

Spongstan with Nasopharyngeal Pack: New Ordinary Procedure Manage the Adenoidectomy Bleeding

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Abstract

Objective: To find out the frequency, prevalence, and epidemiological aspects of the adenoidectomy bleeding and share the new ordinary procedure to manage it by spongstan with the nasopharyngeal pack. Study Design: Cohort retrospective study. Setting: Academic tertiary care hospitals. Subject and Methods: A total of 23 adenoidectomy children's demographic data collection and analyzed who suffered from complications of bleeding in the department of Otolaryngology and Head-Neck Surgery, Comilla Medical College Hospital, and Comilla Medical Centre, concerned Clinic of Central Medical College from 01 July 2016 to 31 June 2019. Results: Incidence of adenoidectomy bleeding among total operative patients was 0.32

Index terms— adenoidectomy, bleeding, children, spongstan, nasopharyngeal pack.

1 I. Introduction

adenoid is a nasopharyngeal lymphoid aggregation of tissue which described by the Santorini and Wilhem Meyer in 17th and 18th century. The adenoid receives a rich arterial supply from branches of the facial and maxillary arteries and the thyrocervical trunk; venous drainage is to the internal jugular and facial veins [1]. From five months, it increases rapidly, most enlargements are seen in 07 years and after 15 years, it regresses [2]. As a part of Waldeyer's ring, adenoid has an important role in the development of antibodies and immunological memory [3]. Adenoidectomy between the ages of 04-10 years doesn't show any immunological deficiency [4]. Enlarged adenoids develop chronic nasal obstruction and obligate mouth breathing, causing the pathological manifestation of obstructive sleep apnea, rhinitis, rhinosinusitis, otitis media, otitis media with effusion and acute and chronic upper and lower respiratory tract infection [5]. A full pediatric ENT clinical history and excluding the family history of unusual bleeding or bruising, routine clotting screening may not confirm the mild Von willebrand disease [6]. Naso-endoscopy is the best process to assess the adenoid size, if not for the uncooperative children's adenoid size may be estimate by lateral x-ray of nasopharynx [7]. During surgery, mirror examination or palpation is a poor measurement of adenoid hypertrophy [8]. In the UK, 79.2% of surgeons use digital palpation and blind curettage, while only 8.1% use suction coagulation under direct vision [9]. Except for blind curettage and suction diathermy, other methods of adenoidectomy include coblation, microdebrider, and laser adenoidectomy, which has a high unit of cost [10] [11] [12]. The reactionary bleeding is rare, which occurs within 24 hours after adenoidectomy, showed less than 0.7% [13]. The management of reactionary bleeding is immediate transfer of the patient to operation theatre and postnasal packing, which left for 24 hours [14]. Due to aberrant ascending pharyngeal artery, secondary bleeding may occur, which is rare [15]. Otolaryngology and Head-Neck Surgery of the two tertiary care hospitals. Of them, 7099 patients got admitted to the hospitals for different types of operations, and adenoidectomy-tonsillectomy was 864. I did adenoidectomy-tonsillectomy of all patients. We followed the traditional method of adenoidectomy, digital palpation of the adenoid, and medialisation of the adenoid by finger dissection from both lateral sides. I used the proper size of St. Clair Thompson's curette for adenoidectomy in a neutral position without sand bag under the shoulder. After curette, I examined by

finger palpation to see any residual tissue present in the nasopharynx; if present, I curette again and again up to tissue removal. I placed wet ribbon gauze in the nasopharynx and placed a sand bag under the shoulder to extend the neck. I removed the gauze and see the bleeding point by retraction of the soft palate and uvula with anterior pillar retractor. I used the diathermy sucker nozzle to cauterize the bleeding point. When bleeding stops, I again placed ribbon gauze in the nasopharynx and tonsillectomy completed by unipolar diathermy. After complete tonsillectomy, I remove the gauze from adenoid and again recheck the nasopharynx for bleeding. I got 23 patients bleeding from adenoid in which primary bleeding was 04, reactionary bleeding 18, and secondary 01. 22 primary and reactionary bleeding managed by spongstan which trade name is cutanplast made in Italy, with usual ribbon gauze pack, 01 secondary bleeding managed by ribbon gauze pack only.

2 II. Methods and Materials

The primary bleeding occurs in the operation table may be under anesthesia after complete the operation or reversal from anesthesia, noticed by the anesthetist. I again placed the Boyle-Davis mouth gag with a tongue blade and retracted the uvula and soft plate to see the bleeding point and trying to cauterize the bleeding point with diathermy sucker nozzle. If failed placed the spogstan in the nasopharynx, then wet ribbon gauze from choanae to every side of nasopharynx up to the soft palate, which creates pressure on nasopharynx to stop bleeding and cutting the rest of gauze piece. So externally, nothing is available to see. I counseled the parents that the child is breathing through the mouth, and they awake the whole night to see the child breathing normally or feeling any difficulties through the mouth or any bleeding coming through the angle of mouth or nose. If it occurs, they promptly notice it to the Nurse or Doctors. It didn't occur during the period of study. The patient stayed the whole night in the postoperative room. I removed the nasopharyngeal pack with spongstan after 18 to 24 hours without any bleeding.

The reactionary bleeding occurs up to 24 hours after the patient transfer from operation theatre usually occurs half an hour or one hour after the operation. The child instantly transfers to the operation theatre and again placed Boyle -Davis mouth gag as before and the management like the primary bleeding without anesthesia. The secondary bleeding is after 24 hours of operation up to the healing of the wound. In the secondary bleeding, the patient came at the 10 th postoperative day. I suction, and clean the patient's nose, nasopharynx and mouth to establish the bleeding point from tonsil or adenoid. After confirmation, I placed a ribbon gauze pack in the nasopharynx and removed after 24 hours. At the same time started the parental antibiotic, test the hemoglobin which showed 06 gm/dl and transfused one unit of blood. The following information collected about the patient: Gender, age, types of bleeding, presenting features, personal history, laboratory investigation, radiological grading of adenoid size, and treatment. Descriptive statistics used to calculate the data.

3 III. Results

Incidence of adenoidectomy bleeding among total operative patients was 0.32%, adenoidectomy-Tonsillectomy patients 2.66%, and the yearly prevalence of 33.35%. Off 23, the male was 09 (39.13%), and the female 14 (60.87%), 0-5 years were 01 (??

4 IV. Discussion

Adenoidectomy is the most frequently performed surgical procedure. In the present study, the incidence of bleeding was 0.32% and 2.66 % in a different point of view supported by Maniglia, Zwack, and Windfuhr et al. series showed incidence accordingly 1989 0.28%, 1997 0.98%, and 2005 1.5% [16] [17] [18].

Considering gender epidemiology, the females (60.87%) were higher than the males (39.13%) in our work held up by ??nolder [14]. The postnasal pack sometimes made the children's parents and attendants feared and furious in our country. The nasopharyngeal pack and spongstan in adenoidectomy bleeding are safe for the surgeon, patient, and also patient's attendant.

The other procedure of adenoidectomy like coblation, microdebrider, and laser has a high cost, but less complication isn't cost-effective like our outlying tertiary care hospital ??10] [11] [12]. The patient in Government Comilla Medical College Hospital may spend a maximum of 50 USD and in Private Clinic 150-300 USD for their operation.

5 V. Conclusion

The adenoidectomy operation is an ordinary procedure for surgeons. Complications are rare, but bleeding is hazardous both for surgeons, patient, and parents. Demographic data reproduced females and delayed adenoidectomy after ten years was risky for bleeding. Maximum surgeons of the world practiced the adenoidectomy by blind curettage method and management of bleeding by the postnasal pack which is also our practice. Except postnasal pack, I used nasopharyngeal pack and Spongstan in two tertiary care hospitals showed safe and authentic procedures both for surgeons and patients. Funding: Nothing any source.



Figure 1: FiguresJ



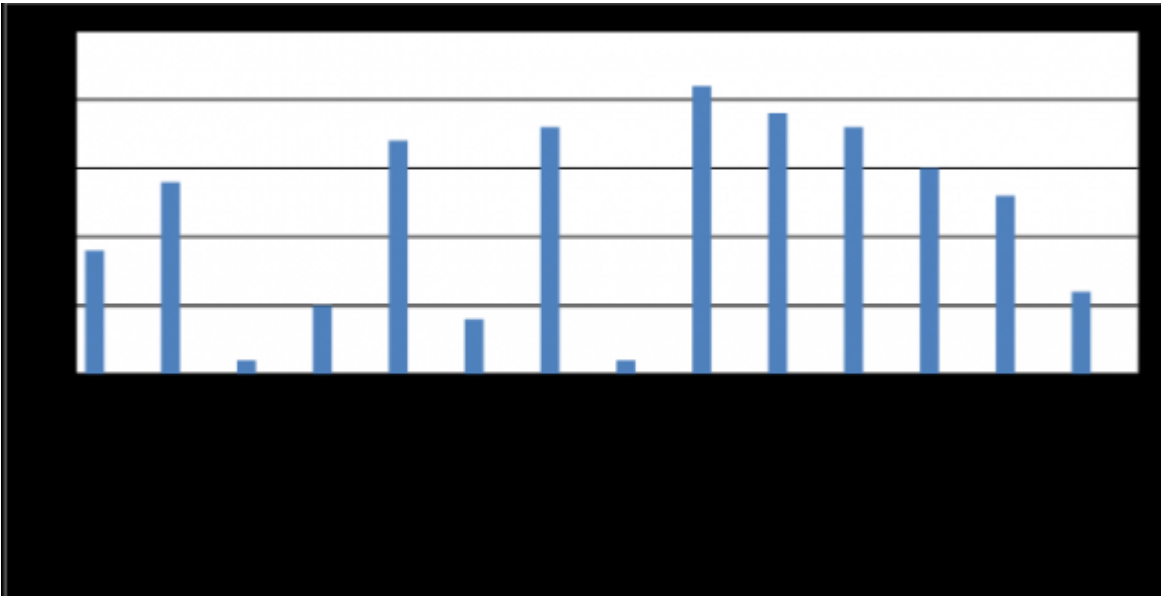
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Figure 2: Figure- 1 :



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Figure 3: Figure- 2 :Figure- 3 :



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Figure 4: Figure- 4 : 1 .Figure- 5 : 1 .

epidemiological aspects of the adenoidectomy bleeding and share the new ordinary procedure to manage it by spongstan with the nasopharyngeal pack. Study Design:

Subject and Methods: A total of 23 adenoidectomy children's demographic data collection and analyzed who suffered from complications of bleeding in the department of Otolaryngology and Head-Neck Surgery, Comilla Medical College Hospital, and Comilla Medical Centre, concerned Clinic of Central Medical College from 01 July 2016 to 31 June 2019.

Results: Incidence of adenoidectomy bleeding among total operative patients was 0.32%, adenoidectomy-Tonsilleectomy patients 2.66%, and the yearly prevalence of 33.35%. Of them, the male was 09 (39.17%), and the female 14 (60.87%), 11-15 years children have highest bleeding complications was 17 (73.91%), commonest presenting features was nasal obstruction (91.30%), mouth breathing (82.61%), and hearing loss (78.26%). Maximum patient came from the village was 14 (60.82%). Laboratory investigations included complete blood count (CBC), Bleeding time (BT), Clotting time (CT), Prothrombin time (PT), and Activated partial thromboplastin time (APTT) for all children. Radiological investigations exhibited according to Cohen et al. grade-4 was highest presentation 12 (52.18%). I used St. Clair Thompson's adenoid curette to remove the adenoid tissue following the conventional method. The type of bleeding, Primary was 04 (17.39%), reactionary 18 (78.26%), and Secondary 01(4.35%). The primary and reactionary 22 (95.65%) patients treated by Spongstan and usual wet ribbon gauze pack, and secondary 01 (4.35%) patient managed by an only nasopharyngeal pack and changed the antibiotic.

Keywords:

spongstan, nasopharyngeal pack.

adenoidectomy,

[Note: Conclusion: Every surgical procedure has a common complication of bleeding.]

Figure 5:

McCormick showed complication rate was 2-10% and mortality rates about 1 in 16000. Windfuhr JP exhibited secondary bleeding occur 7-10 postoperative days, held up our study, the patient came with bleeding at 10 th postoperative day. Our secondary bleeding rate was 4.35% carried out by McCormick's work.

The presenting feature of adenoid children was 80% to 95% of nasal obstruction and mouth breathing, 60% to 80% hearing loss and snoring present in our study kept up by Tos et al. work, showed nasal obstruction and hearing loss above 90 % and other symptoms above 70% [26].

The personal history revealed most of our patient came from village and slum dweller accordingly 60.87 % and 30.43% carried out by Ajayan PV et al. series reported the majority of patient was poor class [27].

The laboratory investigation included for all 23 (100%) the patients was CBC, BT, CT, PT and APTT kept up by Ryczer T, Randall DA and Brum MR et al. study [20] [28] [29].

The nasopharynx lateral view showed the adenoid size reported by Cohen et al. research, which presented in our paper, grade-2 was 13.04%, grade-3 34.78%, and grade-4 52.18% near to Wormald PJ et al. report [30] [31].

About the postoperative bleeding, cauterization, and postnasal pack was recommended by various research works like Milosevic DN, Lowe D, and Tonkinson A et al. study, which showed the effective treatment to stop bleeding carried out by our study [33] [34]. I added Spongstan or Cutanplast, which absorbable gelsponge nasopharyngeal pack strengthening the work of postnasal pack used normal wet ribbon gauze, placing layer by layer over the nasopharynx over the Spongstan from choanae to hard palate, which created sufficient pressure to stop the bleeding. Tzifa et al. study showed 87% surgeon managed primary and reactionary bleeding by postnasal pack

Figure 6:

98	6	Year
99	7	Global
100	¹	

.1 Conflict of interest:

There is no any conflict of interest.

Ethical Approval: The study was approved by Institutional Ethical Committee.

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