drinks, suggesting the need of immediate attention by health and concerned government authorities worldwide

Keywords: carbonated beverages, erosion, school children.

I. Introduction

In today's world, consuming sparkling beverages has become a trend. As an undesirable increase in the ease of availability of these soft drinks its consumption has drastically taken a leap over the past few years. Fluid consumption patterns of children are now more diverse compared to the past years, as carbonated soft drinks and fruit juices have replaced the consumption of water and milk.

These carbonated drinks consist of water, carbon dioxide, color, additives and preservatives. In a tropical country like India, which has torrid summers, there is substantial market for aerated soft drinks. The per capita consumption of carbonated drinks in India is about [4] bottles per year, which is less compared to the other developing countries such as Pakistan, Bangladesh, Egypt, and extremely less compared to USA where it is 350 bottles [1]. Indian market consists of cola products and non-cola products of which the cola segment constitutes 62%, non-cola segment is bagged with 30% and energy drinks segment is 8%. Furthermore, the urban areas report a dramatically high consumption of aerated drinks as compared to rural areas, where Delhi is on the top of the list for Carbonated Soft Drink consumption[2].

The excess consumption of these carbonated beverages is creating havoc in teenage population as it contains no essential nutrients and harms their general as well as oral health. Consumption of carbonated soft drinks may be a key contributor to the epidemic of obesity, as consuming more energy than the body requirement leads to weight gain due to the body storing excess energy as fat. Intake of these drinks may also lead to tooth decay[3] and dental erosion[4]. High consumption of carbonated soft drinks during adolescence may reduce bone mineral accrual and increases fracture risk[5]. Another observed repercussion of consumption of these empty calories is hyperacidity, leading to erosion of stomach lining, characterized by stomach ache. These symptoms are caused by caffeine and acids found in these "sweet demons" such as acetic, fumaric, gluconic and phosphoric acid[6].

It is an area of growing concern, as consumption of these drinks has markedly increased and they are capable of producing a large number of ill effects on oral and general health of the younger population. Hence, the present study was undertaken to assess the knowledge, attitude and practices (KAP) of school students toward carbonated drinks consumption.

II. Material and Methods

A Self-Structured objective type questionnaire was prepared for collection of data. Approval was taken from Ethical committee of the institution.

This study was conducted among school going children aged between 8 and 17 years. The total number of students included were 350 (200: males and 150: females), which were divide into two groups based upon

Author α σ ρ: ITS-CDSR Muradnagar, Ghaziabad.
e-mails: dr.nityarai@gmail.com, meerapedo@yahoo.co.in, principaldtl.gzb@its.edu.in

© 2015 Global Journals Inc. (US)

there socio-economic status using kuppuswamy's socio-economic status scale[7].

Group I- 175 children from upper socio economic group.

Group II- 175 children from lower socio economic group.

Sample size was calculated using Random (non-cluster) sampling.

$n = Z^2 P (1-P)/d^2$

Z =95%, P= 0.65 and d= 0.05

A signed consent was taken from the parents of the students who were included in the study. A questionnaire containing 11 questions was prepared for data collection. 350 questionnaires were distributed to the school students. The respondents were then asked to tick the most appropriate correct answer from the given list of answers according to them, in order to assess their knowledge, attitude and practice regarding the consumption of carbonated beverage. Questionnaire was prepared to assess whether they knew, that these carbonated beverages have ill effects on oral and general health. Did they enjoy drinking carbonated beverages and what would they choose if given choice among cold drink, fruit juice, milk and maza /slice. Factors which influenced the choice of drink such television, easy availability in the market, color and taste of the drink, or family and friends was also assessed. How much of the amount, frequency of consumption, where did they preferred to consume, and which was there favorite among those available in the market was questioned. The obtained results were subjected to statistical analysis using Pearson Chi-Square test SPSS version 16.

III. Results

Table 1 : Knowledge of students regarding consumption of carbonated beverages

Questions	Responses	Group I N (%)	Group II N (%)	p-value
Have you heard about cold-drinks	Yes	175(100%)	170(97.7%)	0.061
	No	0(0%)	4(2.3.%)	
Do you have any idea if it has Bad Effects On Teeth	Yes	145(82.9%)	124(71.7%)	0.015
	No	30(17.1%)	49(28.3%)	
Do you think having these cold-drinks is	Good for health	8(4.6%)	37(21.9%)	< .001
	Bad for health	167(95.4%)	132(78.1%)	

Table 1: 100% from Group I and 97.7% from Group II had heard about carbonated beverages, but still 2.3% in Group II were still unaware about carbonated beverages (p=0.061). 82.9% from Group I and 71.7% from Group II knew that consumption of these beverages is harmful for teeth and still 17.1% from Group I and 28.3% from Group II thought that they don't cause any harm to oral health and difference was highly significant (p=0.015). 95.4% from Group I and 78.1% from Group II knew that consuming these beverages is bad for general health though 4.6% from Group I and 21.9% from Group II considered it to be good for health(p<0.001).

Table 2 : Attitude of students regarding consumption of carbonated beverages

Questions	Responses	Group I	Group II	P-value
Do you enjoy having Cold-drinks	Yes	158(90.8%)	140(81.4%)	0.013
	No	16(9.2%)	32(18.6%)	
If Asked To, Would You Stop Drinking Cold-drinks	Yes	41(23.4%)	65(38.9%)	< .001
	No	53(30.3%)	66(39.5%)	
	May-be	81(46.3%)	36(21.6%)	
What Would you choose out of these drinks	Fruit Juice	63(36%)	61(34.9%)	< .001
	Carbonated Drink	60(34.3%)	6(3.4%)	
	Maza/Slice	41(23.4%)	41(23.4%)	
	Milk	11(6.3%)	67(38.3%)	

Table 2: 90.8% from Group I and 81.4% from Group II enjoyed drinking cold drink. Still 9.2% from Group I and 18.6% from Group II didn't enjoy drinking carbonated beverages (p=0.013). 23.4% from Group I said that they will quit drinking, 30.3% said they won't, and 46.3% said that they might when asked to. And on other hand in Group II 38.9% said that they will quit drinking, 39.5% said they won't, and 21.6% said that they might when asked to (p<0.001). 36% preferred fruit juice and 34.3% carbonated beverages in group I while those in group II preferred 38.3% milk over 34.9% carbonated beverages(p<0.001)

© 2015 Global Journals Inc. (US)

Table 3 : Practices of students regarding consumption of carbonated beverages

Questions	Responses	Group I	Group II	P-value
How Do You make the choice of Your cold-drink	T.V	13(7.5%)	25(14.4%)	< .001
	Easy availability in market	14(8.0%)	32(18.4%)	
	Colour	31(17.8%)	5(2.9%)	
	Family & friends	18(10.3%)	70(40.2%)	
	Taste	91(52.3%)	37(21.3%)	
	Other	7(4.0%)	5(2.9%)	
At a time how much of these drinks do you prefer having	A Glass (100ml)	89(50.9%)	133(76.0%)	< .001
	A Glass Bottle(200ml)	36(20.6%)	33(18.9%)	
	Pet Bottle (500ml)	32(18.3%)	5(2.9%)	
	>500ml	18(10.3%)	4(2.3%)	
How often Do You Consume Cold-drinks	Daily	20(11.4%)	36(21.1%)	>0.05
	Every alternate days	18(10.3%)	17(9.9%)	
	Weekly	77(44.0%)	66(38.6%)	
	Monthly	60(34.3%)	52(30.4%)	
Which is Your Favourite Drink	Pepsi	38(21.8%)	33(19.3%)	=0.001
	Coke	51(29.3%)	21(12.3%)	
	Sprite	26(14.9%)	31(18.1%)	
	Mirinda	21(12.1%)	22(12.9%)	
	Mountain Dew	18(10.3%)	22(12.9%)	
	Thumps Up	20(11.5%)	42(24.6%)	
When do you like having these drinks	When at home with friends & family	53(30.3%)	84(48.6%)	< .001
	When out with family & friends	103(58.9%)	53(30.6%)	
	When I Feel Thirsty	19(10.9%)	36(20.8%)	

Table 3: Those belonging to Group I were more influenced by taste 52.3% compared to other factors i.e color 17.8%, market 8%,T.V 7.5%, whereas in Group II family 40.2% and taste 21.3% influenced choice of drink more in comparison to market 18.4%,T.V 14.4% ($p<0.001$). Children in both the Groups preferred to drink a glass 50.9% in Group I and 76% in group II ($p=0.113$). Group I students preferred to drink on a weekly basis 44%,whereas in Group II weekly consumption was 38.6%, and daily was 21.1% which was high compared to Group 1 being 11.4% ($p<0.001$). Coke29.3%was the most favorite among Group 1 and thumbs-up 24.6% among group II ($p<0.001$). Those in Group I preferred to drink when they were out 58.9% as compared in Group II as they preferred to drink when at home 48.6% ($p<0.001$).

IV. Discussion

A questionnaire study was undertaken, as it allows to collect a lot of information and data from a large number of respondents in a short span of time. Aerated beverages are an important sector in the country because it not only contributes to export earnings of the country, but also acts as a revenue driver for other industries such as glass, refrigeration, transport, paper and sugar. This segment is universal in its demand, catering to all income groups and age-brackets[8]. Consumption of these carbonated beverages is becoming a major factor for health issues faced by the future generation.

In the study it was found that majority of the school children in both the groups had heard about cold drinks. But regarding knowledge of its ill effect on teeth, the upper socio-economic group had (82.9%) more knowledge, as compared to lower socio-economic group (71.1%) (Table 1). The area of concern is that their deleterious association with human teeth induces demineralization causing erosion of enamel due to their high acidic pH which ranges between 2.5-3.4. During demineralization, calcium and phosphorus are removed from the enamel which eventually leads to loss of outermost layers of the enamel causing sensitivity, other is tooth decay caused by sugar content as high as 10 tea spoons of sugar in every 250ml of this toxic elixir in the younger age group.

The finding of the study depicts that, carbonated drinks (34.3%) and fruit juices (36.0%) were more popular in the upper income group, and milk (38.3%) and fruit juice (34.9%) in the lower income group (Table 2). Popularity of these "sparkling beverages" is still more in upper socio-economic group, as children belonging to lower income group preferred milk and fruit juice more over the carbonated beverages.

Weekly consumption was common in both the group's i.e. upper socio economic group (44.0%), and lower socio economic group (38.6%)(Table 3). Not only the frequency, but the method of drinking also plays an important role, as holding the drink in the mouth before swallowing leads to the most pronounced pH drop followed by the long-sipping method[9]. Most of the

© 2015 Global Journals Inc. (US)

children in the upper income group were influenced by taste (52.3%) and color (17.8%) of the drink, while those belonging to the lower income group were more influenced by parents (40.2%) at young age which is in agreement with the findings of Grimm et al. (2004)[10]. Soft drink companies use a wide variety of marketing techniques to increase their sales. These techniques include easy accessibility in a wide variety of venues including schools, heavy media advertising as pre-teens and young adults are more vulnerable to get influenced by such factors. People who consume sugary drinks regularly i.e one to two cans a day or more have a 26% greater risk of developing type 2 diabetes than people who rarely have such drinks[11]. According to a study, people who increased their sugary drink consumption by one 12-ounce serving per day gained more weight over time approximately an extra pound every four years than people who did not change their intake[12]. Surprisingly in the study it was seen that influence of parental soft drink intake is more than peer influence, which directly reflects the responsibility of the parents. Parents should be aware that their behavior regarding the consumption of beverages has a great impact on their children's intake habits as well. So, health promotion strategies should be implemented, involving both parents and children. The parents can be helpful in exposing children to healthier drinks available in the market. Studies have shown that the frequent consumption of soft drinks can lead to change in body mass index (Ludwig et al. 2001[13], Striegel Moore et al. 2004[14]. and increase the frequency of obesity in children (Welsh et al. 2005[15]), which is becoming a common health issue in children nowadays. This concern is growing by each passing day, as the population of upper income group is adapting to a western lifestyle thereby more affected by adverse health conditions as a consequence. In contrast, the low income group is still fascinated by the traditional Indian diet which is rich in nutrients and has less harmful contents.

In the present study, not every student was aware about the hazardous effects of carbonated beverages on general and oral health. Government strategies should be implemented in promoting healthier drinks at a low cost in the market, reducing production of soda drinks and encouraging the future of our nation to adapt to a healthier living as a well-known proverb is "An ounce of prevention is worth a pound of cure"

V. Conclusion

82.9% in upper socio economic and 71.7% in lower socio economic group had knowledge of ill effects of carbonated drinks on oral health. 46.3% in upper socio economic groups said they may discontinue consuming these popping beverages and 38.95% in lower socio economic group were ready to quit consuming carbonated beverages when they came to know about the hazardous effect of fizzy drinks. Most influencing factors for the choice of their drink were taste (52.3%) in upper socio economic group and (40.2%) family in lower socio economic group. So there is a need to, spread awareness among children at a younger age and their parents about the adverse effects of soft drinks, so as to inculcate good oral practices. As the concern is growing, thus it is necessary to provide data to the concerned planning authority, so as they can implement an integrated approach to overcome the plight associated with consumption of carbonated beverages.

References Références Referencias

1. Carbonated soft drink. Available from: smallb.in/sites/default/files/knowledge_base/carbonated_soft-drink.pdf.
2. Carbonated Soft Drinks Market in India [cited May 1, 2011]. Available from: http://marketpublishers.com
3. Sohn W, Burt BA, Sowers MR. Carbonated Soft Drinks and Dental Caries in the Primary Dentition. J Dent Res 2006; 85(3): 262-266
4. Dugmore CR, Rock WP. A multifactorial analysis of factors associated with dental erosion. Br Dent J 2004; 196: 283–286.
5. Gartland C Mc, Robson PJ, Murray L, Cran G, Savage MJ, Watkins D, et al. Carbonated Soft Drink Consumption and Bone Mineral Density in Adolescence: The Northern Ireland Young Hearts Project. J Bone Miner Res 2003; 18(9).
6. Soft drinks - hard facts. Available from: URL:*www.wnho.net/soft_drinks_hard_facts.pdf*
7. Baiwara M, Rajput M, Sachdev S. Modified kuppuswamy's socioeconomic scale: social researcher should include updated income criteria, 2012. Indian J Community Med 2013; 38: 185-6.
8. Carbonated soft drinks market in India, [cited August 2012]. Available from: URL: http://www.researchandmarkets.com/reports/1830018/carbonated_soft_drinks_market_in_India
9. Johansson AK, Lingstrom P, Imfeld T, Birkhed D. Influence of drinking method on tooth-surface pH in relation to dental erosion. Eur J Oral Sci 2004; 112: 484–489.
10. Grimm GC, Harnack L, Story M. Factors associated with soft drink consumption in school-aged children. J Am Diet Assoc 2004 Aug; 104(8): 1244-9.
11. Malik VS, Willett WC, Hu FB. Sugar-sweetened beverages and BMI in children and adolescents: reanalyses of a meta-analysis. Am J Clin Nutr. 2009; 89(1): 438-439.
12. Malik VS, Popkin BM, Bray GA, Despres JP, Willett WC, Hu FB. Sugar-sweetened beverages and risk of
13. Ludwig DS, Peterson KE, Gortmaker SL. Relation between consumption of sugar-sweetened drinks and childhood obesity. Lancet 2001; 357: 505-8.

© 2015 Global Journals Inc. (US)

14. Striegel-Moore RH, Thompson D, Affenito SG, Franko DL, Obarzanek E, Barton BA, et al. Correlates of beverage intake in adolescent girls: the National Heart, Lung, and Blood Institute Growth and Health Study. JPediatr. 2006 Feb; 148(2): 183-7.
15. Welsh JA, Cogswell ME, Rogers S, Rockett H, Mei Z, Grummer-Strawn LM. Overweight among low-income preschool children associated with the consumption of sweet drinks. Pediatrics. 2005 Feb; 115(2): 223-229.

© 2015 Global Journals Inc. (US)

This page is intentionally left blank

© 2015 Global Journals Inc. (US)

Global Journal of Medical Research: J
Dentistry and Otolaryngology
Volume 15 Issue 2 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Perceived Competency towards Dental Practice among Interns of Various Dental Colleges in Delhi NCR

By Punya Sekhri, Meera Sandhu & Vinod Sachdev
ITS-CDSR Muradnagar, Ghaziabad, India

Abstract- Aim: The number of dental colleges has increased markedly and so has the number of dental graduates. But the dental curriculum has not been modified to cater to the needs of the people. Hence the aim of this study was to assess self-perceived competency of interns towards dental practice among dental colleges of Delhi NCR.

Material and Methods: A cross sectional questionnaire study was conducted Self- perceived competency of interns was assessed using a valid self–administered questionnaire with 10 parameters and 76 closed ended questions.

Statistical Analysis: Data collected was analyzed and frequency tables were computed using statistical software packages SPSS software windows (version 22.0).

Results and Conclusion: Majority of interns felt they were not skilled enough in performing procedures which are the basic requisites in running a dental operatory. Hence it was concluded that there exists a need to change the current curriculum and promote competency based education for it is these aspiring dentists who will decide the future of oral health in our country.

Keywords: delhi NCR, interns, self-perceived competency.

GJMR-J Classification: NLMC Code: WU 21

PERCEIVEDCOMPETENCYTOWARDSDENTALPRACTICEAMONGINTERNSOFVARIOUSDENTALCOLLEGESINDELHINCR

Strictly as per the compliance and regulations of:

© 2015. Punya Sekhri, Meera Sandhu & Vinod Sachdev. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Perceived Competency towards Dental Practice among Interns of Various Dental Colleges in Delhi NCR

Punya Sekhri [α], Meera Sandhu [σ] & Vinod Sachdev [ρ]

Abstract- Aim: The number of dental colleges has increased markedly and so has the number of dental graduates. But the dental curriculum has not been modified to cater to the needs of the people. Hence the aim of this study was to assess self-perceived competency of interns towards dental practice among dental colleges of Delhi NCR.

Material and Methods: A cross sectional questionnaire study was conducted Self- perceived competency of interns was assessed using a valid self–administered questionnaire with 10 parameters and 76 closed ended questions.

Statistical Analysis: Data collected was analyzed and frequency tables were computed using statistical software packages SPSS software windows (version 22.0).

Results and Conclusion: Majority of interns felt they were not skilled enough in performing procedures which are the basic requisites in running a dental operatory. Hence it was concluded that there exists a need to change the current curriculum and promote competency based education for it is these aspiring dentists who will decide the future of oral health in our country.

Keywords: delhi NCR, interns, self-perceived competency.

I. Introduction

Dentistry in India is being practiced since the era of the Indus Valley civilization. Ancient medical literature described treatments of diseases of oral cavity and emphasized the importance of tongue hygiene. The first dental college and hospital in India was opened in 1883.

Until 1966, all the dental colleges in India were either run by the government or aided by the government.[1] Since dental disease is a serious public health problem with equal distribution and affecting all age groups, the demand of providing oral health care to all had to be met. Therefore dental colleges in private sector were established. India has approximately 290 dental colleges with around 25,000 graduates passing each year and dental manpower has greatly increased. Decrease in the number of schools for hygienists and laboratory technicians from forty (20+20) in 1990s to twenty (10+10) in 2000 with the result that there has been no increase in the efficiency of overburdened dentists.[2] But even with such a large work force, most of the people in India do not have access to basic oral health care.

The dentist to population ratio is 1:10,000 in urban areas whereas it drastically falls to 1:150,000 in rural areas. This unequal distribution of dentists contributes to emergence of oro-dental diseases in India. Recent estimates state that about 50% of school children are suffering from dental caries and 90% of adults are having periodontal disease. Oral cancer is also emerging as a major threat among young generation due to increased usage of tobacco products.[3]

Although dental care is a part of primary health care in India, dental care services are available in very few states at the primary health care level. In regions where adequate dental manpower is available yet the utilization of oral health care services is low thereby widening the oral health care differences across the social economic classes. Various factors like demographic, behavioral, socio-economic, cultural and epidemiological contribute to people's decision to either forgo care or seek professional assistance for dental problems.[4]

To bring down the burden of oral diseases, various health education programs and preventive programs were organized by the government authorities, private colleges and organizations but the major responsibility lies in the hands of aspiring dentists. Previously dental education was fabricated in such a way that a dental graduate would only learn prescribed subject matter as per the traditional curriculum in order to retain knowledge. This traditional approach was very restricted and bounded. The current trend is toward competency and evidence based education. While literature continues to emphasize on competencies when discussing dental education, ambiguity remains. An education based upon competency offers several advantages which incur a positive attitude in the aspiring dentists to independently work in a clinical set up.[5]

Change is the only constant and also the need of the hour. Hence this study was carried out to estimate

Author α: Post graduate Depart of Pedodontics ITS-CDSR Dental College Muradnagar, Ghaziabad. e-mail: punyasekhri@gmail.com
Author σ: Professor, Department of Pedodontics and Preventive Dentistry ITS- CDSR Muradnagar, Ghaziabad.
Author ρ: Prof and Head of Department, Pedodontics ITS- CDSR Muradnagar.

© 2015 Global Journals Inc. (US)

the self- perceived competency towards dental practice among interns of various dental colleges in Delhi NCR.

II. Materials and Methods

In the present study 5 dental colleges from Delhi NCR were chosen at random. Interns of these dental colleges in the academic year 2013-14 constituted the study population. Interns who were willing to take part in this study and those who were on the verge of completion of their internship(last one month of internship) were included as they were equally exposed to all the branches of dentistry by this time period and those who had previously taken part in any such study were excluded.

A cross sectional questionnaire study was conducted in the Department of Pedodontics and Preventive Dentistry I.T.S C.D.S.R Muradnagar Ghaziabad. Prior to start of the study an approval from the concerned dental authorities and ethical committee was obtained. The sample size was determined using the statistical formula $E = z\sqrt{p(1 - \hat{p})/n}$ with 95% level of confidence and 5% precision. Self- perceived competency of interns was assessed using a valid self–administered questionnaire with 10 parameters and 76 closed ended questions.

The various aspects included were 'General Patient Management', Periodontology and Dental Public Health',' Conservative Dentistry', 'Oral Rehabilitation', 'Orthodontics', 'Pedodontics', 'Oral and Maxillofacial Surgery', 'Oral Medicine and Radiology', 'Oral Pathology' and 'Drug and Emergency Management'.

After informing the interns about the intent and purpose of this study the questionnaires were distributed.500 questionnaires were distributed, out of which 300 were returned completely filled and the data collected was analyzed and frequency tables were computed using statistical software packages SPSS software windows (version 22.0)

III. Data Analysis

A total of 500 questionnaires were distributed among the interns of five dental colleges of Delhi NCR. Of which 300 questionnaires were returned and free from errors and considered for further analysis. The data collected was analyzed and frequency tables were computed using statistical software packages SPSS software windows (version 22.0).

On frequency distribution it was seen that 100% of the interns felt that they were very well prepared to develop sequential plan for the patient and in interpreting tests and history to make diagnosis (Table 1). The same percentage perceived to be very well prepared in performing scaling and root planning (Table 2), restoring teeth with amalgam (Table 3), replacing teeth with partial and complete dentures (Table 4), in differentiating between primary and permanent teeth and in motivating the child and his parents in maintaining good oral health.(Table 6)

However, 300 interns felt that they were poorly prepared in performing multi-root RCTs and in restoring teeth with metal, PFM and all ceramic crowns and also in performing bleaching and restoring teeth with post and core (Table 3). The same percentage perceived to be very poorly prepared in replacing teeth with fixed partial dentures, implants, conventional bridges and resin bonded bridges (Table 4). They also perceived to be very poorly prepared in performing minor tooth alignment, in performing pulp therapy in primary teeth, treatment of traumatic injuries, bleaching, apexification, apexogenesis, diagnosing speech problems, giving stainless steel crowns, space maintainers and regainers and in managing mentally or physically disabled patients, in performing Incision and Drainage and managing fractures of dento-facial complex, in performing soft tissue biopsies and in managing medical emergencies (as shown in Tables 5,6,7,8,9 and 10).

Table 1 : Preparedness of interns in recording General Patient Management

	Very poorly		Poorly		Well		Very well	
GENERAL PATIENT MANAGEMENT	n	%	n	%	n	%	n	%
Take and interpret medical, social and dental history	0	0	0	0	26	8.7	274	91.3
Communicate effectively with patients	0	0	0	0	30	10	270	90
Discuss treatment plans and get informed consent	0	0	0	0	61	20.3	239	79.7
Discuss fees and payment options with patients	0	0	13	4.3	287	95.7	0	0
Develop a sequential treatment plan	0	0	0	0	0	0	300	100
Interpret tests and history to make a diagnosis	0	0	0	0	0	0	300	100
Identify and address patient's chief complaints	0	0	0	0	184	61.3	116	38.7

© 2015 Global Journals Inc. (US)

Table 2 : Preparedness of interns in the Department of Periodontology and Dental Public Health

	Very poorly		Poorly		Well		Very Well	
PERIODONTOLOGY AND DENTAL PUBLIC HEALTH	n	%	n	%	n	%	n	%
Treat early periodontal treatment	0	0	0	0	130	43.3	170	56.7
Perform deep scaling, root planing	0	0	0	0	0	0	300	100
Perform periodontal surgery	300	100	0	0	0	0	0	0
Perform oral hygiene instructions and diet analysis	0	0	0	0	21	7	279	93
Provide and monitor preventive treatment	0	0	0	0	96	32	204	68

Table 3 : Preparedness of interns in the Department of Conservative Dentistry

CONSERVATIVE DENTISTRY	Very poorly		Poorly		Well		Very Well	
	n	%	n	%	n	%	n	%
Restore teeth with amalgam restorations	0	0	0	0	0	0	0	0
Restore teeth with composite resin	0	0	45	15	255	85	0	0
Perform root surface restorations	300	100	0	0	0	0	0	0
Perform single root RCT	0	0	0	0	290	96.7	10	3.3
Perform multi-root RCT	300	100	0	0	0	0	0	0
Restore teeth with crowns								
(i) Metal crowns	300	100	0	0	0	0	0	0
(ii) Porcelain fused to metal	300	100	0	0	0	0	0	0
(iii) All ceramic	300	100	0	0	0	0	0	0
Bleaching	300	100	0	0	0	0	0	0
Restore teeth with post and core	300	100	0	0	0	0	0	0

Table 4 : Preparedness of interns in the Department of Oral Rehabilitation

ORAL REHABILITATION	Very poorly		Poorly		Well		Very Well	
	n	%	n	%	n	%	n	%
Replace teeth with partial dentures	0	0	0	0	0	0	300	100
Replace teeth with cast partial denture	0	0	252	84	48	16	0	0
Fixed Partial denture	300	100	0	0	0	0	0	0
Replace teeth with complete dentures	0	0	0	0	0	0	300	100
Replace teeth with implants	300	100	0	0	0	0	0	0
Replace teeth with conventional bridges	300	100	0	0	0	0	0	0
Replace teeth with resin bonded bridges	300	100	0	0	0	0	0	0

Table 5 : Preparedness of interns in the Department of Orthodontics

ORTHODONTICS	Very poorly		Poorly		Well		Very Well	
	n	%	n	%	n	%	n	%
Perform orthodontic treatment planning	0	0	232	77.3	68	22.7	0	0
Perform minor tooth alignment with removable appliances	0	0	247	82.3	53	17.7	0	0
Perform minor tooth alignment with fixed appliances	300	100	0	0	0	0	0	0
Perform full arch alignment	300	100	0	0	0	0	0	0

© 2015 Global Journals Inc. (US)

Table 6 : Preparedness of interns in the Department of Pedodontics

PEDODONTICS	Very poorly		Poorly		Well		Very Well	
Differentiate b/w primary and permanent teeth	0	0	0	0	0	0	300	100
Infant Oral Health Care	242	80.7	58	19.3	0	0	0	0
Pit and Fissure Sealant	242	80.7	58	19.3	0	0	0	0
Topical Fluoride Application	242	80.7	58	19.3	0	0	0	0
Perform Behavior Management	0	0	0	0	249	83	51	17
Motivate child to maintain good oral hygiene	0	0	0	0	0	0	300	100
Motivate parents/ guardian	0	0	0	0	0	0	300	100
Perform restorative procedures	0	0	0	0	57	19	243	81
Detection and correction of habits	0	0	252	84	48	16	0	0
Pulp therapy in primary teeth	300	100	0	0	0	0	0	0
Treatment of traumatic injuries	300	100	0	0	0	0	0	0
Bleaching	300	100	0	0	0	0	0	0
Apexification	300	100	0	0	0	0	0	0
Apexogenesis	300	100	0	0	0	0	0	0
Diagnose speech problems	300	100	0	0	0	0	0	0
Give stainless steel crowns	300	100	0	0	0	0	0	0
Perform space maintenance/ or regaining	300	100	0	0	0	0	0	0
Manage mentally or physically disabled patients	300	100	0	0	0	0	0	0
Recognize, report and follow up neglect and abuse cases.	193	64.3	107	35.7	0	0	0	0

Table 7 : Preparedness of interns in the Department of Oral and Maxillofacial Surgery

ORAL AND MAXILLOFACIAL SURGERY	Very poorly		Poorly		Well		Very Well	
	n	%	n	%	n	%	n	%
Manage acute pain/ infection	0	0	206	68.7	94	31.3	0	0
Manage Dento-alveolar abscess	281	93.7	19	6.3	0	0	0	0
Incision and Drainage	300	100	0	0	0	0	0	0
Administer local anesthesia	0	0	0	0	4	1.3	296	98.7
Perform simple extraction	0	0	0	0	4	1.3	296	98.7
Extract impacted third molars	273	91	2.7	9	0	0	0	0
Manage complications of oral surgery	0	0	157	52.3	143	66	0	0
Manage fractures of dento-facial surgery	300	100	0	0	0	0	0	0

Table 8 : Preparedness of interns in the Department of Oral Medicine and Radiology

ORAL MEDICINE AND RADIOLOGY	Very poorly		Poorly		Well		Very Well	
	n	%	n	%	n	%	n	%
Record proper case history	0	0	0	0	0	0	300	100
Generate awareness amongst patients	0	0	0	0	198	66	102	34
Shoot and Develop Radiographs	0	0	0	0	8	2.7	292	97.3
(i) IOPA	300	100	0	0	0	0	0	0
(ii) RVG	300	100	0	0	0	0	0	0
(iii) Extra-Oral	300	100	0	0	0	0	0	0
(iv) Cephalometric	300	100	0	0	0	0	0	0
(v) Lateral View	300	100	0	0	0	0	0	0
Manage chronic oro-facial pain	92	30.7	208	69.3	0	0	0	0

Table 9 : Preparedness of interns in the Department of Oral Pathology

ORAL PATHOLOGY	Very poorly		Poorly		Well		Very Well	
	n	%	n	%	n	%	n	%
Identify and manage oral pathology	262	87.3	38	12.7	0	0	0	0
Perform soft tissue biopsies	300	100	0	0	0	0	0	0

© 2015 Global Journals Inc. (US)

Table 10 : Preparedness of interns in the Department of Drug and Emergency Management

DRUG AND EMERGENCY MANAGEMENT	Very poorly		Poorly		Well		Very Well	
	n	%	n	%	n	%	n	%
Prescribe Drugs	0	0	243	81	57	19	0	0
Prevent and manage local anesthesia complications	0	0	241	80.3	59	19	0	0
Manage medical emergencies	300	100	0	0	0	0	0	0
Prevent and manage dental emergencies	0	0	197	65.7	103	34.3	0	0

IV. Discussion

The education system so far has promoted teaching students in an incremental pattern of prescribed subject matter i.e. conventional curriculum with the aim of instilling and retaining knowledge. It is "competence" and "accomplishment" which mark what the students are expected to or have learned in the course of their professional training programme.

Starting up one's own dental practice or running one's own operatory being the most common dream of every dental graduate, makes it necessary to assess the process and confirm that learning has actually been achieved.

Present study was conducted with the intent to assess the competency of interns of five different colleges of Delhi NCR towards dental practice.

From this study we saw majority of the interns felt well prepared in most aspects of general patient management, taking and interpreting medical, social and dental histories, communicating effectively with the patients, identifying and addressing patients' chief complaints and formulate a sequential treatment plan which was in accordance with a study conducted by McGrath et al (Hong Kong Dental Journal 2005:2;84-91) (6)].. [TABLE 1]

56.7% of Interns felt very well prepared in treatment of early stages of periodontal disease and 100% of them were well prepared in performing deep scaling and root planing procedures. Diet analysis and oral hygiene instructions are basic dental procedures taught in early dental training. It is essential that the interns are well trained in health promotion procedures. 93% of the interns felt very well prepared in performing dietary analysis and in giving oral hygiene instructions. [TABLE 2]

However, 100% of the interns felt poorly prepared in carrying out pericoronitis and curettage. They also felt they were inadequately trained in extraction of impacted third molars and couldn't perform procedures like minor tooth alignment using fixed appliances, full mouth alignment, Fixed partial dentures, in giving crowns, replacing teeth with implants, multi root RCT, post and core, pulp therapy in child patient, bleaching, Incision and Drainage which was in accordance with Greenwood study (Journal of Dental Education 1998;62;307-13).[TABLE 2,3,4,5,6,7]

Practically all interns i.e. 93% felt they were well prepared in performing simple extractions or administering local anesthesia. Interns felt well prepared in restorative procedures like amalgam and composite restorations, single root endodontics as these are the most common procedures in dental practice, as proved in study conducted by McGrath et al Hong Kong (6)]. [TABLE 7,3]

In performing procedures like multi-rooted teeth endodontic treatment 100% of the interns felt they were poorly prepared as poor access and variation in root morphology causes practical difficulties for the dental students. The interns also felt they were incompetent when it came to replacement of teeth with conventional bridges and with the increased demand for conventional bridges and implants to replace missing teeth, the dental curriculum should be modified to solve this issue results correlated with the study done by Greenwood et al (European Journal of Dental Education, 1999;3:153-8)4 .Dental graduates were confident in creating awareness amongst children and their parents in order to maintain a good oral hygiene but poorly prepared in performing most of the procedures in a child patient besides oral prophylaxis and restorations.

They also felt poorly prepared in managing mentally or physically disabled child or recognizing and reporting neglect and child abuse.[TABLE 3, 4, 6]

100% of the interns perceived they could not manage medical emergencies and 81% of them felt that they could poorly prescribe drugs. This is an issue of concern as a risk of medical emergencies accompanies every dental procedure and it is of utmost importance that the dental graduates feel prepared for dealing with such events.[TABLE 10]

A "competent" graduate is the one who is capable of functioning independently in realistic practice settings. Combination of attributes of appropriate knowledge and professional attitudes with reliable performance undertaken in natural settings without assistance is what makes a graduate competent(7), which lacks in them at present.

A continuous assessment rather than end course examination would aid in improving the plight of these graduates as this kind of assessment is

© 2015 Global Journals Inc. (US)

comprehensive and covers broad outcomes rather than a few narrow areas of knowledge which lie within a prescribed educational zone.(7)

This study revealed that in all the clinical departments, dental graduates were trained only to perform conventional procedures such as amalgam restorations, simple extractions, administering local anesthesia, fabricating complete dentures and partial dentures.

Performing procedures which are pre-requisites for running a good dental practice such as multi-root RCT, fabrication of fixed partial denture, post and core, bleaching, resin bonded bridges, stainless steel crowns, pit and fissure sealants, topical fluoride application, the dental graduates appeared to be completely incompetent.

With the current trends shifting towards more advanced techniques and procedures like implants, lasers, esthetic dentistry there is a need to increase the clinical exposure. Inspite of the fact that DCI curriculum (revised in 2007 dciindia.org.in)(8) comprises the list of all the exercises that would enable a dental graduate to practice independently, the exposure to perform these procedures needs to be worked upon.

Replacing "requirements" with "minimal expected procedures" or "thresholds" will instill a great deal of confidence in the dental graduates to work independently and efficiently. (7)

V. Conclusion

To conclude, the interns felt well prepared towards dental practice; however, there exists a lacuna in certain areas of practical training the interns towards dental practice. and this lacunae has to be fulfilled.

References Références Referencias

1. Prakash H, Duggal R, Mathur VP. Final report and recommendations "Formulation of guidelines for meaningful and effective utilization of available manpower at dental colleges for primary prevention of oro-dental problems in the country." A GOI-WHO Collaborative Programme, New Delhi: 2007
2. Corbet EF. Future directions in periodontology. Hong Kong Dent Assoc Yearbook 1989; 34-6.
3. Rafeek RN, Marchan SM, Naidu RS, Carrotte PV. Perceived Competency at graduation among dental alumni of the University of the West Indies. J Dent Educ 2004;68:81-8
4. McGrath C, Cobert EF. Do dental graduates of the University of Hong Kong (1997-2001) perceive themselves prepared for dental practice? Hong Kong Dent J 2005;2:84-91
5. Tandon S. Challenges to the oral health workforce in India. J Dent Educ 2004; 68 (7 Suppl):28-33.
6. The first five years, the undergraduate dental curriculum. 2nd edition. London: General Dental Council; 2002.
7. Smales R.J. Yip H.K Review of competency-based education in dentistry. British Dental Journal volume 189. no. 6 september 23 2000.
8. Revised DCI curriculum dciindia.org.in
9. Dental colleges in India. Accessed from: http://www.dciindia.org/ search.aspx. [last cited on 2012 Apr 5].
10. Greenwood LF, Townsend GC, Wetherell JD, Mullins GA. Self-perceived competency at graduation: A comparison of dental graduates from the Adelaide PBL curriculum and the Toronto traditional curriculum. Eur J Dent Educ 1999; 3: 153- 8.
11. ADA council on scientific affairs. Office emergencies and emergency kits. J Am Dent Assoc 2002; 33: 364-5.
12. Arena G, Kruger E, Holley D, Millar S and Tennant M. Western Australian dental graduates' perception of preparedness to practice: A five- year follow- up. J Dent Educ 2007; 71: 1217-22.

© 2015 Global Journals Inc. (US)

Global Journal of Medical Research: J
Dentistry and Otolaryngology
Volume 15 Issue 2 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Self Inflicted Cut Throat Injury – A Series of 2 Cases

By Ajay Manickam, Shaswati Sengupta, Rajarshi Sannigrahi, Jayanta Saha, Sk Basu & Souradeep Ray

RG Kar Medical College and Hospital, India

Abstract- The incidence and pattern of suicide vary from country to country. Cut throat injuries can beeither suicidal or homicidal. These are well recognized methods of homicide and are less commonly used in suicides and are very rarely accidental. Suicide by incising one's own throatis always associated with hesitation marks and homicidal wounds are not associated with one. Psychiatric illness, psychological stress and poverty are some of the associatedfactors of suicidal cut throat injury. when a patient comes with suicidal cut throat injuries, a multidisciplinary approach is required in the effective management of victims. This requires the close collaboration of the Otorhinolaryngologist, the anaesthesiologist and the psychiatrist.

GJMR-J Classification: NLMC Code: WV 1-101

SELFINFLICTEDCUTTHROATINJURYASERIESOF2CASES

Strictly as per the compliance and regulations of:

© 2015. Ajay Manickam, Shaswati Sengupta, Rajarshi Sannigrahi, Jayanta Saha, Sk Basu & Souradeep Ray. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Self Inflicted Cut Throat Injury – A Series of 2 Cases

Ajay Manickam [α], Shaswati Sengupta [σ], Rajarshi Sannigrahi [ρ], Jayanta Saha [Ѡ], Sk Basu [¥] & Souradeep Ray [§]

Abstract- The incidence and pattern of suicide vary from country to country. Cut throat injuries can beeither suicidal or homicidal. These are well recognized methods of homicide and are less commonly used in suicides and are very rarely accidental. Suicide by incising one's own throatis always associated with hesitation marks and homicidal wounds are not associated with one. Psychiatric illness, psychological stress and poverty are some of the associatedfactors of suicidal cut throat injury. when a patient comes with suicidal cut throat injuries, a multidisciplinary approach is required in the effective management of victims. This requires the close collaboration of the Otorhinolaryngologist, the anaesthesiologist and the psychiatrist.

I. Introduction

Suicide is one of the leading causes of death in the world. The incidence and pattern of suicide vary from country to country. Cut throat injuries can be either suicidal or homicidal. These are well recognized methods of homicide and are less commonly used in suicides and are very rarely accidental. Suicide by incising one's own throat is always associated with hesitation marks and homicidal wounds are not associated with one. Psychiatric illness, psychological stress and poverty are some of the associated factors of suicidal cut throat injury. Here are case reports of 2 patients who tried to commit suicide by cutting their own neck.

II. Case Report

a) CASE 1

A 32 years of male patent attended ENT emergency of RG Kar medical college with alleged history of suicidal cut throat at around night 2: 00 am. There was severe bleeding from the wound site. The patient was immediately shifted to the emergency OT. First of all tracheostomy was done to secure airway. Then wound exploration was done. No major blood vessels were injured. There was a cut injury over the thyroid cartilage. It was carefully repaired with prolenesuture. Wound was closed by layers. Patient was discharged on the tenth post-operative day and was asked to regularly follow-up in psychiatry department. The patient was followed up in ENT department after 1 month, 3 months and 6 months.

b) CASE 2

A 47 years old male patient attended ENT emergency with history of suicidal tendency and by cutting his own throat. There was severe bleeding from the wound site. The patient was immediately shifted to emergency OT. After securing the bleeding, it was found that the air way was opened. A part of Thyroid cartilage was found missing. Tracheostomy was done and after securing homeostasis wound was closed by layers. The injury in the cartilage was repaired with prolene 3 – 0 sutures. After giving proper counselling, patient was discharged on day 14. The patient was followed up on 1month, 3 months and 6 months.

III. Discussion

It was an age old debate that whether penetrating neck injuries should have been explored or not in the past decade. Now with the advent of various investigations and advancement in science, now selective exploration of neck concept is getting popularized. We have to be also aware of carotid and possible cervical injury in the patient.

Hence penetrating neck trauma can be classified into (1) stab injury (2) gunshot wounds (3) blast injury (4) blunt injury. Roon and Christensen1 have classified the site of cervical trauma into zone 1, 2 and 3.

1. Zone I injuries occur at the thoracic inlet. This zone extends from the level of the cricoid cartilage to the clavicles.
2. Zone II injuries are those occurring in the region between the cricoid cartilage and the angle of the mandible. Injuries in this zone are the easiest to expose and evaluate
3. Zone III injuries occur between the angle of the mandible and the base of the skull.

Author α: Junior resident, Department of ENT and Head Neck Surgery.
e-mail: ajaymanickam87@gmail.com
Author σ: RMO, Department of ENT and Head Neck Surgery.
e-mail: drshaswati@gmail.com
Author ρ: Junior resident, Department of ENT and Head Neck Surgery.
e-mail: rajsanni.boo@gmail.com
Author Ѡ: Asst. Professor, Department of ENT and Head Neck Surgery.
e-mail: drsaha_jayanta@rediffmail.com
Author ¥: HOD, Department of ENT and Head Neck Surgery.
e-mail: basugora@gmail.com
Author §: Asst. Professor, Department of ENT and Head Neck Surgery, RG Kar Medical College and Hospital, Kolkata India.
e-mail: drsouradeepray@gmail.com

© 2015 Global Journals Inc. (US)

According to Bailey[2] it was proposed that in early 1990, early exploration of neck injuries with tracheostomy and antibiotics reduced the mortality rate to seven per cent. Following that lots of controversies were aroused that without proper knowledge about the extent of the injury and missing an unsuspected vascular injury without preoperative angiography and oesophagoscopy was highly questioned.

But nowadays in recent time according to Demetriades et al[3] combination of clinical and selective investigations yielded a sensitivity of 100%. Hence in our patient once the patient attended emergency ward, primary survey was done. After making a clinical assessment they were immediately transferred to emergency operation theatre. Immediately we performed a tracheostomy. Airway to be secured is the most important part of management in cut throat injury. As primary survey suggested there is no major vessel injury and oesophageal injury we planned for immediate exploration of the wound.

Accuracy of the diagnosis of oesophageal injury is very important in the management of these injuries. According to Weigelt JA et al, if there are suspected injuries it is better to go for combination of oesophagography and oesophagoscopy, because they are having a sensitivity of 100 per cent[4].

The planning for repair of these penetrating neck injuries will not stop with clinical primary survey. The things that we have to do in order are first to secure intra venous line. Anaesthetists play a very important role in the management process. Under local or general anaesthesia intubation must be tried, if not possible tracheostomy must be done to secure airway, that is the most important aspect. Following securing of airway, patient should be put in proper position with neck extension only if there is no cervical spine injury. Zone 2 injuries are usually easily managed. When there is zone 1 or three injury additional surgical exposures may be needed. As both of our patients had zone two injuries, additional exposure was not required. There were no major vessel injury hence vein grafting was also not necessary. If there is suspected vascular injury we have to be also prepared for saphenous vein harvesting[5].

Our management part is not ending with the anaes the tist intervention and the surgical repair. In case of suicidal wounds proper counselling by psychiatrist plays a very important role. There are various aetiologies like schizophrenia, depression, bipolar disorder; the patient may be suffering. If after surgical intervention proper psychiatry follow-up is not done in this patient, then there are all chances of repeated suicidal attempts in these patients leading in death.

In our case both the patients were immediately taken for proper psychiatry counselling and evaluation. They were regularly followed up in the psychiatry outdoor. Not only the psychiatrist the patient's family members are also having equal responsibility, to take proper care of these patients. In our case the patient's tracheostomy was removed after 21 days and strapping was done. They recovered completely without any hoarseness of voice or vocal cord palsy. They were followed up in the 3rd month and 6th month respectively.

IV. Conclusion

Hence suicidal cut throat patients have to be monitored with proper care. When suicidal cut throat injuries occur, a multidisciplinary approach is required in the effective management of victims. This requires the close collaboration of the Otorhinolaryngologist, the anaesthesiologist and the psychiatrist. Our treatment is not ending with discharging the patient. Proper follow up is very much essential to save these patients from death.

Conflicts of Interest
The Authors Declare, There are No Conflicts of Interest.

Funds
There were No Funding for this Case Reporting

References Références Referencias

1. Roon AJ, Christensen N. Evaluation and treatment of penetrating cervical injuries. Journal of Trauma 1979: 19; 391-7
2. Bailey H ed. Surgery of modern warfare, 3rd edition. Baltimore; Williams & Willkins, 1944; 674
3. Demetriades D, Charalambides D, Lakhoo M. physical examination and selective conservative management in patients with penetrating injuries of neck. British Journal of Surgery. 1993; 80; 1534 -6
4. Weigelt JA, Thal ER, Synder WH. Diagnosis of penetrating cervical oesophageal injuries; multicentre study of American association for the surgery of trauma. 2001; 50; 289 - 96
5. Scott and Brown's Otorhinolaryngology and head neck surgery volume 2, page 1775. Chapter 139. 7th edition. Editor Michael Gleeson. Hodder and Arnold publication.

© 2015 Global Journals Inc. (US)

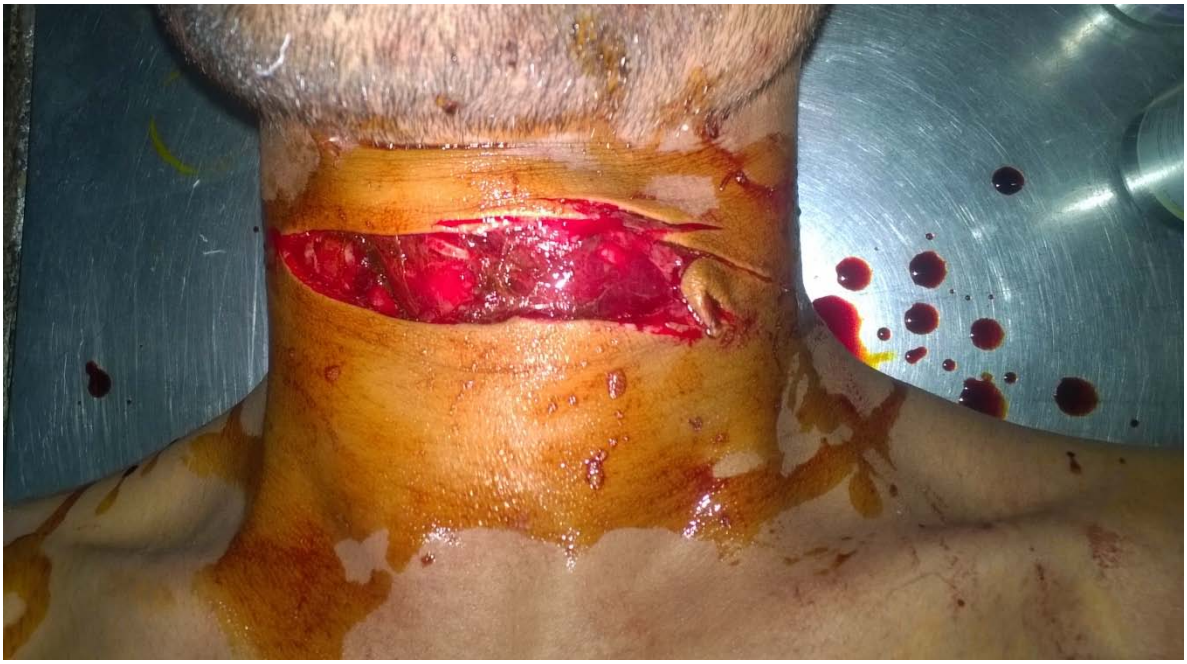

Figure 1 : Suicidal cut throat injury with hesitation cuts

Figure 2 : patient after repair day 5

© 2015 Global Journals Inc. (US)

Global Journals Inc. (US) Guidelines Handbook 2015

www.GlobalJournals.org

FELLOWS

FELLOW OF ASSOCIATION OF RESEARCH SOCIETY IN MEDICAL (FARSM)

Global Journals Incorporate (USA) is accredited by Open Association of Research Society (OARS), U.S.A and in turn, awards "FARSM" title to individuals.The'FARSM' title is accorded to a selected professional after the approval of the Editor-in-Chief/Editorial Board Members/Dean.

- The "FARSM" is a dignified title which is accorded to a person's name viz. Dr. John E. Hall,Ph.D., FARSS or William Walldroff, M.S., FARSM.

FARSM accrediting is an honor. It authenticates your research activities. After recognition as FARSM, you can add 'FARSM' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, and Visiting Card etc.

The following benefits can be availed by you only for next three years from the date of certification:

FARSM designated members are entitled to avail a 40% discount while publishing their research papers (of a single author) with Global Journals Incorporation (USA), if the same is accepted by Editorial Board/Peer Reviewers. If you are a main author or co-author in case of multiple authors, you will be entitled to avail discount of 10%.

Once FARSM title is accorded, the Fellow is authorized to organize a symposium/seminar/conference on behalf of Global Journal Incorporation (USA). The Fellow can also participate in conference/seminar/symposium organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent.

You may join as member of the Editorial Board of Global Journals Incorporation (USA) after successful completion of three years as Fellow and as Peer Reviewer. In addition, it is also desirable that you should organize seminar/symposium/conference at least once.

We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

The FARSM can go through standards of OARS. You can also play vital role if you have any suggestions so that proper amendment can take place to improve the same for the benefit of entire research community.

As FARSM, you will be given a renowned, secure and free professional email addres with 100 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.

The FARSM will be eligible for a free application of standardization of their researches. Standardization of research will be subject to acceptability within stipulated norms as the next step after publishing in a journal. We shall depute a team of specialized research professionals who will render their services for elevating your researches to next higher level, which is worldwide open standardization.

The FARSM member can apply for grading and certification of standards of their educational and Institutional Degrees to Open Association of Research, Society U.S.A. Once you are designated as FARSM, you may send us a scanned copy of all of you credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria. After certification of all your credentials by OARS, they will be published on your Fellow Profile link on website https://associationofresearch.org which will be helpful to upgrade the dignity.

The FARSM members can avail the benefits of free research podcasting in Global Research Radio with their research documents. After publishing the work, (including published elsewhere worldwide with proper authorization) you can upload your research paper with your recorded voice or you can utilize chargeable services of our professional RJs to record your paper in their voice on request.

The FARSM member also entitled to get the benefits of free research podcasting of their research documents through video clips. We can also streamline your conference videos and display your slides/ online slides and online research video clips at reasonable charges, on request.

© Copyright by Global Journals Inc.(US)| Guidelines Handbook

The FARSM is eligible to earn from sales proceeds of his/her researches/reference/review Books or literature, while publishing with Global Journals. The FARSS can decide whether he/she would like to publish his/her research in a closed manner. In this case, whenever readers purchase that individual research paper for reading, maximum 60% of its profit earned as royalty by Global Journals, will be credited to his/her bank account. The entire entitled amount will be credited to his/her bank account exceeding limit of minimum fixed balance. There is no minimum time limit for collection. The FARSM member can decide its price and we can help in making the right decision.

The FARSM member is eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get remuneration of 15% of author fees, taken from the author of a respective paper. After reviewing 5 or more papers you can request to transfer the amount to your bank account.

MEMBER OF ASSOCIATION OF RESEARCH SOCIETY IN MEDICAL (MARSM)

The ' MARSM ' title is accorded to a selected professional after the approval of the Editor-in-Chief / Editorial Board Members/Dean.

The “MARSM” is a dignified ornament which is accorded to a person’s name viz. Dr. John E. Hall, Ph.D., MARSM or William Walldroff, M.S., MARSM.

MARSM accrediting is an honor. It authenticates your research activities. Afterbecoming MARSM,you can add 'MARSM' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, Visiting Card and Name Plate etc.

The following benefitscan be availed by you only for next three years from the date of certification.

MARSM designated members are entitled to avail a 25% discount whilepublishing their research papers (of a single author) in Global Journals Inc., if the same is accepted by our Editorial Board and Peer Reviewers. If you are a main author or co-author of a group of authors, you will get discount of 10%.

As MARSM, you willbe given a renowned, secure and free professional email address with 30 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.

© Copyright by Global Journals Inc.(US) | Guidelines Handbook

We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

The MARSM member can apply for approval, grading and certification of standards of their educational and Institutional Degrees to Open Association of Research, Society U.S.A.

Once you are designated as MARSM, you may send us a scanned copy of all of your credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria.

It is mandatory to read all terms and conditions carefully.

Auxiliary Memberships

Institutional Fellow of Open Association of Research Society (USA) - OARS (USA)

Global Journals Incorporation (USA) is accredited by Open Association of Research Society, U.S.A (OARS) and in turn, affiliates research institutions as "Institutional Fellow of Open Association of Research Society" (IFOARS).

The "FARSC" is a dignified title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., FARSC or William Walldroff, M.S., FARSC.

The IFOARS institution is entitled to form a Board comprised of one Chairperson and three to five board members preferably from different streams. The Board will be recognized as "Institutional Board of Open Association of Research Society"-(IBOARS).

The Institute will be entitled to following benefits:

The IBOARS can initially review research papers of their institute and recommend them to publish with respective journal of Global Journals. It can also review the papers of other institutions after obtaining our consent. The second review will be done by peer reviewer of Global Journals Incorporation (USA) The Board is at liberty to appoint a peer reviewer with the approval of chairperson after consulting us.

The author fees of such paper may be waived off up to 40%.

The Global Journals Incorporation (USA) at its discretion can also refer double blind peer reviewed paper at their end to the board for the verification and to get recommendation for final stage of acceptance of publication.

The IBOARS can organize symposium/seminar/conference in their country on behalf of Global Journals Incorporation (USA)-OARS (USA). The terms and conditions can be discussed separately.

The Board can also play vital role by exploring and giving valuable suggestions regarding the Standards of "Open Association of Research Society, U.S.A (OARS)" so that proper amendment can take place for the benefit of entire research community. We shall provide details of particular standard only on receipt of request from the Board.

The board members can also join us as Individual Fellow with 40% discount on total fees applicable to Individual Fellow. They will be entitled to avail all the benefits as declared. Please visit Individual Fellow-sub menu of GlobalJournals.org to have more relevant details.

We shall provide you intimation regarding launching of e-version of journal of your stream time to time. This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

After nomination of your institution as "Institutional Fellow" and constantly functioning successfully for one year, we can consider giving recognition to your institute to function as Regional/Zonal office on our behalf.
The board can also take up the additional allied activities for betterment after our consultation.

The following entitlements are applicable to individual Fellows:

Open Association of Research Society, U.S.A (OARS) By-laws states that an individual Fellow may use the designations as applicable, or the corresponding initials. The Credentials of individual Fellow and Associate designations signify that the individual has gained knowledge of the fundamental concepts. One is magnanimous and proficient in an expertise course covering the professional code of conduct, and follows recognized standards of practice.

Open Association of Research Society (US)/ Global Journals Incorporation (USA), as described in Corporate Statements, are educational, research publishing and professional membership organizations. Achieving our individual Fellow or Associate status is based mainly on meeting stated educational research requirements.

Disbursement of 40% Royalty earned through Global Journals : Researcher = 50%, Peer Reviewer = 37.50%, Institution = 12.50% E.g. Out of 40%, the 20% benefit should be passed on to researcher, 15 % benefit towards remuneration should be given to a reviewer and remaining 5% is to be retained by the institution.

We shall provide print version of 12 issues of any three journals [as per your requirement] out of our 38 journals worth $ 2376 USD.

Other:

The individual Fellow and Associate designations accredited by Open Association of Research Society (US) credentials signify guarantees following achievements:

- The professional accredited with Fellow honor, is entitled to various benefits viz. name, fame, honor, regular flow of income, secured bright future, social status etc.

- In addition to above, if one is single author, then entitled to 40% discount on publishing research paper and can get 10%discount if one is co-author or main author among group of authors.
- The Fellow can organize symposium/seminar/conference on behalf of Global Journals Incorporation (USA) and he/she can also attend the same organized by other institutes on behalf of Global Journals.
- The Fellow can become member of Editorial Board Member after completing 3yrs.
- The Fellow can earn 60% of sales proceeds from the sale of reference/review books/literature/publishing of research paper.
- Fellow can also join as paid peer reviewer and earn 15% remuneration of author charges and can also get an opportunity to join as member of the Editorial Board of Global Journals Incorporation (USA)
- • This individual has learned the basic methods of applying those concepts and techniques to common challenging situations. This individual has further demonstrated an in–depth understanding of the application of suitable techniques to a particular area of research practice.

Note :

"

- In future, if the board feels the necessity to change any board member, the same can be done with the consent of the chairperson along with anyone board member without our approval.
- In case, the chairperson needs to be replaced then consent of 2/3rd board members are required and they are also required to jointly pass the resolution copy of which should be sent to us. In such case, it will be compulsory to obtain our approval before replacement.
- In case of "Difference of Opinion [if any]" among the Board members, our decision will be final and binding to everyone. "

Process of submission of Research Paper

The Area or field of specialization may or may not be of any category as mentioned in 'Scope of Journal' menu of the GlobalJournals.org website. There are 37 Research Journal categorized with Six parental Journals GJCST, GJMR, GJRE, GJMBR, GJSFR, GJHSS. For Authors should prefer the mentioned categories. There are three widely used systems UDC, DDC and LCC. The details are available as 'Knowledge Abstract' at Home page. The major advantage of this coding is that, the research work will be exposed to and shared with all over the world as we are being abstracted and indexed worldwide.

The paper should be in proper format. The format can be downloaded from first page of 'Author Guideline' Menu. The Author is expected to follow the general rules as mentioned in this menu. The paper should be written in MS-Word Format (*.DOC,*.DOCX).

The Author can submit the paper either online or offline. The authors should prefer online submission.Online Submission: There are three ways to submit your paper:

(A) (I) First, register yourself using top right corner of Home page then Login. If you are already registered, then login using your username and password.

(II) Choose corresponding Journal.

(III) Click 'Submit Manuscript'. Fill required information and Upload the paper.

(B) If you are using Internet Explorer, then Direct Submission through Homepage is also available.

(C) If these two are not conveninet , and then email the paper directly to dean@globaljournals.org.

Offline Submission: Author can send the typed form of paper by Post. However, online submission should be preferred.

Preferred Author Guidelines

MANUSCRIPT STYLE INSTRUCTION (Must be strictly followed)

Page Size: 8.27" X 11'"

- Left Margin: 0.65
- Right Margin: 0.65
- Top Margin: 0.75
- Bottom Margin: 0.75
- Font type of all text should be Swis 721 Lt BT.
- Paper Title should be of Font Size 24 with one Column section.
- Author Name in Font Size of 11 with one column as of Title.
- Abstract Font size of 9 Bold, "Abstract" word in Italic Bold.
- Main Text: Font size 10 with justified two columns section
- Two Column with Equal Column with of 3.38 and Gaping of .2
- First Character must be three lines Drop capped.
- Paragraph before Spacing of 1 pt and After of 0 pt.
- Line Spacing of 1 pt
- Large Images must be in One Column
- Numbering of First Main Headings (Heading 1) must be in Roman Letters, Capital Letter, and Font Size of 10.
- Numbering of Second Main Headings (Heading 2) must be in Alphabets, Italic, and Font Size of 10.

You can use your own standard format also.
Author Guidelines:

1. General,

2. Ethical Guidelines,

3. Submission of Manuscripts,

4. Manuscript's Category,

5. Structure and Format of Manuscript,

6. After Acceptance.

1. GENERAL

Before submitting your research paper, one is advised to go through the details as mentioned in following heads. It will be beneficial, while peer reviewer justify your paper for publication.

Scope

The Global Journals Inc. (US) welcome the submission of original paper, review paper, survey article relevant to the all the streams of Philosophy and knowledge. The Global Journals Inc. (US) is parental platform for Global Journal of Computer Science and Technology, Researches in Engineering, Medical Research, Science Frontier Research, Human Social Science, Management, and Business organization. The choice of specific field can be done otherwise as following in Abstracting and Indexing Page on this Website. As the all Global

Journals Inc. (US) are being abstracted and indexed (in process) by most of the reputed organizations. Topics of only narrow interest will not be accepted unless they have wider potential or consequences.

2. ETHICAL GUIDELINES

Authors should follow the ethical guidelines as mentioned below for publication of research paper and research activities.

Papers are accepted on strict understanding that the material in whole or in part has not been, nor is being, considered for publication elsewhere. If the paper once accepted by Global Journals Inc. (US) and Editorial Board, will become the copyright of the Global Journals Inc. (US).

Authorship: The authors and coauthors should have active contribution to conception design, analysis and interpretation of findings. They should critically review the contents and drafting of the paper. All should approve the final version of the paper before submission

The Global Journals Inc. (US) follows the definition of authorship set up by the Global Academy of Research and Development. According to the Global Academy of R&D authorship, criteria must be based on:

1) Substantial contributions to conception and acquisition of data, analysis and interpretation of the findings.

2) Drafting the paper and revising it critically regarding important academic content.

3) Final approval of the version of the paper to be published.

All authors should have been credited according to their appropriate contribution in research activity and preparing paper. Contributors who do not match the criteria as authors may be mentioned under Acknowledgement.

Acknowledgements: Contributors to the research other than authors credited should be mentioned under acknowledgement. The specifications of the source of funding for the research if appropriate can be included. Suppliers of resources may be mentioned along with address.

Appeal of Decision: The Editorial Board's decision on publication of the paper is final and cannot be appealed elsewhere.

Permissions: It is the author's responsibility to have prior permission if all or parts of earlier published illustrations are used in this paper.

Please mention proper reference and appropriate acknowledgements wherever expected.

If all or parts of previously published illustrations are used, permission must be taken from the copyright holder concerned. It is the author's responsibility to take these in writing.

Approval for reproduction/modification of any information (including figures and tables) published elsewhere must be obtained by the authors/copyright holders before submission of the manuscript. Contributors (Authors) are responsible for any copyright fee involved.

3. SUBMISSION OF MANUSCRIPTS

Manuscripts should be uploaded via this online submission page. The online submission is most efficient method for submission of papers, as it enables rapid distribution of manuscripts and consequently speeds up the review procedure. It also enables authors to know the status of their own manuscripts by emailing us. Complete instructions for submitting a paper is available below.

Manuscript submission is a systematic procedure and little preparation is required beyond having all parts of your manuscript in a given format and a computer with an Internet connection and a Web browser. Full help and instructions are provided on-screen. As an author, you will be prompted for login and manuscript details as Field of Paper and then to upload your manuscript file(s) according to the instructions.

To avoid postal delays, all transaction is preferred by e-mail. A finished manuscript submission is confirmed by e-mail immediately and your paper enters the editorial process with no postal delays. When a conclusion is made about the publication of your paper by our Editorial Board, revisions can be submitted online with the same procedure, with an occasion to view and respond to all comments.

Complete support for both authors and co-author is provided.

4. MANUSCRIPT'S CATEGORY

Based on potential and nature, the manuscript can be categorized under the following heads:

Original research paper: Such papers are reports of high-level significant original research work.

Review papers: These are concise, significant but helpful and decisive topics for young researchers.

Research articles: These are handled with small investigation and applications

Research letters: The letters are small and concise comments on previously published matters.

5.STRUCTURE AND FORMAT OF MANUSCRIPT

The recommended size of original research paper is less than seven thousand words, review papers fewer than seven thousands words also.Preparation of research paper or how to write research paper, are major hurdle, while writing manuscript. The research articles and research letters should be fewer than three thousand words, the structure original research paper; sometime review paper should be as follows:

Papers: These are reports of significant research (typically less than 7000 words equivalent, including tables, figures, references), and comprise:

(a)Title should be relevant and commensurate with the theme of the paper.

(b) A brief Summary, "Abstract" (less than 150 words) containing the major results and conclusions.

(c) Up to ten keywords, that precisely identifies the paper's subject, purpose, and focus.

(d) An Introduction, giving necessary background excluding subheadings; objectives must be clearly declared.

(e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition; sources of information must be given and numerical methods must be specified by reference, unless non-standard.

(f) Results should be presented concisely, by well-designed tables and/or figures; the same data may not be used in both; suitable statistical data should be given. All data must be obtained with attention to numerical detail in the planning stage. As reproduced design has been recognized to be important to experiments for a considerable time, the Editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned un-refereed;

(g) Discussion should cover the implications and consequences, not just recapitulating the results; conclusions should be summarizing.

(h) Brief Acknowledgements.

(i) References in the proper form.

Authors should very cautiously consider the preparation of papers to ensure that they communicate efficiently. Papers are much more likely to be accepted, if they are cautiously designed and laid out, contain few or no errors, are summarizing, and be conventional to the approach and instructions. They will in addition, be published with much less delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and to make suggestions to improve briefness.

It is vital, that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

Format

Language: The language of publication is UK English. Authors, for whom English is a second language, must have their manuscript efficiently edited by an English-speaking person before submission to make sure that, the English is of high excellence. It is preferable, that manuscripts should be professionally edited.

Standard Usage, Abbreviations, and Units: Spelling and hyphenation should be conventional to The Concise Oxford English Dictionary. Statistics and measurements should at all times be given in figures, e.g. 16 min, except for when the number begins a sentence. When the number does not refer to a unit of measurement it should be spelt in full unless, it is 160 or greater.

Abbreviations supposed to be used carefully. The abbreviated name or expression is supposed to be cited in full at first usage, followed by the conventional abbreviation in parentheses.

Metric SI units are supposed to generally be used excluding where they conflict with current practice or are confusing. For illustration, 1.4 l rather than 1.4 × 10-3 m3, or 4 mm somewhat than 4 × 10-3 m. Chemical formula and solutions must identify the form used, e.g. anhydrous or hydrated, and the concentration must be in clearly defined units. Common species names should be followed by underlines at the first mention. For following use the generic name should be constricted to a single letter, if it is clear.

Structure

All manuscripts submitted to Global Journals Inc. (US), ought to include:

Title: The title page must carry an instructive title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) wherever the work was carried out. The full postal address in addition with the e-mail address of related author must be given. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining and indexing.

Abstract, used in Original Papers and Reviews:

Optimizing Abstract for Search Engines

Many researchers searching for information online will use search engines such as Google, Yahoo or similar. By optimizing your paper for search engines, you will amplify the chance of someone finding it. This in turn will make it more likely to be viewed and/or cited in a further work. Global Journals Inc. (US) have compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Key Words

A major linchpin in research work for the writing research paper is the keyword search, which one will employ to find both library and Internet resources.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy and planning a list of possible keywords and phrases to try.

Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and near) that enable you to expand or narrow your affords. Tips for research paper while preparing research paper are very helpful guideline of research paper.

Choice of key words is first tool of tips to write research paper. Research paper writing is an art.A few tips for deciding as strategically as possible about keyword search:

- One should start brainstorming lists of possible keywords before even begin searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

Acknowledgements: Please make these as concise as possible.

References

References follow the Harvard scheme of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

References to information on the World Wide Web can be given, but only if the information is available without charge to readers on an official site. Wikipedia and Similar websites are not allowed where anyone can change the information. Authors will be asked to make available electronic copies of the cited information for inclusion on the Global Journals Inc. (US) homepage at the judgment of the Editorial Board.

The Editorial Board and Global Journals Inc. (US) recommend that, citation of online-published papers and other material should be done via a DOI (digital object identifier). If an author cites anything, which does not have a DOI, they run the risk of the cited material not being noticeable.

The Editorial Board and Global Journals Inc. (US) recommend the use of a tool such as Reference Manager for reference management and formatting.

Tables, Figures and Figure Legends

Tables: Tables should be few in number, cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g. Table 4, a self-explanatory caption and be on a separate sheet. Vertical lines should not be used.

Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.

Preparation of Electronic Figures for Publication

Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. Please give the data for figures in black and white or submit a Color Work Agreement Form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution (at final image size) ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs) : >350 dpi; figures containing both halftone and line images: >650 dpi.

Color Charges: It is the rule of the Global Journals Inc. (US) for authors to pay the full cost for the reproduction of their color artwork. Hence, please note that, if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a color work agreement form before your paper can be published.

Figure Legends: Self-explanatory legends of all figures should be incorporated separately under the heading 'Legends to Figures'. In the full-text online edition of the journal, figure legends may possibly be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should notify the reader, about the key aspects of the figure.

6. AFTER ACCEPTANCE

Upon approval of a paper for publication, the manuscript will be forwarded to the dean, who is responsible for the publication of the Global Journals Inc. (US).

6.1 Proof Corrections

The corresponding author will receive an e-mail alert containing a link to a website or will be attached. A working e-mail address must therefore be provided for the related author.

Acrobat Reader will be required in order to read this file. This software can be downloaded

(Free of charge) from the following website:

www.adobe.com/products/acrobat/readstep2.html. This will facilitate the file to be opened, read on screen, and printed out in order for any corrections to be added. Further instructions will be sent with the proof.

Proofs must be returned to the dean at dean@globaljournals.org within three days of receipt.

As changes to proofs are costly, we inquire that you only correct typesetting errors. All illustrations are retained by the publisher. Please note that the authors are responsible for all statements made in their work, including changes made by the copy editor.

6.2 Early View of Global Journals Inc. (US) (Publication Prior to Print)

The Global Journals Inc. (US) are enclosed by our publishing's Early View service. Early View articles are complete full-text articles sent in advance of their publication. Early View articles are absolute and final. They have been completely reviewed, revised and edited for publication, and the authors' final corrections have been incorporated. Because they are in final form, no changes can be made after sending them. The nature of Early View articles means that they do not yet have volume, issue or page numbers, so Early View articles cannot be cited in the conventional way.

6.3 Author Services

Online production tracking is available for your article through Author Services. Author Services enables authors to track their article - once it has been accepted - through the production process to publication online and in print. Authors can check the status of their articles online and choose to receive automated e-mails at key stages of production. The authors will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the manuscript.

6.4 Author Material Archive Policy

Please note that if not specifically requested, publisher will dispose off hardcopy & electronic information submitted, after the two months of publication. If you require the return of any information submitted, please inform the Editorial Board or dean as soon as possible.

6.5 Offprint and Extra Copies

A PDF offprint of the online-published article will be provided free of charge to the related author, and may be distributed according to the Publisher's terms and conditions. Additional paper offprint may be ordered by emailing us at: editor@globaljournals.org .

Before start writing a good quality Computer Science Research Paper, let us first understand what is Computer Science Research Paper? So, Computer Science Research Paper is the paper which is written by professionals or scientists who are associated to Computer Science and Information Technology, or doing research study in these areas. If you are novel to this field then you can consult about this field from your supervisor or guide.

TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

1. Choosing the topic: In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

2. Evaluators are human: First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

3. Think Like Evaluators: If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

4. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

5. Ask your Guides: If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

6. Use of computer is recommended: As you are doing research in the field of Computer Science, then this point is quite obvious.

7. Use right software: Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.

8. Use the Internet for help: An excellent start for your paper can be by using the Google. It is an excellent search engine, where you can have your doubts resolved. You may also read some answers for the frequent question how to write my research paper or find model research paper. From the internet library you can download books. If you have all required books make important reading selecting and analyzing the specified information. Then put together research paper sketch out.

9. Use and get big pictures: Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

10. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

11. Revise what you wrote: When you write anything, always read it, summarize it and then finalize it.

12. Make all efforts: Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

13. Have backups: When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

14. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

15. Use of direct quotes: When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

16. Use proper verb tense: Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

17. Never use online paper: If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

18. Pick a good study spot: To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

19. Know what you know: Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

20. Use good quality grammar: Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

21. Arrangement of information: Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

23. Multitasking in research is not good: Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

25. Take proper rest and food: No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

26. Go for seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.

Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

· Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

Title Page:

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.

Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

Procedures (Methods and Materials):

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

Please carefully note down following rules and regulation before submitting your Research Paper to Global Journals Inc. (US):

Segment Draft and Final Research Paper: You have to strictly follow the template of research paper. If it is not done your paper may get rejected.

- The **major constraint** is that you must independently make all content, tables, graphs, and facts that are offered in the paper. You must write each part of the paper wholly on your own. The Peer-reviewers need to identify your own perceptive of the concepts in your own terms. NEVER extract straight from any foundation, and never rephrase someone else's analysis.

- Do not give permission to anyone else to "PROOFREAD" your manuscript.

- Methods to avoid Plagiarism is applied by us on every paper, if found guilty, you will be blacklisted by all of our collaborated research groups, your institution will be informed for this and strict legal actions will be taken immediately.)
- To guard yourself and others from possible illegal use please do not permit anyone right to use to your paper and files.

Criterion for Grading a Research Paper (Compilation) by Global Journals Inc. (US)

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals Inc. (US).

Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

Index

A

Angiofibromas · 27
Anosmia · 22

C

Choanal · 21, 22, 23, 25, 27
Corticotomies · 1

E

Elastomer · 42
Endodontics · 62
Erythematosus · 29
Ethmoidal · 21, 22, 26, 27
Ethmoidochoanal · 21

H

Histopathological · 22, 23, 25, 27

M

Mandibular · 7, 40

N

Nystagmus · 29, 31

O

Osteotomy · 1, 3, 5, 7, 9, 11, 13, 15, 17, 19

P

Periosteum · 2, 3, 7, 9, 11
Prosthodontics · 35, 38, 42

T

Tracheostomy · 65
Trophism · 2

V

Verticalmucosal · 2
Vinícius · 35, 38, 40, 42
Voxels · 35

Z

Zirconia · 40
Zucchelli · 2, 8

save our planet

Global Journal of Medical Research

Visit us on the Web at www.GlobalJournals.org | www.MedicalResearchJournal.org
or email us at helpdesk@globaljournals.org

ISSN 9755896

© Global Journals