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Surgeries and Cardiovascular System



Study of Open Haemorrhoidectomy

Patient with Situs Inversus Abdominalis

Highlights

Management of Duplicated Gallbladder

Finding of Perforated Jejunal Diverticulum

Discovering Thoughts, Inventing Future

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Contents of the Issue

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

1. Intraoperative Diagnosis and Management of Duplicated Gallbladder: A Case Report. *1-4*
2. A Case Report of Management of Intestinal Obstruction in a Patient with Situs Inversus Abdominalis. *5-8*
3. Resolution of Lower Urinary Tract Symptoms due to Benign Prostatic Hyperplasia after Transurethral Resection of Prostate in Northern Zone of Tanzania. *9-14*
4. Incidental Finding of Perforated Jejunal Diverticulum during Laparotomy for Suspected Peritonitis on Peritoneal Dialysis Catheter: A Case Report. *15-17*
5. Elastofibroma: Literature Review and Clinical Case Report. *19-24*
6. A Comparative Study of Open Haemorrhoidectomy with Stapler Haemorrhoidectomy (MIPH) in Relation to Immediate and Early Complications. *25-30*

v. Fellows
vi. Auxiliary Memberships
vii. Preferred Author Guidelines
viii. Index

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Intraoperative Diagnosis and Management of Duplicated Gallbladder: A Case Report

By Saeed Alshlwi, MD, Abdullah Alhudaib, MD, Ahmed Alanazi, MBBS, Munirah Alhassen, MBBS & Nouf Algahtani MBBS

Abdulrahman University

Abstract- Laparoscopic cholecystectomy (LC) is the most common elective laparoscopic procedure performed globally and is the gold standard treatment for gallstone disease. A double gallbladder (GB), with or without duplication of cystic duct is a very rare surgical encounter, with an incidence of approximately 1 in 4000–5000 population.

Symptomatic conditions of duplicated gallbladder are usually associated with cholecystitis, cholangitis, gallstone disease, and pancreatitis but are rarely diagnosed with carcinoma. Surgery is the ideal treatment choice of symptomatic duplicated gallbladder.

Duplication of the GB is rarely detected preoperatively, can lead to difficulties during surgery with increased likelihood of conversion to open surgery and complications. Our patients is a 45-year-old woman admitted as case of symptomatic cholelithiasis. Patient was admitted to the hospital for laparoscopic Cholecystectomy.

Keywords: case report- laparoscopic cholecystectomy - boyden classification - duplicated gallbladder - duplicated cystic duct.

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Saeed Alshlwi, MD [α], Abdullah Alhudaib, MD [σ], Ahmed Alanazi, MBBS [ρ], Munirah Alhassen, MBBS [ω] & Nouf Algahtani MBBS [¥]

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Symptomatic conditions of duplicated gallbladder are usually associated with cholecystitis, cholangitis, gallstone disease, and pancreatitis but are rarely diagnosed with carcinoma. Surgery is the ideal treatment choice of symptomatic duplicated gallbladder.

Duplication of the GB is rarely detected preoperatively, can lead to difficulties during surgery with increased likelihood of conversion to open surgery and complications. Our patients is a 45-year-old woman admitted as case of symptomatic cholelithiasis. Patient was admitted to the hospital for laparoscopic Cholecystectomy . Preoperative investigations showed that the patient had only Gallstones. Intraoperatively, patient was found to have double gallbladder with double cystic duct.

Subsequently, we successfully performed laparoscopic Cholecystectomy after carful identification and dissection of all these critical structures. The patient's recovery was uneventful, and she was discharged on day one post op.

All surgeons should be aware of this rare congenital abnormality of the gallbladder, in addition, thorough knowledge of the anatomical variations of the gallbladder and cystic duct greatly aids the surgeon in anticipating duplications, managing it accordingly and avoiding any complications.

Keywords: case report- laparoscopic cholecystectomy - boyden classification - duplicated gallbladder - duplicated cystic duct.

I. Introduction

Laparoscopic cholecystectomy (LC) is the most common elective laparoscopic procedure performed globally and is the gold standard treatment for gallstone disease. (1)

Variations in biliary anatomy are frequently encountered, Of these, a double gallbladder (GB), with or without duplication of cystic duct is a very rare surgical encounter, with an incidence of approximately 1 in 4000–5000 population (2)

Although duplicated gallbladder is found in both genders, its prevalence is higher in females. (3) Symptomatic conditions of duplicated gallbladder are usually associated with cholecystitis, cholangitis, gallstone disease, and pancreatitis but are rarely diagnosed with carcinoma.(3) Surgery is considered to be the ideal treatment choice of symptomatic duplicated gallbladder.(3) Failure to recognise the presence of a double GB in asymptomatic patient has required a repeat cholecystectomy for symptomatic gallstone disease in some instances to remove the missed second GB However, there is currently no indication for a cholecystectomy in the asymptomatic patient if duplication of the GB was to be detected incidentally during the course of imaging for unrelated conditions (2).

Duplication of the gall bladder may be associated with duplication of cystic duct; the anatomy should be precisely visualized during surgery to avoid injuries to other structures (4). The anatomic variations of gallbladder duplications were classified based on the location and number of cystic ducts. (5) Type 1 includes gallbladder duplication separated with a septum and two separate gallbladders that fuse in the neck to form a single cystic duct; type 2 includes accessory gallbladders with two different cystic ducts (6)

The symptoms and signs of gallbladder duplication are like those of patients with a single gallbladder.(7) When diagnosed incidentally, prophylactic cholecystectomy is not required (3). Nevertheless, appropriate diagnosis is necessary to avoid biliary tract injuries that can occur during surgeries, postoperative complications, or a need for a reparative procedure (3,4)

II. Case Presentation

41-year-old lady presented to the outpatient clinic on 30/06/0221 as a case of symptomatic cholelithiasis and obesity with a BMI of 36. Patient have undergone 4 C-sections that last one was 2 years ago. She started complaining of right upper quadrant pain episodes radiating to the back that was triggered by fatty food with no attacks of nausea/vomiting, dark urine, pale stool or jaundice. Her pre-operative liver function test was unremarkable. The biliary ultrasound that was

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done on 07/07/2022 showed a gallbladder with average distention showing multiple mobile echogenic stones casting shadows with reserved wall thickness and no pericholecystic collection, CBD was unremarkable. Based on that; laparoscopic cholecystectomy was planned.

Intraoperatively, the Pneumoperitoneum was created through a closed technique and insertion of the optical ports under vision in the left subcostal space. Three more secondary trocars were inserted.

Extensive adhesions between the gallbladder and the omentum were identified. The fundus of the gallbladder was retracted over the doom of the liver, and it was difficult due to large sized double looking gallbladder and the infundibulum was retracted in lateral direction exposing the triangle of calot. Adhesions were lysed sharply with gentle traction and Retrograde dissection was performed over the peritoneum overlying the infundibulum at which the cystic artery and double tubed cystic duct were identified then circumferential dissection was done and double clipping of both cystic duct and cystic artery were done. Afterheat, the gallbladder was then excised from its hepatic peritoneal attachment by electrocautery as the dissection proceeded. open examining the gallbladder after retrieving it, it was found to have double gallbladder with double cystic duct as it was confirmed intraoperatively No associated artery was identified no bile leak was found the remainder of the operation was routine. The patient's recovery was uneventful, and she was discharged on day one post op.

The gross specimen of histopathology was found to be: V-type gallbladder duplication. The first gallbladder measures 8.0 x 3.0 cm and 0.1 cm wall thickness. The second one measures 6.5 x 2.0 and 1.0 cm wall thickness. There is one stone entrapped in the neck measuring 0.3 cm. The first gallbladder contains three stones with the biggest one measuring 0.6 cm. It has rigid wall and flat pale mucosa with stone dust. The second gallbladder has green velvety mucosal surface with no stone. The serosal surface of both are smooth and glistening. Diagnosis for both first and second gallbladder shows chronic calculus cholecystitis.

III. Discussion

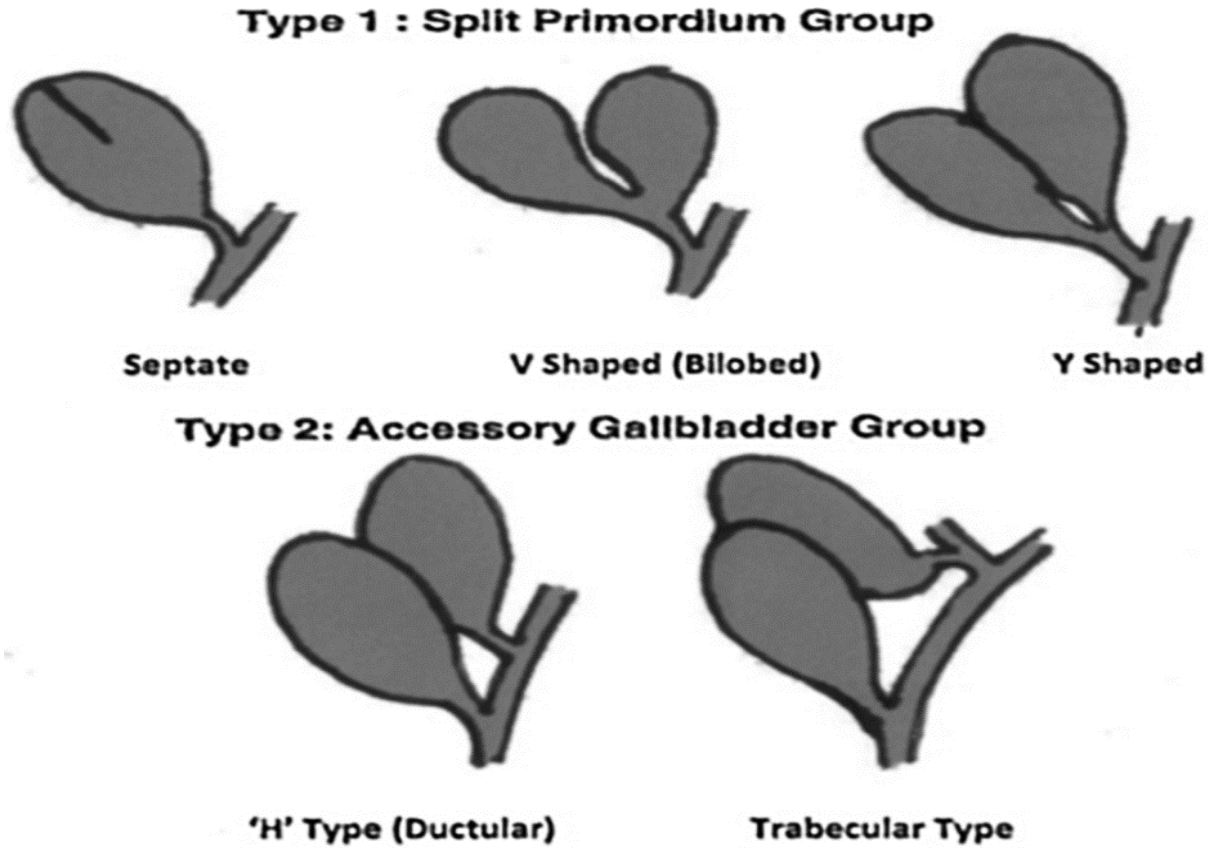
Gallbladder duplication is a rare congenital anomaly (3). Anticipation and recognition of this anomaly and its various types are important to avoid surprises therefore preoperative diagnosis plays a crucial role in planning surgery and preventing possible surgical complications or re-operation if accessory gallbladder has been overlooked during initial surgery (3,4,7).

1 per 4000 individuals, occurring nearly twice in women than in men (2). Duplication of gallbladder occurs during the 5th or early 6th embryonic week during which a single primordium bifurcates (1). The time that bifurcation occurs determines the type of duplication that will occur i.e., the earlier the bifurcation; the more complete the degree of duplication (1). A true accessory gallbladder arises from two separate primordia on the biliary tree and possesses a separate cystic duct (5). Histologically, gallbladder duplication is differentiated from a choledochal cyst by the presence of a muscular wall with an epithelial lining (3). In 1929 Boyden reported 20 cases of double gallbladder he found in the literature from 1674 to 1929, He described a system to classify gallbladder duplications including “vesica fellea divisa”(bilobed gallbladder that has one cystic duct) and “vesica felleaduplex” (true gallbladder duplication) (1).

The latter is subclassified into “Y-shaped type” (two cystic ducts uniting before entering the common bile duct), and “H-shaped or ductular type” (two cystic ducts enter separately into the common bile duct) (Table1) (5). In 1936, Gross described congenital abnormalities of gallbladder and classified them into six types labelled A–F (4). In 1977, Har-laftis et al. further modified the classification by describing two main types based on morphology and embryogenesis (2). Although his classification is the most universally accepted, a modified Harlaftis classification has been reported in the literature by describing a left trabecular variant to type 2 classification (6). Has-san et al. reported an accessory gallbladder branching from both the left and right hepatic ducts (7). Causey et al. reported a new variant in which a septated type 1 gallbladder has 2 cystic ducts(8). Our case represents V-shaped type.

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Table 1: Boyden's system classification of duplicated GB



Diagnosing duplicated gallbladder preoperatively greatly improves the surgical outcome and reduce the risk of complications (3,4). In addition, thorough knowledge of the anatomical variations of the gallbladder and cystic duct greatly aids the surgeon in anticipating duplications, managing it accordingly and avoiding any complications (7,8,9).

All surgeons should be aware of this rare congenital abnormality of the gallbladder, which requires particular attention to preoperative radiographic studies and special attention to the biliary ductal and arterial anatomy during cholecystectomy.

IV. Conclusion

Duplication of the gallbladder is a rare congenital abnormality, which requires special attention to the biliary ductal and arterial anatomy. Furthermore, the preoperative diagnosis in most of cases cannot be achieved. Failure to recognise the presence of a double GB in asymptomatic patient has required a repeat cholecystectomy for symptomatic gallstone disease in some instances to remove the missed second GB [8]. However, there is currently no indication for a cholecystectomy in the asymptomatic patient if duplication of the GB was to be detected incidentally during imaging for unrelated conditions.

Abbreviations:

LC Laparoscopic Cholecystectomy

GB Gallbladder

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Monira Khalid Alhasan: Concept and design of study, data collection, literature review, drafting, revision

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References Références Referencias

1. Harding T, Hannan E, Brosnan C, Duggan W, Ryan D, Stafford A, et al. The dilemma of the duplicated cystic duct: A case report. Journal of Surgical Case Reports. 2020; 2020(6), https://doi.org/10.1093/jscr/rjaa161.
2. Musleh MG, Burnett H, Rajashanker B, Ammori BJ. Laparoscopic double cholecystectomy for duplicated gallbladder: A case report. International Journal of Surgery Case Reports. 2017; 41: 502–4, https://doi.org/10.1016/j.ijscr.2017.11.046.
3. Bawazir AO, Bawazir OA, Bawazir RO. A pediatric case of double gallbladder with gallstone. Saudi Medical Journal. 2021; 42(4): 441–4, https://doi.org/10.15537/smj.2021.42.4.20200534.
4. Hassan Arif S, Hussein IS, Mohammed AA. Duplicated gall bladder with gall bladder polyp presenting with cholecystitis: Case report with literature review. International Journal of Surgery Case Reports. 2019; 60: 103–5, https://doi.org/10.1016/j.ijscr.2019.06.002.
5. Singh JP. Duplication of the gallbladder as an operative surprise: A case report with review of the literature. Case Reports in Surgery. 2021; 2021: 1–5, https://doi.org/10.1155/2021/6668302.
6. Kabul Gürbulak E, Özşahin H, Düzköylü Y, Akgün IE, Battal M, Gürbulak B. Single incision laparoscopic cholecystectomy for gallbladder duplication. Case Reports in Surgery. 2015; 2015: 1–4, https://doi.org/10.1155/2015/589313.
7. Pillay Y. Gallbladder duplication. International Journal of Surgery Case Reports. 2015; 11: 18–20, https://doi.org/10.1016/j.ijscr.2015.04.002.
8. Al Rawahi A, Al Azri Y, Al Jabri S, Alfadli A, Al Aghbari S. Successful laparoscopic management of duplicate gallbladder: A case report and review of literature. International Journal of Surgery Case Reports. 2016; 21: 142–6, https://doi.org/10.1016/j.ijscr.2016.03.002.

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A Case Report of Management of Intestinal Obstruction in a Patient with Situs Inversus Abdominalis

By El Wassi Anas

Abstract- Situs inversus totalis is a rare congenital malformation that results in mirror positioning of the thoracic and abdominal organs. Situs inversus abdominalis is a right-left inversion limited to the abdomen; The association of situs inversus with intestinal band occlusion is very rare; We report a case of acute intestinal obstruction associated with situs inversus abdominalis, the diagnosis was confirmed by abdominopelvic CT scan, and the treatment consisted of a gallbladder resection with anastomosis, with good postoperative results.

Keywords: *situs inversus abdominalis, congenital anomaly, intestinal obstruction, surgery.*

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Keywords: situs inversus abdominalis, congenital anomaly, intestinal obstruction, surgery.

I. Introduction

Situs inversus totalis is a rare autosomal recessive condition (1) (1 in 8,500) (2-3) that results in mirror positioning of the thoracic and abdominal organs.; Situs inversus abdominalis, also known as situs inversus with levocardia or left-sided heart, is a condition with right-left inversion limited to the abdomen (4-5). SIA is a recognized cause of obstruction in the pediatric population due to intestinal abuse; Despite, this reason of acute surgical emergencies in adults is extremely rare; this case describes a small bowel obstruction in an adult patient with SIA (2).

II. Case Presentation

The patient was 67 years old, with no previous pathological history, and was admitted to the surgical emergency room for an occlusive syndrome of vomiting, generalized abdominal pain, and cessation of food and gas that had been evolving for three days; Clinical examination revealed a conscious patient with tachycardia at 120 bpm, BP: 100/60 mmHg, temperature of 37.3, distended abdomen and tympanic with generalized abdominal tenderness; on rectal examination, the rectal ampulla was empty without palpable mass. Abdominal radiography showed grelicular hydroaeric hydroaerobic. Abdominopelvic CT showed a bowel obstruction upstream of an area of hypogastric caliber disparity, with a complete abdominal situs inversus with the liver, and portal trunk visible on the left, spleen and, stomach visible on the right and heart in place.



Fig. 1: Situs inversus abdominalis: stomach on the right, liver and gallbladder on the left

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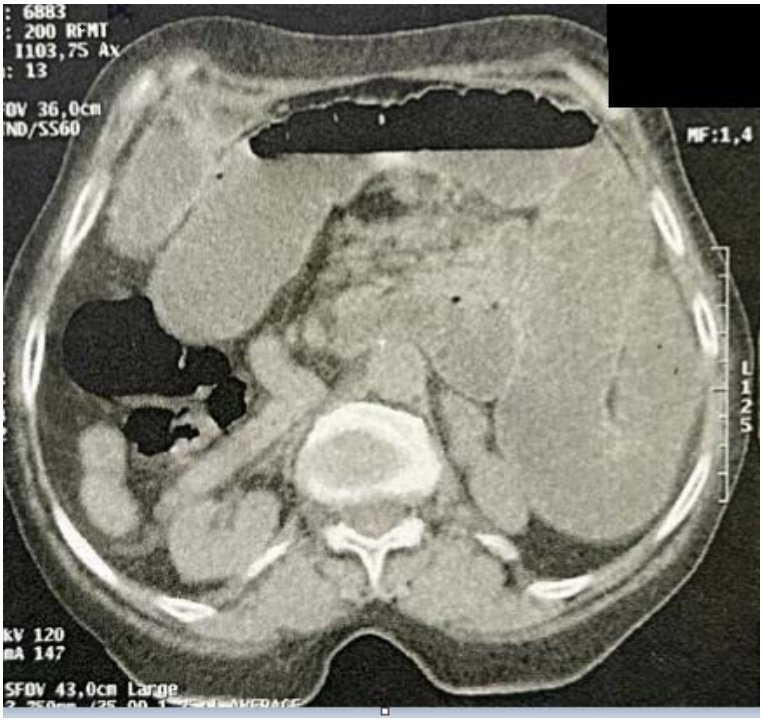


Fig. 2: Small bowel obstruction and situs inversus abdominalis

The patient was operated on in the emergency room after resuscitation measures. The surgical exploration found a 4 cm dilatation of the bowel upstream of a gremo-mesenteric flange at 1.80 m from the duodenojejunal angle and 50 cm from the ileocaecal junction with necrosis of 1 m of the small bowel and the presence of a complete abdominal situs inversus and common mesentery. The procedure consisted of segmental resection of 1m of the small intestine with necrosis of the small intestine and a small intestine anastomosis. The postoperative course was simple. The patient was discharged from the hospital on the fifth day and recovered four months later.



Fig. 3: Intraoperative images showing bowel necrosis

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Fig. 4: Intraoperative images showing the stomach on the right, the liver and gallbladder on the left confirming the situs inversus abdominalis.

III. Discussion

SIT is a rare congenital malformation (1-6), first reported by Fabricius in 1600 (7), characterized by an inverted position of all viscera, including dextrocardia; the normal lung anatomy is inverted; The liver and gallbladder are located on the left side, and the spleen and stomach are on the right side (5).

The etiology of situs inversus has not been fully elucidated; studies have shown that it is related to genetic factors, changes in chromosome structure and number (8-6-9), maternal diabetes, and exposure to retinoic acid (10). In our patient no associated congenital anomalies were identified.

Some authors have reported that 60% of patients with situs inverus have other congenital anomalies of the gastrointestinal tract, such as gallbladder or intestinal atresia, splenic agenesis or colonic duplication. These anomalies manifest themselves in childhood, which leads to early diagnosis, if not prenatal diagnosis (8-3-10-5). Congenital heart defects are present in about 5-10% of patients (3).

Situs inverus can be asymptomatic and diagnosed incidentally during laparotomy or autopsy (5), and its revelation by occlusive syndrome would be a rare event (5-8), and its revelation by an occlusive syndrome would be a rare event (8). This is the case of our patient; she was asymptomatic and did not know that she was carrying a situs inversus abdominalis (8); and, it was the abdominal CT scan requested to support the diagnosis of intestinal obstruction, which allowed the discovery of the diagnosis of SIA by showing a reversal of the position of the abdominal viscera (8). This paraclinical examination is the critical examination to confirm the diagnosis of this anomaly.

In the literature, three cases of small bowel obstruction have been documented in adult patients with situs inversus abdominalis. The first case, described by Brown et al. involved a 54-year-old woman who presented with a bowel obstruction secondary to a trans mesenteric internal hernia, the second case, by Mallick et al, described a bowel obstruction secondary to a volvulus on incomplete common mesentery. The third case is of a 38-year-old woman with a band occlusion bowel or internal hernia (2).

In general, surgery in a patient with SIA is difficult (11), so preoperative diagnosis is important to plan the surgical incision and abdominal procedures (12). Our patient was approached by median laparotomy, and exploration confirmed the diagnosis of visceral inversion (8).

IV. Conclusion

Situs inversus totalis is a rare and asymptomatic congenital malformation. The latter is the cause of diagnostic and therapeutic difficulties encountered in

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many clinical situations, especially if the patient is not known to be a carrier of this malformation (13).

The association of situs inversus with intestinal obstruction on flange is very rare. Preoperative diagnosis of situs inversus is important for appropriate incision placement and surgical planning (12).

References Références Referencias

1. Laparoscopic Roux-en-Y gastric bypass in a patient with situs inversus totalis: Case report, technical tips and review of the literature - PubMed [Internet]. [cité 14 févr 2023]. Disponible sur: https://pubmed.ncbi.nlm.nih.gov/29573597/
2. Jurat D, Teo A. Small bowel obstruction with situs inversus abdominalis: A case report. Int J Surg Case Rep. 2020; 73: 307-9.
3. Talabi AO, Sowande OA, Tanimola AG, Adejuyigbe O. Situs inversus in association with duodenal atresia. Afr J Paediatr Surg. 2013; 10(3): 275-8.
4. Kitasato A, Miyoshi T, Okamoto T, Yoneda A, Takeshita H, Kuroki T. Hepatocellular carcinoma with situs inversus totalis treated by caudate lobectomy: A case report. Int J Surg Case Rep. juin 2022; 95: 107204.
5. Gupta R, Soni V, Valse PD, Goyal RB, Gupta AK, Mathur P. Neonatal intestinal obstruction associated with situs inversus totalis: two case reports and a review of the literature. J Med Case Rep. 18 sept 2017; 11(1): 264.
6. Di Buono G, Maienza E, Buscemi S, Randisi B, Romano G, Agrusa A. Acute appendicitis in a patient with situs viscerum inversus totalis: Role of laparoscopic approach. A case report and brief literature review. Int J Surg Case Rep. 2020; 77S(Suppl): S29-33.
7. Bedioui H, Chebbi F, Ayadi S, Makni A, Fteriche F, Ksantini R, et al. Cholécystectomie laparoscopique chez un patient porteur d'un situs inversus. Annales de Chirurgie. 1 juill 2006;131(6): 398-400.
8. Ouédraogo NLM, Sanogo K, Traoré MS, Simporé J, Traoré SS. A case report of management of gastric perforation in situs inversus totalis in a 45-year-old adult. A case report. Int J Surg Case Rep. 2020; 74: 69-72.
9. Xiang D, He J, Fan Z, Xiong F, Liu G, Chen S, et al. Situs inversus totalis with solid pseudopapillary pancreatic tumor: A case report and review of literature. Medicine (Baltimore). mars 2018; 97(12): e0205.
10. Gupta R, Soni V, Valse PD, Goyal RB, Gupta AK, Mathur P. Neonatal intestinal obstruction associated with situs inversus totalis: two case reports and a review of the literature. J Med Case Rep. 18 sept 2017; 11: 264.
11. Shibata K, Kawamura H, Ichikawa N, Shibuya K, Yoshida T, Ohno Y, et al. Laparoscopic total gastrectomy for advanced gastric cancer in a patient with situs inversus totalis. Asian J Endosc Surg. févr 2018; 11(1): 39-42.
12. Chinya A, Naranje K, Mandelia A. Situs inversus abdominalis, polysplenia, complex jejunal atresia and malrotation in a neonate: A rare association. Int J Surg Case Rep. 2019; 56: 93-5.
13. Masson E. *Situs inversus totalis* révélé par un syndrome occlusif : à propos d'une observation [Internet]. EM-Consulte. [cité 14 févr 2023]. Disponible sur: https://www.em-consulte.com/article/1336514/situs-inversus-totalis-revele-par-un-syndrome-occl

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Resolution of Lower Urinary Tract Symptoms due to Benign Prostatic Hyperplasia after Transurethral Resection of Prostate in Northern Zone of Tanzania

By Mbarouk Mohammed, Sophia Kagoye, Aggrey William, Emmanuel Itambu, Rajabu Mramba, Kurenje Mbura, Samuel Kibona, Vitus Kajerero, Tyeni Ndemula & Onuigbo Cornelius

Kilimanjaro Christian Medical University

Abstract- *Background:* The gold standard for surgical treatment of LUTS brought on by BPH is transurethral resection of the prostate (TURP). The purpose of this treatment is to reduce LUTS brought on by BPH and enhance the patient's quality of life. When assessing this therapy objective and developing post-TURP care for individuals who still experience symptoms, evaluation of post-TURP symptomatic alleviation is essential.

Aim: To evaluate the patients' quality of life and the IPSS score for voiding and storage symptoms in relation to the remission of LUTS caused by BPH after TURP.

Methods: In the Institute of Urology of KCMC Moshi, Tanzania, patients who underwent TURP for symptomatic BPH participated in this 6-month hospital prospective observational study. We'll figure out the IPSS and QoLS before and after surgery.

Keywords: *lower urinary tract symptoms, benign prostate hyperplasia.*

GJMR-I Classification: *LCC: RC889*



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Results: The study consisted of 156 patients in total. With median IPPS of 28(21,31), QoLS of 6(5,6), Storage of 12(11,13), and voiding of 16(14,18), respectively, the majority of our patients experienced severe bothersome LUTS. Following a three-month follow-up, the overall IPSS score, QoLS, and both of its subscores (storage and voiding domain), all experienced significant declines. There was less decline in the voiding sub score when comparing the median changes in storage and voiding. This result demonstrates that the storage sub score changes more after TURP than the voiding sub score and may return to normal.

Conclusion: Reduction in IPSS, QoLS, and its subscore after TURP. Greater than voiding symptoms is the newer storage score. As a result, TURP continues to be the gold standard of care for patients with LUTS caused by BPE. However, greater health promotion efforts are needed to encourage patients to arrive at the urology clinic on time.

Keywords: lower urinary tract symptoms, benign prostate hyperplasia.

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I. Background

Many urologists in underdeveloped nations in Africa have the choice of surgical treatment or an indwelling urinary catheter because the majority of adult males with LUTS caused by BPH present late and have related comorbidities.[1] Storage symptoms, formerly known as irritative symptoms (frequency, urgency, and nocturia), and voiding symptoms, formerly known as obstructive symptoms (hesitancy, weak urine stream, intermittency, straining, and terminal dribbling) are the two categories for lower urinary tract symptoms caused by BPH. and post-micturition sensations (such as dribbling and a sense of incomplete emptying).[2]

When these patients first arrive, their main concern is to have their LUTS and BPH-related discomfort addressed. For this to be done successfully, accurate assessments of these patients and their classification using a validated scoring system are required. The most often used measurement for this is the International Prostate Symptom Score (IPSS).[3]

The symptoms are compiled and divided into three categories: mild (0–7), moderate (8–19), and severe (20–35). The following situations would benefit from the usage of a trustworthy IPSS: the classification of patients into various treatment modes, the exchange of information between patients and physicians, the recording of treatment outcomes, and the comparison of various treatment modalities.[3][4]

In carefully chosen patients, transurethral resection of the prostate (TURP) is the gold standard for treating symptomatic BPH. The medication helps to improve the quality of life score and resolve LUTS brought on by BPH.[5][6]

The purpose of this study was to evaluate the remission of LUTS caused by BPH following TURP in

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patients at our center using the IPSS, its voiding and storage symptoms sub score, and QoLS.

II. Methods

a) Study Design

In the Institute of Urology of KCMC Moshi, Tanzania, patients who underwent TURP for symptomatic BPH participated in this 6-month hospital prospective observational study.

b) Study Population and Data Sources

All symptomatic BPH patients who underwent TURP between June 2021 and January 2022. To rule out any possible differential diagnoses for BOO, the chosen patients underwent appropriate diagnostics, a history review, and physical examination. Trucut prostate biopsies are performed and sent for histological evaluation in patients with serum PSA levels greater than 4ng/ml and/or suspect DRE. To maintain uniformity, the translated IPSS was administered by a specific author who was fluent in the subject's original tongue (by a physician). Prostate transurethral resection was carried out while sedated. The same author who gave the preoperative IPSS reviewed them with IPSS in the clinic one month after the TURP. This was reiterated over the phone three months after the TURP.

The KCMUCo Research and Ethical council and the Institute of Urology at KCMC, respectively, provided their approval and consent for the conduct of this study from a retrospective evaluation. Information about the patients was kept completely private: In this investigation, no specific patient identifiers were employed.

c) Outcomes and Explanatory Variables

Irritable and obstructive symptoms (LUTS) were the primary study outcome, and IPSS, QoLS, Storage, and Voiding were used as the study's explanatory variables.

d) Statistical Analysis

The IPSS, QoLS, storage, and voiding sub scores were compared before and after 3 months after TURP using the paired t-test.

III. Results

The final data analysis included 156 patients who had had TURP in total. Table 1 displays the demographics of the patients. The majority of the patients had mean ages of 66, 6.7, 54.7, 13.1, and 24.2, 7.5, respectively, for prostate volume and weight of tissue removed. Baseline IPSS values for QoLS, storage, and voyaging were 28(21,31), 6(5,6), 12(11,13), and 16(14,18), respectively. Following a three-month follow-up, the overall IPSS score, QoLS, and both of its subscores (storage and voiding domain), all experienced significant declines.

There was less decline in the voiding sub score when comparing the median change in storage and voiding sub scores. This research demonstrates that the storage sub score changes more frequently after TURP than it does after voiding and may return to normal.

Table 1: Background characteristics of study participants (N= 156)

Characteristic	Frequency	Percentage
Age		
60 and below	29	18.6
Above 60	127	81.4
Mean±SD		
66±6.7		
Education level		
No/Primary education	47	30.1
Secondary education & above	109	69.9
Prostate volume (mls)		
40 and below	29	18.6
Bove 40	127	81.4
Mean±SD		
Weight of resected tissue (gm)		
25 and below	93	59.6
Above 25	63	40.4
Mean±SD		
24.2±7.5		

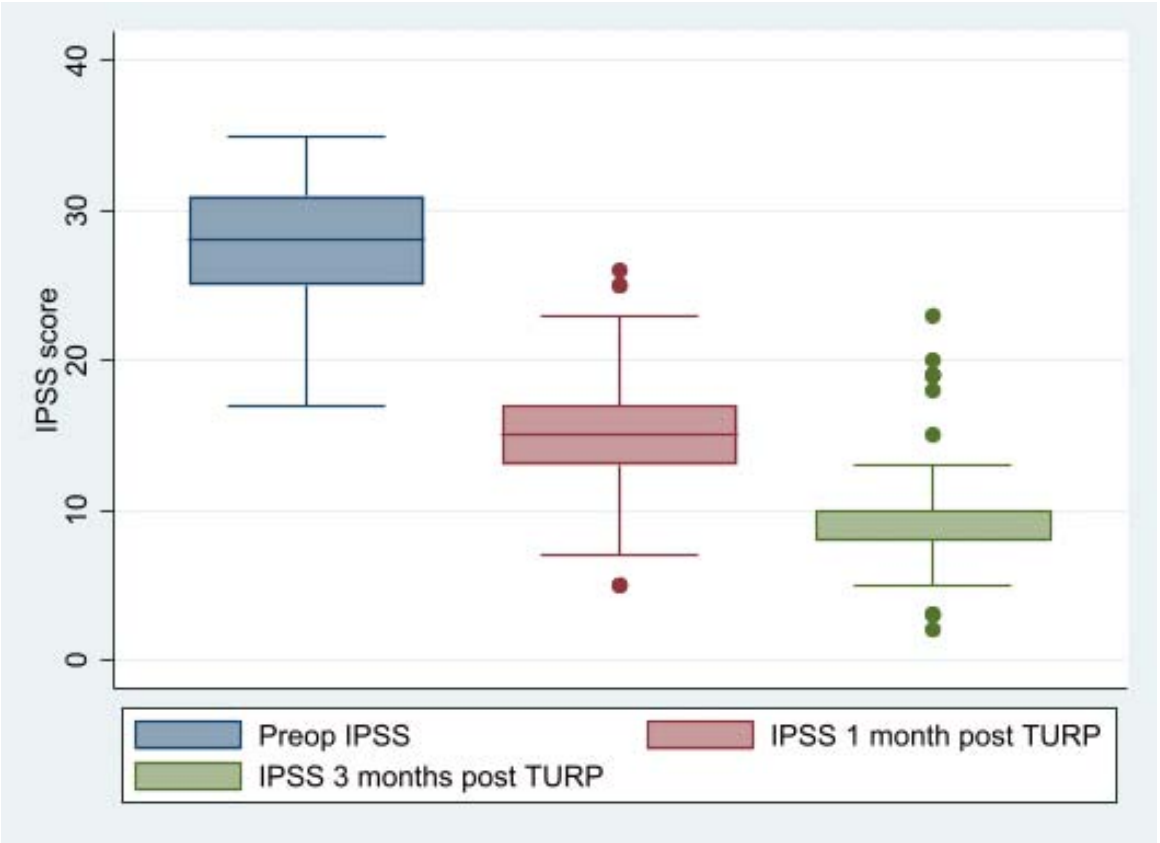
Table 2: Comparison of outcomes before and after (Median used) (N=156)

Characteristic	PreOP	1 month post TURP	*3 months post TURP*
IPSS	28 (25,31)	15 (13, 17)	8 (8,10)
QOLS	6 (5, 6)	2 (1, 2)	0 (0, 1)
Storage	12 (11, 13)	6 (5, 7)	4 (3, 4)
Voiding	16 (14, 18)	8 (7, 10)	5 (4, 6)

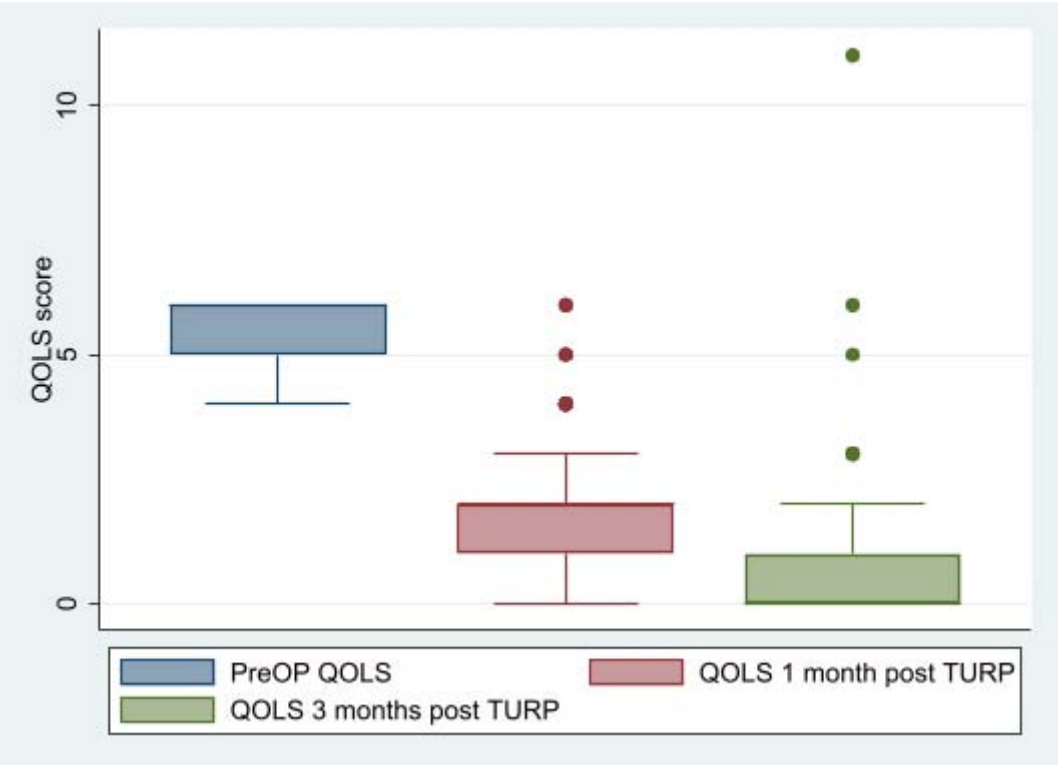
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Comparison of outcomes (graphical presentation)

IPSS

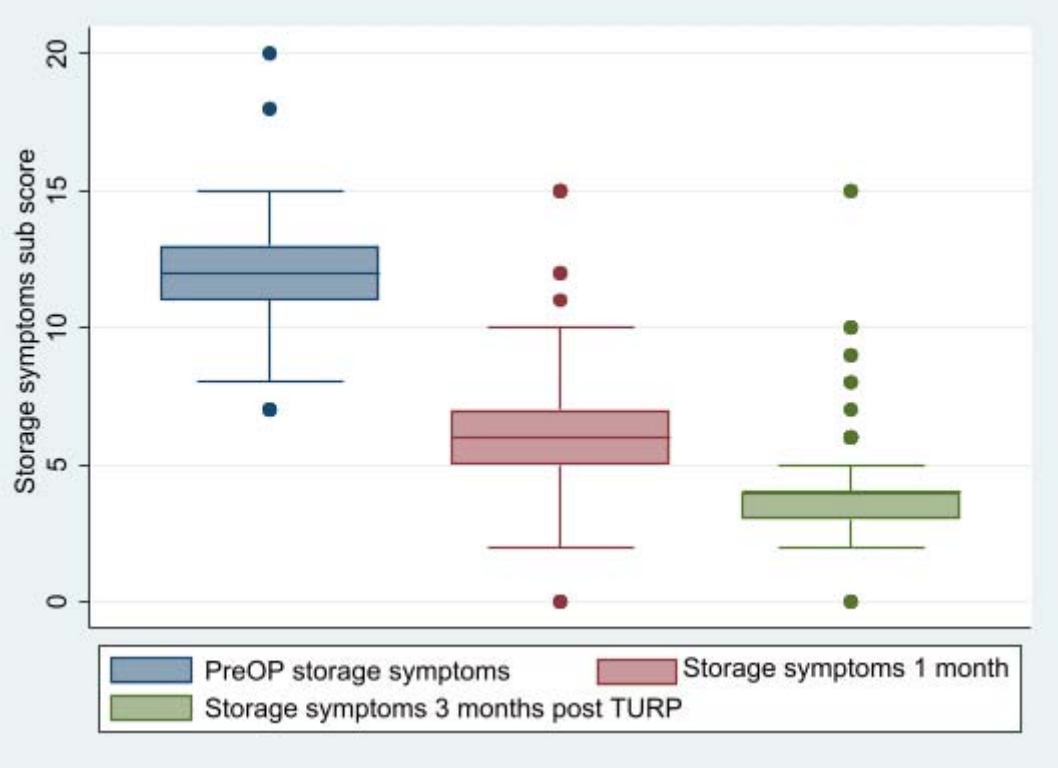


QOLS

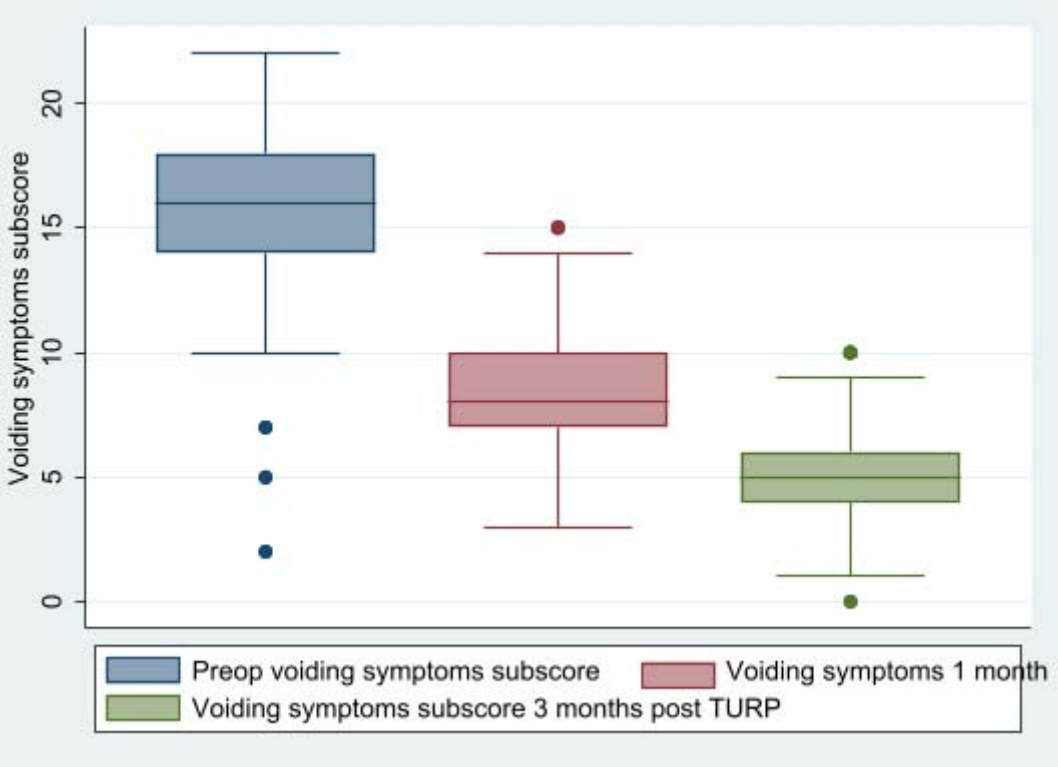


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Storage



Voiding



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IV. Discussion

This study is the first on LUTS resolution following TURP to be conducted at our center. Despite the obstruction being removed, some alterations that arise inside the bladder as a result of BPO might not return to normal. According to this study, the majority of TURP patients were in their sixth decade of life, had severe LUTS, and had a low quality of life as a result of unpleasant symptoms. Patients who had undergone TURP had an average prostate size of 54.7gm. In recent investigations, men who had undergone TURP had prostate volumes ranging from 46.1gm to 60gm.[7] The average age of the TURP patients was around 66 years old, which is similarly comparable to the data from Gacci et al., who found that the average age was 68 years old.[8] This findings confirm the validity of enlargement of prostate disease of the elderly male.

Before TURP, the study's overall IPPS was 28(21,31), and QOLS was 6(5,6). This result differs from the study conducted in Italy, where preoperative IPSS and QoLS were respectively 19.6 and 3.41, and the study conducted by Luite et al. in Nepal, where preoperative IPPS was 24.66 and QoLS was 5.10.9. This result demonstrates that our population's preoperative IPSS and QoLS are greater than those of patients in the European and Western globe. This may be due to our patients' delayed presentation, and some of our clients even believe that LUTS is a symptom of aging and refuse medical attention.[7]

In our study, the baseline score for storage symptoms was 12 (11, 13), which decreased to 4 (3, 4) 3 months after TURP, with a net change of - 8 (8, 9). But this decrease in storage symptoms happens far more frequently than voiding symptoms. The results of the study indicate that post-TURP changes in storage symptoms sub-score occur more frequently than changes in voiding symptoms, and those changes in voiding may return to normal, while other alterations that take place inside the bladder as a result of BPO may not, even after the obstruction is removed. In contrast to the study by Chalise et al., obstructive symptoms improve much more (82.4%) than irritative symptoms (46.3%) following TURP.(7) Kang YJ et al.'s study demonstrates that patients with diabetes who had improved storage symptoms.[5]

V. Conclusion

Reduction in IPSS, QoLS, and its subscore after TURP. Greater than voiding symptoms is the newer storage score. As a result, TURP continues to be the gold standard of care for patients with LUTS caused by BPE. However, greater health promotion efforts are needed to encourage patients to arrive at the urology clinic on time.

Abbreviations

AUA, American Urological Association; BOO, Bladder Outlet Obstruction; BPH, Benign Prostatic Hyperplasia; DRE, Digital Rectal Examination; IPSS, International Prostate Symptoms Score; KCMC, Kilimanjaro Christian Medical Centre; KCMUCo, Kilimanjaro Christian Medical University College; LUTS, Lower Urinary Tract Symptoms; PSA, Prostate Specific Antigen; QoLS, Quality of Life Score.

Ethical Approval

Research ethical clearance was received from the KCMUCO Research and Ethical committee. Patient informed consent was required due to the anonymized patient data. It was conducted in accordance with the Declaration of Helsinki and permission was obtained from the head of the Urology Institute.

Consent for Publication

I Dr. Mbarouk Mohammed hereby declare, I participated in the study and development of manuscript entitled *"Resolution of Lower Urinary Tract Symptoms due to Benign Prostatic Hyperplasia after Transurethral Resection of Prostate in Northern Zone of Tanzania."* I have read the final version and give consent to be published in BP International Journals.

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Disclosure

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References Références Referencias

1. Stothers L, Mutabazi S, Mukisa R, Macnab AJ. The burden of bladder outlet obstruction in men in rural Uganda. Int J Epidemiol. 2016; 45(6): 1763–6.
2. Irwin DE, Kopp ZS, Agatep B, Milsom I, Abrams P. Tract Symptoms, Overactive Bladder, Urinary Incontinence and Bladder Outlet Obstruction. BJU Int. 2011; 108: 1132–9.
3. Amu OC, Udeh EI, Ugochukwu AI, Dakum NK, Ramyil VM. The value of international prostate symptom scoring system in the management of bph in jos, nigeria. Niger J Clin Pract. 2013; 16(3):273–8.
4. Michael J. BARRY. 1992.
5. Bae J, Kang HW, Lee HW, Lee KS, Cho MC. Predictors of de novo urge urinary incontinence after photoselective vaporization of the prostate. World J Urol. 2016; 34(3): 413–8.
6. Anutrakulchai S. Residual LUTS after Transurethral Resection of Prostate (TURP): The Urodynamic

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Studies in Chiangmai University. Thai J Surg. 2005; 26: 82–7.
7. Luitel B, Gupta D, Chalise P, Subedi P, Chapagain S, Sharma U, et al. Change in storage symptoms after transurethral resection of prostate: a prospective observational study. J Soc Surg Nepal. 2016; 17(1): 35–8.
8. Gacci M, Bartoletti R, Figlioli S, Sarti E, Eisner B, Boddi V, et al. Urinary symptoms, quality of life and sexual function in patients with benign prostatic hypertrophy before and after prostatectomy: A prospective study. BJU Int. 2003; 91(3): 196–200.

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Incidental Finding of Perforated Jejunal Diverticulum during Laparotomy for Suspected Peritonitis on Peritoneal Dialysis Catheter: A Case Report

By El Hattabi Khalid, Kamal Khadija, Bouali Mounir, El Bakouri Abdelilah, Bensardi Fatimazahra, Fadil Abdelaziz, Mtioui Naoufal & Azria Siham

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Abstract- Small intestinal diverticulosis is very rare. The incidence ranges from 0.06 to 1.3%, with a higher prevalence after the 6th decade of life. Among these small intestinal diverticula duodenal diverticulosis is more frequent, followed by diverticula of the jejunum and ileum (1).

Jejunal diverticulosis is a very rare disease. It is usually asymptomatic or associated with non-specific symptoms which makes the diagnosis more challenging (2). When present, they are usually multiple and located in the proximal jejunum. Rarely, they can cause acute complications that can develop into an acute abdomen requiring surgical intervention (3). Here we describe a case of complicated isolated jejunal diverticula with perforation, which was successfully treated with resection and anastomosis of the defective segment.

Keywords: *diverticulum, jejunum, perforation.*

GJMR-I Classification: *DDC Code: 616.362 LCC Code: RC846*



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Keywords: diverticulum, jejunum, perforation.

I. Introduction

Acquired diverticulosis of the small bowel was first described by Baillie and Sommering in 1794. In 1807, Sir Astley Cooper specifically described jejunal diverticula with 75% of them affecting the proximal jejunum, 20% the distal jejunum and 5% the ileum(4).

Diverticula of the gastrointestinal tract may occur from the upper esophagus down to the rectum. The outpouchings of the gastrointestinal tract may be true diverticula that involve all layers of the bowel wall. The most common true diverticulum is a Meckel's diverticulum present in approximately 2% of the population and usually found in the ileum(5).

Complications such as perforations, adhesion, fistula, and peritonitis are more common than massive lower gastrointestinal bleeding, and these complications are reported only in 10% of cases. Surgery is the definitive treatment option in case of complicated diverticulitis with perforation like in our case(1)

II. Case Report

A 53-year-old patient, followed for chronic kidney disease for 7 years, hospitalized in the nephrology department for suspicion of peritonitis on a peritoneal dialysis catheter, with a clinical picture of generalized abdominal pain, nausea and vomiting, without digestive hemorrhage or transit disorder, all evolving in a context of feverish sensation. The clinical examination found a conscious patient SG=15/15, BP= 11/06mmHg, FR=16cpm, FC=68bpm, T°=38,9°. The abdominal examination found a generalized abdominal tenderness, with a peritoneal dialysis catheter at the left para-umbilical level. On biological assessment WBC=23610ele/mm, CRP= 149mg/L, Pro calcitonin= 5ng/L. Cytobacteriological study of the peritoneal fluid was negative. The patient was initially treated with antibiotics for 6 days with no significant improvement. The biological check-up found an increase in white blood cells at 36000elem/mm, CRP=256mg/L, pro calcitonin=34ng/L, and the cytobacteriological examination of the peritoneal fluid found white cells at 17920 with E. Coli as the identified germ. The indication of an exploratory laparotomy was put. Surgical exploration found a large pus effusion with several false membranes, and a perforated jejunal diverticulum 20 centimeters from the duodeno-jejunal angle opposing the mesenteric border (fig. 1). The procedure consisted of a resection of the diverticulum with terminal anastomosis. The postoperative course was simple and without complications.

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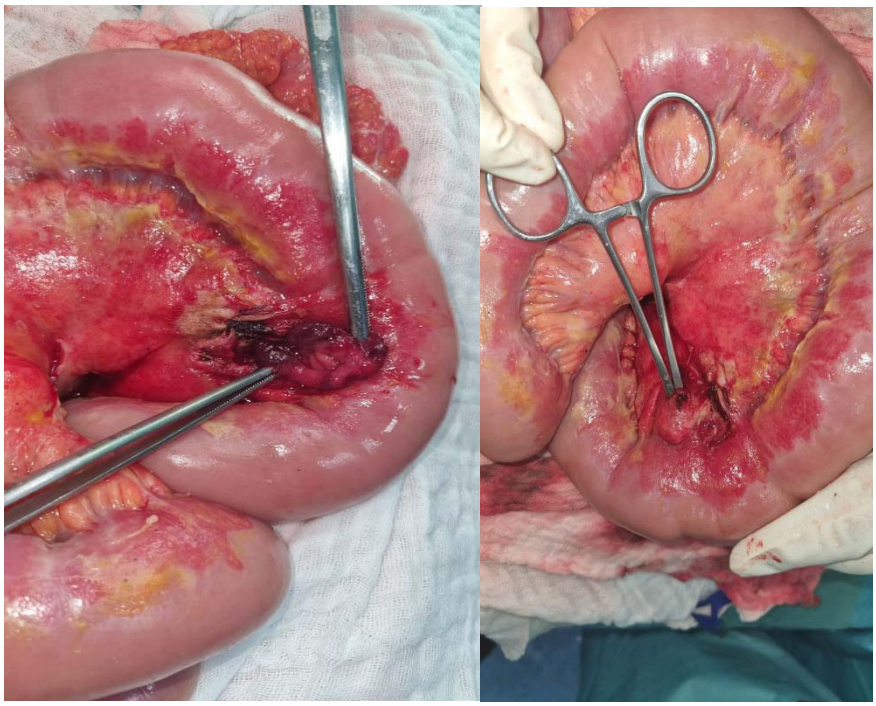


Fig. 1: Intra-operative view showing the perforated jejunal diverticulum

III. Discussion

The increased incidence of diverticula in the proximal jejunum compared to the distal jejunum and the ileum is attributed to the larger diameter of blood vessels in the proximal jejunum, vasa recta, or anastomosis arches between the jejunal arteries and ileal, originating from the superior mesenteric artery(6).

Small bowel diverticula can be either congenital or acquired. Congenital diverticula are located on the antimesenteric border of the small bowel. It contains all the layers of the bowel including mucosa, submucosa, muscularis, and serosa. When present, they are usually solitary and Meckel's diverticulum is considered the most common example(2). Acquired diverticula are formed by a herniation of the mucosa and submucosa through the muscular layer of the bowel wall, while false diverticula probably due to motor dysfunction of the smooth muscle or the myenteric plexus of the small intestine, generating an increase in intraluminal pressures such as progressive systemic sclerosis, visceral neuropathies and myopath(1,6).

Jejunal diverticulosis is usually asymptomatic. Only 29% of patients develop symptoms and 10% develop complications such as perforation, obstruction, adhesion, fistula, peritonitis, and lower gastrointestinal bleeding(nigam). Perforation of jejunal diverticula is a severe complication that occurs in 2 to 6% of cases(1).

The risk factors for jejunal diverticula perforation include blunt abdominal trauma leading to a necrotizing inflammatory reaction in 82% of cases, foreign body impaction in 6% of cases(7), cocaine sniffing, NSAID usage (as noted in our case), amyloid disease and malignancy like lymphosarcoma, MEN1, and fibrous histiocytoma, and Ehler-Danlos syndrome (2).

Symptomatic cases present with early satiety, bloating, anorexia, diarrhea/steatorrhea due to bacterial overgrowth, colicky pains in epigastrium, peri-umbilical region, loud rumbling noises in the abdomen following meals(8).

Small bowel diverticulosis is often diagnosed incidentally in patients undergoing upper endoscopy or imaging for upper gastrointestinal symptoms. Plain film radiographs of the abdomen will suggest the diagnosis from the presence of air-fluid levels in multiple diverticula throughout the small intestine(1).

Contrast studies, including enteroclysis of the jejunum and ileum, will reveal a large outpouching with retained contrast medium after the main lumen has become empty. The lumen of the intestine will be dilated in the diverticula, and the mucosal folds will be thickened and prominent(9).

The CT scan has the diagnostic value higher to identify the presence, site and cause intestinal perforation(8). It can allow the diagnosis of diverticular perforation of the jejunum, based on the following images: free intraperitoneal air, extraluminal air bubbles concentrated near the intestinal wall, asymmetric thickening of the wall, edema or thickening of surrounding fatty tissue. However, an accurate diagnosis is rarely made before laparotomy or exploratory laparoscopy(10)

For stable patients with contained perforations, non-operative treatment such as bowel rest, intravenous fluids and antibiotics, has been successfully reported(11). For larger peridiverticular abscesses, CT-

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guided percutaneous drainagemay be required. In the case of failure of non-operative management and in patients with generalized peritonitis surgery is mandatory(12).

IV. Conclusion

Acquired jejunal diverticulosis is a rare disorder of the small intestine. Perforation of a jejunal diverticulum have a high morbidity and mortality rates.

The treatment of diverticular perforation associated with peritonitis, is the resection of the segment of the small intestine involved with anastomosis.

Conservative treatment is possible in some mild cases and presents an alternative for surgery.

References Références Referencias

1. Gurala D, Idiculla PS, Patibandla P, Philipose J, Krzyzak M, Mukherjee I. Perforated Jejunal Diverticulitis. Case Rep Gastroenterol. 12 déc 2019; 13(3): 521-5.
2. Anjum R, Kumar N, Singla T, Mani R, Karki B. A Case of Isolated Jejunal Diverticulum Presented as Free Perforation: A Rare Cause of Acute Abdomen. Cureus [Internet]. 15 oct 2021 [cité 16 févr 2023]; Disponible sur: https://www.cureus.com/articles/72808-a-case-of-isolated-jejunal-diverticulum-presented-as-free-perforation-a-rare-cause-of-acute-abdomen
3. Nigam A, Gao FF, Steves MA, Sugarbaker PH. Acute abdomen caused by a large solitary jejunal diverticulum that induced a midgut volvulus. Report of a case. Int J Surg Case Rep. 2020; 74: 109-12.
4. Mazahreh TS, Aleshawi AJ, Alorjani MS, Elayyan R, Al-Zoubi NA. Arteriovenous malformations within jejunal diverticulosis: case report and literature review. BMC Surg. déc 2019; 19(1): 70.
5. Prough H, Jaffe S, Jones B. Jejunal diverticulitis. J Surg Case Rep [Internet]. 1 janv 2019 [cité 16 févr 2023]; 2019(1). Disponible sur: https://academic.oup.com/jscr/article/doi/10.1093/jscr/rjz005/5304858
6. Kuzmova M, Salame M, Colonval P. Diverticule jéjunal perforé et abcédé : revue de la littérature.
7. Huang Y, Sarofim M, Cohen-Hallaleh R. Foreign body perforation of a jejunal diverticulum: a rare cause of rectal bleeding. ANZ J Surg. mars 2021; 91(3): 465-7.
8. Luitel P, Shrestha BM, Adhikari S, Kandel BP, Lakhey PJ. Incidental finding of jejunal diverticula during laparotomy for suspected adhesive small bowel obstruction: A case report. Int J Surg Case Rep. août 2021; 85: 106268.
9. Ohira T, Iraha A, Kinjo T, Hokama A, Fujita J. Jejunal diverticulosis. Korean J Intern Med. 1 janv 2020; 35(1): 249-249.
10. Mejri A, Arfaoui K, Hedfi M, Znaidi H. Perforated jejunal diverticulum as an unsual cause of acute abdomen: A case report. Int J Surg Case Rep. mai 2022; 94: 107130.
11. Jambulingam R, Nanayakkara G. Non-operatively managed case of contained jejunal diverticular perforation. BMJ Case Rep. juill 2019; 12(7): e228811.
12. Guercioni G, Benedetti M, Catarci M. Laparoscopic jejunal resection for perforation of solitary jejunal diverticulum – a video vignette. Colorectal Dis. nov 2020; 22(11): 1805-6.

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Elastofibroma: Literature Review and Clinical Case Report

By B.V. Boldin, V.Yu. Tsukan, I.M. Dizengof, S.I. Kolesova, D.A. Kobzarev & M.G.Kaviladze

Introduction- Elastofibroma is a rare slowly growing benign soft tissue tumor of mesenchymal origin, characterized by typical localization in the subscapular region. It consists of proliferating fibrous and adipose tissue.

The first elastofibroma was diagnosed in 1958 [1]. The first clinical case called "Elastofibroma of the Back" was presented at the XII Scandinavian Congress of Pathologists by doctors O. Jarvi and A.E. Saxen. However, this case was published only in 1961 [2, 3].

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Elastofibroma: Literature Review and Clinical Case Report

B.V. Boldin [α], V.Yu. Tsukan [σ], I.M. Dizengof [ρ], S.I. Kolesova [Ω], D.A. Kobzarev [¥] & M.G.Kaviladze [§]

I. Introduction

Elastofibroma is a rare slowly growing benign soft tissue tumor of mesenchymal origin, characterized by typical localization in the subscapular region. It consists of proliferating fibrous and adipose tissue.

The first elastofibroma was diagnosed in 1958 [1]. The first clinical case called "Elastofibroma of the Back" was presented at the XII Scandinavian Congress of Pathologists by doctors O. Jarvi and A.E. Saxen. However, this case was published only in 1961 [2, 3].

In 1982, a clinical and pathological study of 170 cases of elastofibromas was conducted in Okinawa Prefecture, Japan. As a result, a large number of conclusions were made that still remain relevant today [4]. Elastofibroma has a rather typical localization: it is located in soft tissues in the area of the scapula angle deeply in the latissimus dorsi muscle, rhomboid muscle and serratus anterior muscle above the ribs [4-8] (Fig. 1).



Figure 1: Bilateral subscapular elastofibroma in a 59-year-old female patient.

There are also other options for the localization of elastofibroma: the area of the olecranon, the area of the ischial tuberosity, as well as in the chest wall [4, 9]. The connection between the occurrence of elastofibroma and heredity was also identified for the first time, thanks to a study in Okinawa Prefecture [4]. However, there are other etiological theories: for example, O. Jarvi and A.E. Saxen proposed a concept, according to which elastofibroma is not a real tumor, but a consequence of a degenerative-regenerative process during the movement of the scapula relative to the thoracic fascia, which is also confirmed by researchers of the 21st century [1, 10, 11]. Recent studies revealed that elastofibroma is a monoclonal, neoplastic process with genomic karyotypic instability, which is an important link in the structural modification that affects almost all chromosomes [12,13]. However, M. Hisaoka and H. Hashimoto concluded that the development of elastofibroma is affected by a combination of factors: activation of mesenchymal CD34+ cells and prolonged mechanical impact [14].

According to modern data, elastofibroma is more common, as a rule, in women aged from 65 till 70 [4, 6, 15-18]. It is described in the literature that the incidence rate is 0.23 per 100,000 and is only 1-2% of all primary tumors of the chest wall [6, 19]. In 2013, only 400 cases of elastofibroma have been described [20].

Clinically, elastofibroma manifests itself only in 50% of cases [21]. Discomfort, crunching in the area of the scapula, combined with pain on movement, are characteristic clinical signs [22].

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Various imaging modalities such as ultrasound, CT, and MRI play an important role in establishing diagnosis. Ultrasound examination of elastofibroma shows an alternation of linear sections that have a different echo signal and form a layered structure [23] (Fig. 2).



Figure 2: Ultrasound image showing a solid mass with alternating hypo- and hyperechoic areas below the serratus anterior (arrows).

CT reveals an isodense structure with hypodense stripes [21, 23] (Fig. 3).

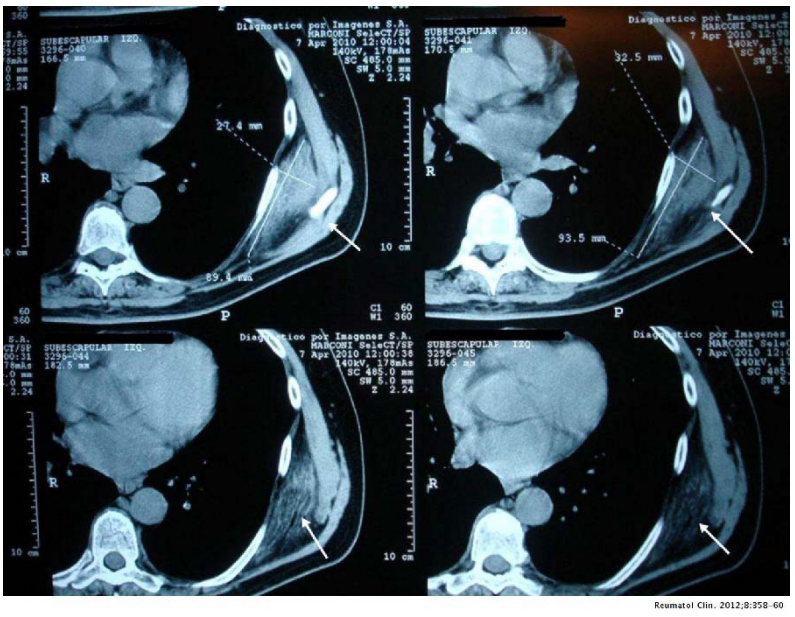


Figure 3: An unenhanced CT scan shows a left subscapular mass that is in contact with intercostal muscles of similar density to skeletal muscle, with areas of weakness similar to subcutaneous fat (arrows).

MRI is the most informative method for diagnosing elastofibroma, which is visualized as a heterogeneous soft tissue component with a well-defined border [24]. PET-CT is performed for another pathology, and elastofibroma is an incidental finding. The study notes a low or moderate metabolism of F18-deoxyglucose, but cases of hypermetabolism are also described [25].

Many authors believe that morphological confirmation of the diagnosis is inappropriate if uncomprehensive radiological conclusion has been obtained [26, 27]. However, in differential diagnosis with lipoma, liposarcoma, hemangioma, hematoma, fibromatosis, desmoidtumor and malignant histiocytoma, morphological examination is necessary [28].

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Thus, already by 1969, elastofibroma was described in some detail on the basis of not only a histological study, but also a biochemical one. Chemical analysis showed that about 8% of the total dry mass of the tumor is elastin, and 75-80% is collagen, while normal subcutaneous connective tissue contains only 2% of elastin [1] (Fig. 4).

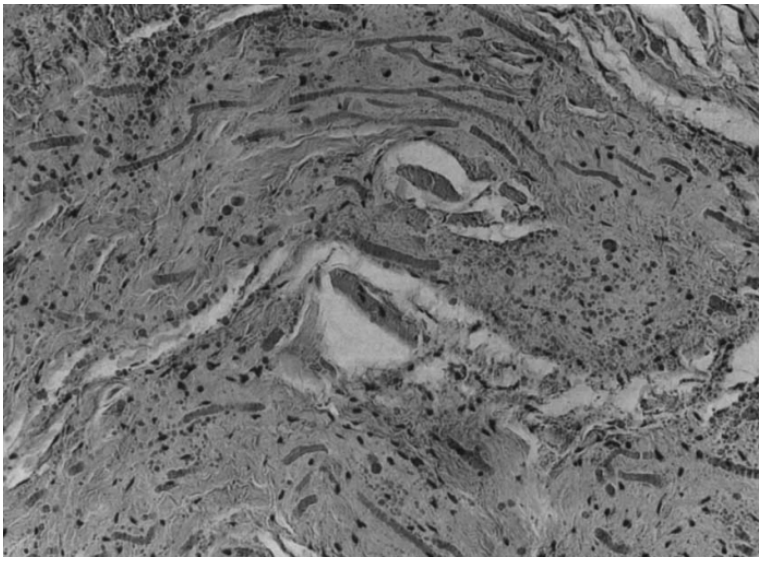


Figure 4: Microslide. Bands of connective tissue with swollen and partially segmented elastic fibers. Both elastic fibers and collagen stain red and differ mainly in refraction. The bands are separated by loose connective tissue and fat.

The histological diagnosis is established by the presence of elastic fibers, often fragmented into a collagen matrix. In electronic microscopy: eosinophilic material often contains mature elastic fibers [23, 28] (Fig. 5).

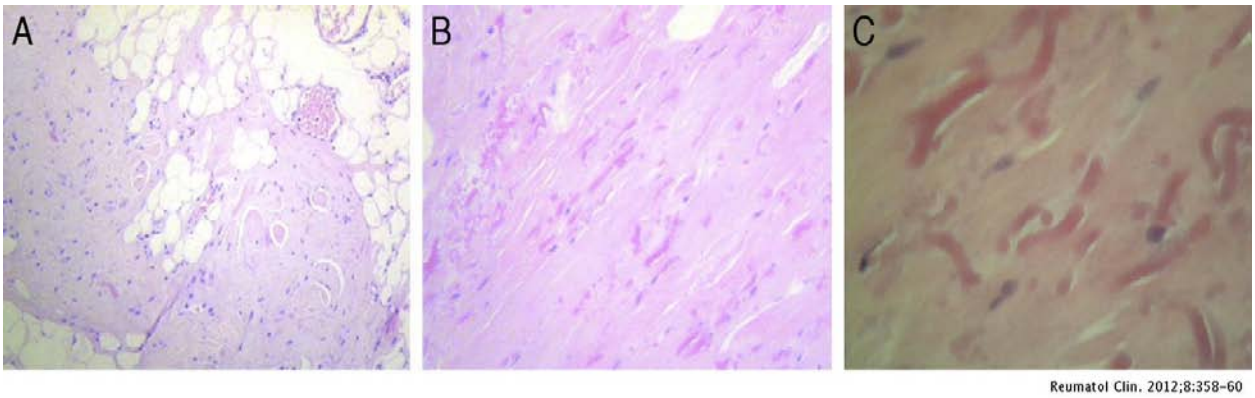


Figure 5: A - Growth of dense small-celled collagen tissue and fat. B - Small nuclei, elongated and fragmented elastic fibers and rounded contours are visualized. C - Details of abnormal elastic fibers.

Complete surgical excision of elastofibroma is the most rational and effective method of treatment. However, observation is indicated in asymptomatic cases [1, 29].

II. Clinical Case

Patient A., 70 years old, complained of a painless tumor-like subcutaneous mass in the region of the lower angle of the right scapula, applied to the surgeon at the Clinical and Diagnostic Center of ANO CCH MP. She considers herself ill for 5 years, when she first noted a volumetric formation on her back on the right, which progressed and increased in size.

When viewed, a volumetric tumor-like ball-shaped formation measuring 7.5x6.0x2.0 cm of soft-elastic consistency (Fig. 6) is determined on the back along the lower edge of the right shoulder blade. On palpation the formation is painless, not soldered to the skin. The skin over the formation is not changed. Preliminary diagnosis: Lipoma of the back.

During additional examination, an ultrasound scan (Fig. 7), chest MSCT (Fig. 8) were performed, which showed no evidence for a lipoma, but there was

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an elastofibroma of the back detected. For differential diagnosis, a biopsy material was taken followed by a histological examination, the obtained results confirmed the diagnosis of “elastofibromadorsi” (Fig. 9).

Thus, the pathoanatomical diagnosis does not contradict the clinical one.

Based on the results of clinical work, it was decided to adhere to observational tactics.



Figure 6: On examination: a voluminous tumor-like formation along the lower edge of the right scapula.

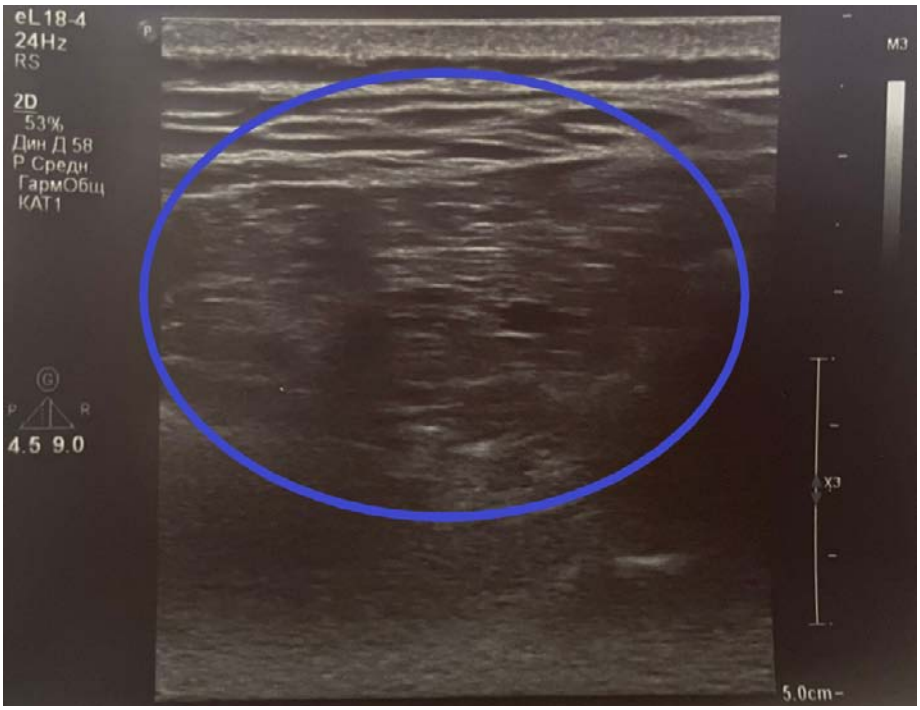


Figure 7: Ultrasound, transverse scan: posterior chest wall: a volumetric mass with an inhomogeneous echostructure is determined.

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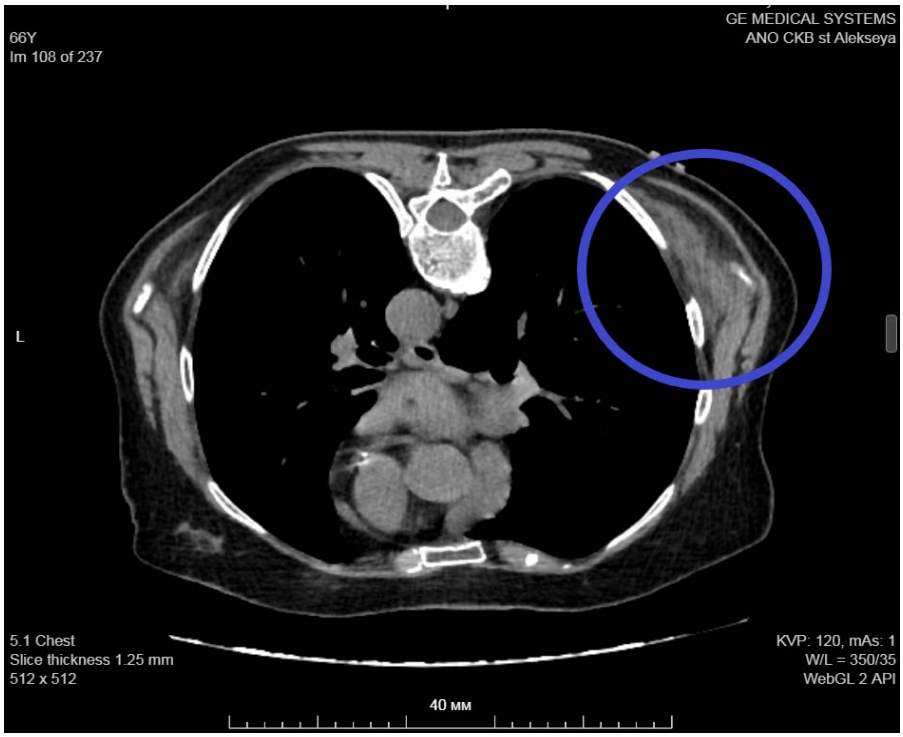


Figure 8: Chest MSCT. Right elastofibromadorsi: isodense structure with hypodense streaks.

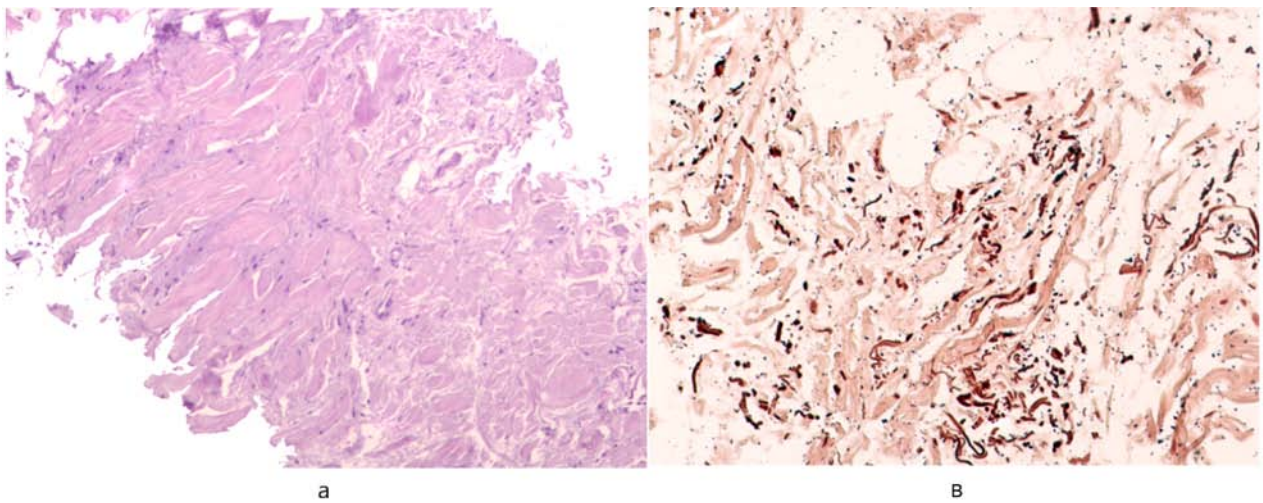


Figure 9: Microslide of elastofibromadorsi. a - Fibro-adipose tissue with collagen and elastic fibers. b - Orcein staining. Elastic fibers are stained brown.

III. Conclusion

The presented data on clinical cases indicate that elastofibroma is a rare tumor of the soft tissues of the chest wall, which often does not manifest itself clinically, and its diagnosis is random. Imaging methods currently allow an accurate diagnosis, however, a histological examination is necessary for differential diagnosis. Out own clinical case proves that the presence of elastofibroma may not be accompanied by pain, and in this case, observation is advisable.

Literature

1. Jarvi O., Saxen E. et al., Elastofibroma – a degenerative pseudotumor//Canser. 1969. V. 23. P. 42-63.
2. Jarvi O., Saxen E. Elastofibromadorse // ActaPathol. Microbiol. Scand. 1961. V. 51. P. 83-84.;
3. Kransdorf M.J., Meis J.M., Montgomery E. Elastofibroma: MR and CT appearance with radiologic-pathologic correlation. AJR. 1992; 159: 575–579.
4. Nagamine N., Nohara Y., Ito E. Elastofibroma in Okinawa: a clinicopathologic study of 170 cases // Cancer. 1982. V. 50. P. 1794-1805.

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5. Fletcher C.D., Unni K.K., Mertens F. World Health Organisation Classification of Tumors. Pathology and genetics of tumors of soft tissue and bone; elastofiroma. Lyon: IARC Press, 2002.,
6. Freixinet J., Rodríguez P., Hussein M. et al. Elastofibroma of the thoracic wall // Interact. Cardiovasc. Thorac. Surg. 2008. V. 7. P. 626-628,
7. Daigeler A., Vogt P.M., Busch K. et al. Elastofibroma dorsi-differential diagnosis in chest wall tumours // World J. Surg. Oncol. 2007. V. 5. P. 15.
8. Yildirim D., Eroglu M., Sanli Y., Tamam M. Hypermetabolic bilateral infrascapular lesions in pet-ct imaging: elastofibromadorsi // Yeditepe Medical Journal. 2012. V. 6 (23). P. 543-546.
9. Kapff P.D., Hocken D.B., Simpson R.H. Elastofibroma of the hand // J. Bone Joint Surg. Br. 1987. V. 69. P. 468-479.
10. Kastner M., Salai M., Fichman S. et al. Elastofibroma at the scapular region // Isr. Med. Assoc. J. 2009. V. 11. P. 170-172.
11. Parratt M.T., Donaldson J.R., Flanagan A.M. et al. Elastofibromadorsi: management, outcome and review of the literature // J. Bone Joint Surg. Br. 2010. V. 92. P. 262-266.
12. Fibla J., Laureano M., Vicente M., Javier P., Gonzalo V. Élastofibrome dorsal bilatéral // Rev. Rhum. 2007. V. 74. P. 294-296.
13. Mortman K.D., Hochheiser G.M., Giblin E.M., Manon-Matos Y., Frankel K.M. Elastofibromadorsi: clinicopathologic review of six cases // Ann. Thorac. Surg. 2007. V. 83. P. 1894-1897.
14. Hisaoka M., Hashimoto H. Elastofibroma: clonal fibrous proliferation with predominant CD34-positive cells. Virch. Arch. 2006; 448: 195–199.
15. Brandser E.A., Goree J.C., El-Khoury G.Y. Elastofibromadorsi: prevalence in an elderly population as revealed by CT // Am. J. Roentgenol. 1998. V. 171. P. 977-980.
16. Jarvi O.H., Lansimies P.H. Subclinical elastofibromas in the scapular region at autopsy series // ActaPathol. Microbiol. Scand. 1975. V. 83. P. 87-108.
17. Naylor M.F., Nascimento A.G., Sherrick A.D., McLeod R.A. Elastofibromadorsi: radiologic findings in 12 patients // Am. J. Roentgenol. 1996. V. 167. P. 683-687.
18. Blumenkrantz Y., Bruno G.L., González C.J., Namías M., Osorio A.R., Parma P. Characterization of ElastofibromaDorsi with 18FDG PET/CT: a retrospective study // Rev. Esp. Med. Nucl. 2011. V. 30 (6). P. 342-345.
19. Mariño IT, Solis PS, Lara AP, Malo JM, Luz Vazquez M, Tamimi F. Sensitivity and positive predictive value of magnetic resonance imaging in the diagnosis of elastofibromadorsi: review of fourteen cases. Journal of shoulder and elbow surgery. 2013; 22(1): 57-63.
20. Braham E., Hergli I., SadokBoudaya M., Ismail O., Ayadi-Kaddour A., Kilani T., El Mezni F. Elastofibroma of scapula: a case report and literature review // Ann. Transl. Med. 2013. V. 1 (3). P. 31.
21. Oueslati S., Douira-Khomsi W., Bouaziz C., Zaouia K. Elastofibromadorsi: a report on 6 cases. Acta. Orthop. Belg. 2006; 72: 237–242.
22. Hammoumi M.E., Qtaibi A., Arsalane A. et al. Elastofibromadorsi: clinicopathological analysis of 76 cases. Korean J. Thorac. Cardiovasc. Surg. 2014; 47: 111–116.
23. Cavallasca J. A., Sohn D. I., Borgia A. R. et al. Elastofibromadorsi: review of 4 cases. Reumatol. Clin. 2012; 8: 358– 360.
24. Ochsner J. E., Sewall S. A., Brooks G. N., Agni R. Elastofibromadorsi. 2006; 26: 1873–1876.
25. Falidas E., Arvanitis D., Anyfantakis G. et al. Painful elastofibromadorsi: a report of a case and a brief review of the literature. Case Rep. Orthoped. 2013; Article ID 794247: 5 p.
26. Kourda J., Ayadi-Kaddour A., Merai S. et al. Bilateral elastofibromadorsi. a case report and review of the literature // Orthop. Traumatol. Surg. Res. 2009. V. 95. P. 383-387.
27. Pierce J.C., Henderson R. Hypermetabolism of elastofibromadorsi on PET-CT // Am. J. Roentgenol. 2004. V. 183. P. 35-37.
28. Hocar, O., Buffard, V., Ortonne, N., & Bagot, M. (2012). Élastofibrome dorsal bilatéral. Annales de dermatologie et de vénéréologie, 139(1), 41-45.
29. Maounilliass, YoussraOuhamou, MeryemGridda, M. El Absi Dorsal Elastofibroma: About Two Cases // SAS Journal of Surgery. 2023. 9(1): 37-39.

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A Comparative Study of Open Haemorrhoidectomy with Stapler Haemorrhoidectomy (MIPH) in Relation to Immediate and Early Complications

By Bijalwan A, Singhal P, Kumar A & Malhotra H

Abstract- *Introduction:* Haemorrhoids are very common in everyday life. While grades I and II haemorrhoids can be managed conservatively, grades III and grade IV haemorrhoids require surgery. The study was conducted to determine the better surgical modality for patients undergoing haemorrhoidectomy (Open vs MIPH) based on the immediate and early post operative complications.

Aim: This study is aimed to compare the two surgical modalities to treat haemorrhoids namely Open (Conventional) haemorrhoidectomy and Minimally Invasive Procedure Haemerrhoid (Stapled Haemorrhoidectomy) by comparing their immediate and early post-operative complications.

GJMR-I Classification: *LCC: RD32.3*



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A Comparative Study of Open Haemorrhoidectomy with Stapler Haemorrhoidectomy (MIPH) in Relation to Immediate and Early Complications

Bijalwan A [α], Singhal P [σ], Kumar A [ρ] & Malhotra H [ω]

Abstract- *Introduction:* Haemorrhoids are very common in everyday life. While grades I and II haemorrhoids can be managed conservatively, grades III and grade IV haemorrhoids require surgery. The study was conducted to determine the better surgical modality for patients undergoing haemorrhoidectomy (Open vs MIPH) based on the immediate and early post operative complications.

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Patients and method: A hospital based prospective analytical study was conducted on 50 patients for a duration of 18 months. In all the patients who met inclusion criteria, patients were divided into two groups with Group A undergoing open haemorrhoidectomy, whereas Group B undergoing MIPH. Both groups received injections of Diclofenac AQ 1 ml at the end of procedure and Diclofenac AQ IV twelve hourly post operatively. Breakthrough pain was treated by Injection Tramadol. Both groups of patients was assessed by visual scale at 12, 24, 48 hours post-operatively. Duration of surgery, duration of hospital stay, intra-operative bleeding along with any incidence of post-operative urinary retention, bleeding, rectal discharge for first 48 hours was recorded. Patient was followed up telephonically for 3 months for any symptoms suggestive of Anal stricture, incontinence or recurrent bleeding and called to OPD for re-examination, if required.

Conclusion: In present study we found that the important advantages of MIPH over the Milligan-Morgan conventional approach is that there are reduced pain in post operative period with fewer less breakthrough analgesics requirement to control the pain , leading to reduced hospital stay and early return to work along with better wound healing rate. but the stapled technique has these advantages at the expense of higher cost and surgical expertise. The present study thus recommends MIPH stapler haemorrhoidectomy has better results over conventional approach for Grade III and Grade IV haemorrhoids.

I. Introduction

Haemorrhoids are very common in everyday life. They may be primarily due to genetics, a natural result of human adaptation to the upright posture, straining to pass constipated stools, or secondary to rectal cancer, pregnancy, uterine tumors, chronic constipation, dysuria due to stenosis or enlargement of the prostate, and portal hypertension (1). In the past, the varicose vein theory prevailed and it was believed that haemorrhoids were caused by varicose veins in the anal canal. Now the slippage theory of the inner wall of the anal canal is popular. This suggests that haemorrhoids develop when the anal cushions supporting tissue break down or degenerates. Thus haemorrhoids is the pathological term describing an abnormal displacement of the anal cushions leading to dilated veins. There are usually three main anal cushions located at the right front, right back and left side of the anal canal, and various numbers of smaller anal cushions located in between. The anal cushions of patients with haemorrhoids show obvious pathological changes. These changes include abnormal venous dilation, vascular thrombosis, degenerative processes of collagen fibers and fibroelastic tissue, and deformation and tearing of the subepithelial muscles of the anus (2). Haemorrhoids can be classified in different ways. Mainly divided into internal type, external type and mixed type. Internal haemorrhoids lie above the dentate line and are covered with mucous membranes, while external haemorrhoids lie below the dentate line and are covered with skin (3). Another classification tells us that haemorrhoids range from grade I (symptomatic bleeding only) to grade IV (prolapsed haemorrhoids). A third classification identifies haemorrhoids based on their anatomical location, where the 3, 7, 11 o'clock positions are considered primary and the area between the three points is secondary (4). While grades I and II haemorrhoids can be managed conservatively, grades III and grade IV haemorrhoids require surgery (5). Open haemorrhoidectomy has long been perceived by patients as an inherently painful procedure. Reducing post-haemorrhoidectomy pain is an important goal, with the ultimate goal of reducing the length of hospital stay and the likelihood of day surgery. Haemorrhoidectomy performed by conventional techniques causes considerable postoperative pain (6). MIPH (Minimally Invasive procedure for Haemorrhoids) is a new concept used to overcome these problems. Stapled haemorrhoidopexy for prolapsed haemorrhoids are conceptually different from excisional haemorrhoidectomy. It is not assosciated with the pain

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usually assosciated with resection of the sensitive anoderm (7).

a) Open haemorrhoidectomy

In an open procedure, the internal villous mass is separated from the internal sphincter fibers by separating the mucus from the skin. A trans fixation suture is bound at the base of the pile mass pedicle, and the pile is excised distal to it. Each haemorrhoid is treated in this way, leaving a mucocutaneous bridge.

b) The Minimally Invasive procedure for Haemorrhoids

MIPH involves suturing the mucosal and submucosa veins using a stapling device, by tightening around the stapler head by a purse string suture. Take care to move the purse string at least 4 cm above the dentate line. Secure and lock the stapler for 45 seconds holding the stapler along the axis of the anal canal. Then gently extract with a donut of excised tissue. All bleeding points are closed with haemostatic sutures.

II. Patients and Methods

a) Study design

A Hospital based prospective type of analytical study.

b) Site of study

The Study will be conducted in department of General Surgery, Shri Mahant Indiresh Hospital, PatelNagar, Dehradun.

c) Type and Duration of Study

The study is a prospective analytical study in patients who are operated for Grade III, Grade IV haemorrhoids by either OPEN or MIPH presented in Shri Mahant Indresh Hospital, Patel Nagar, Dehradun with complaints of mass and/or bleeding per rectum. Study will be conducted over 18 months time period.

d) Study planning

After obtaining consent of the patient for participation, all patients admitted through surgery OPD with Grade III or IV internal haemorrhoids, will be explained about both the procedures and depending upon patient's preference of procedure, patients will be divided into two groups. Group A will undergo open haemorrhoidectomy, whereas Group B will undergo MIPH. Both groups will receive injections of Diclofenac AQ 1 ml at the end of procedure and Diclofenac AQ IV twelve hourly post operatively. Breakthrough pain will be treated by Injection Tramadol. Both groups of patients will be assessed by visual scale at 12, 24, 48 hours post-operatively. Duration of surgery, duration of hospital stay, intra-operative bleeding along with any incidence of post-operative urinary retention, bleeding, rectal discharge for first 48 hours will be recorded. Patient will be followed up telephonically for 3 months for any symptoms suggestive of Anal stricture, incontinence or recurrent bleeding and called to OPD for re-examination, if required.

e) Data collection tools and techniques

Data will be collected on clinical, lab results and proctological findings and follow up examination according to the proforma attached.

f) Inclusion criteria

All patients with Grade III/IV uncomplicated haemorrhoids undergoing haemorrhoidectomy by open or MIPH methods.

g) Exclusion criteria

1. Haemorrhoids secondary to any other condition like colonic malignancy.
2. Patients having fissures and/or fistulas associated with piles.
3. Patients having full thickness rectal prolapse with piles.
4. History of anal incontinence.
5. Rectocele.
6. Patients with anal stenosis.
7. Patients with any other systemic disease like renal failure, liver disorders, bleeding disorders.

h) Study planning

- All eligible patients will be properly counselled and explained about the nature and purpose of the study. Secrecy and confidentiality will be maintained.
- Institutional ethical committee permission will be taken accordingly.
- After informed written consent, patients will be recruited into the study.
- Patient will be studied as per the working proforma attached.
- Valid and appropriate statistical tests will be applied in the data collected to obtain results.

III. Observation and Results

A hospital based prospective analytical study was conducted at Department of Surgery, Shri Mahant Indresh hospital, Dehradun, India. Study aimed to compare the two surgical modalities to treat haemorrhoids namely Open haemorrhoidectomy and Minimally Invasive Procedure for Haemorrhoid (Stapled Haemorrhoidectomy) by comparing their immediate and early post-operative complications. Patients were allocated into two groups based on their choice of surgical intervention after thoroughly explaining the pros and cons of each procedure and written informed consent: Group A underwent Conventional haemorrhoidectomy and Group B underwent MIPH. Both groups received injections of Diclofenac AQ 1 ml at the end of procedure and Diclofenac AQ IV twelve hourly post operatively. Breakthrough pain was treated by Injection Tramadol. Both groups of patients were assessed by visual scale at 12, 24, 48 hours post-operatively. Duration of surgery, duration of hospital

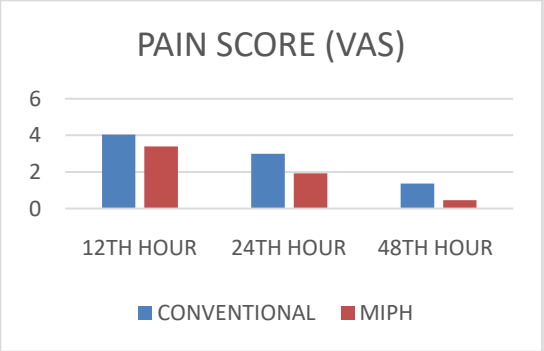
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stay, intra-operative bleeding along with any incidence of post-operative urinary retention, bleeding, rectal discharge for first 48 hours was recorded. Patient was followed up telephonically for 3 months for any symptoms suggestive of Anal stricture, incontinence or recurrent bleeding and was called to OPD for re-examination, if required. Following observations were made during the study:-

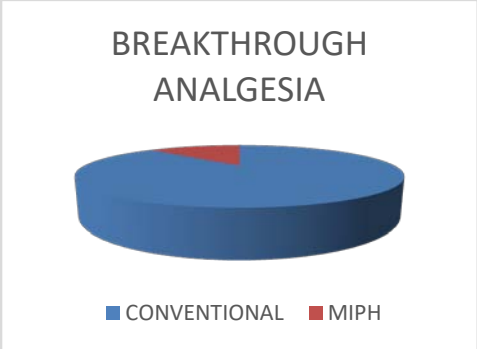
1. The mean age of the study cases was 43 years with no significant difference between study groups (p-0.47).
2. Almost identical gender distribution was observed among the two groups with a ratio of male: female being 2:1.(p-1.0) .
3. No significant difference were observed between the two study groups based on presentation of patients – grade (p-0.794), pain during defecation (p-0.44), bleeding per rectum (p-0.07) and mass per rectum (p-0.77).
4. The mean operative time between two groups showed a significant difference with mean operative time for Group B MIPH being 31.24 as compared to 35.08 of Conventional haemorrhoidectomy (p-<0.001). But a time difference of 4 minutes can be ignored for all practical purposes.

Type of Surgery	Mean	SD	P Value
CONVENTIONAL	35.08	2.66	0.001
MIPH	31.24	2.33	

5. The mean VAS score at the end of 12 hours was 4.04 in Group A as compared to 3.4 in Group B (p-0.0004). By the end of 24 hours the mean VAS score for Group A was 03 as compared to 1.92 for Group B (p-0.0001). The mean VAS score at 48 hours showed no significant difference among the two groups (p-0.5461).



6. The breakthrough analgesic requirement was significantly high for Group A (required by 7 out of 25 patients) as compared to Group B (required by 1 out 25 patients) (p-0.0).

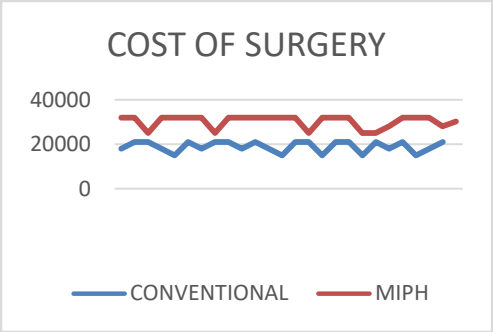


7. The mean duration of hospital stay in Group B was significantly low 3.04 days as compared to Group A 4.92 days (p-<0.0001).

Duration	CONVENTIONAL	MIPH	P value
Mean days	4.92	3.04	<0.0001

8. The mean cost of surgery for Group A was 18,960 as compared to 30,280 for Group B (p-0.001). The significant difference of 11,320 is attributed to the use of stapler gun used in MIPH.

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9. There was no significant difference noted among immediate complications – urinary retention (p-0.29), post operative bleed (p-0.55) or early complications – anal stricture (0.55), anal incontinence or recurrence (p-0.16).

IV. Discussion

a) Baseline data

In our study the mean age of Group A was 41.8 ranging from 18 to 70, for Group B mean age was 44.52 ranging from 15 to 78. The demographic age variable is comparable in both the samples and is age matched with a P value of 0.47. In their study Dr Nambalu Malyadri et al of 80 patients, found that study cases had a mean age of 34 for patients undergoing Conventional haemorrhoidectomy and 35 for patients undergoing MIPH with no particular predisposition to particular age group (8). Out of 60 patients that underwent similar case study conducted by Dr Yogesh Yadav et al, the mean age for Conventional haemorrhoidectomy was 44.77 and those who underwent MIPH was 45.53 (9). Similar results were found in case studies held by Dr Shalabh Gupta et al, Dr P Krishna Kishore et al and Dr Varun Raju et al.

In our study out of 50 patients 34 (68%) were males and 16 (32%) were females. Among the 34 male patients 17 (50%) were operated in Group A by Conventional method And 17 (50%) were operated in Group B with MIPH. Among the 16 females 8 (50%) were operated with Conventional method in Group A and 8 (50%) were operated by MIPH in Group B. Gender distribution is matched with P value of 1.0. In study conducted by Dr Yogesh Yadav et al a Male predominance of 52 (86.7%) was observed. Among 80 patients who underwent case study trials, Dr Shalabh Gupta et al, 49 were males (61.25%) and 31 were females (38.75 %) (10). Similar results were found in case study conducted by Dr P Krishna Kumar et al (11).

b) Presentation of patient

Patients with haemorrhoids often present with complaints of pain while defecation, bleeding per rectum, something coming out of anal canal (mass per rectum) and itching. Painless bleeding associated with bowel movements with or without intermittent tissue protrusion is the most common complaint of patients with symptomatic internal haemorrhoids. Depending upon the grade of haemorrhoid, the line of treatment varies. Grade I and II are usually managed conservatively while Grade III and IV require a much active plan of care and surgical intervention.

In our study out of 25 patients who underwent conventional haemorrhoidectomy, 16 patients had Grade III haemorrhoids while 09 had Grade IV haemorrhoids while out of 25 patients who underwent MIPH, 15 had Grade III haemorrhoids while 10 had Grade IV haemorrhoids and were grade matched with a P value of 0.77. Although study conducted by Dr Shailendra Pal Singh et al of 60 patients showed contradiction to our study with cases of Grade III haemorrhoids being 93.3 % and that of Grade IV haemorrhoids being 6.7 % (p-0.038) (12).

In our study, out of 25 patients who underwent conventional haemorrhoidectomy, 22 (88%) patients presented with complaints of pain during defecation while 20 (80%) presented with complaints of pain among patients who underwent MIPH, 19 (76%) presented with complaints of bleeding PR and 12 (48%) presented with complaints of mass PR while out of 25 patients who underwent MIPH, 20 (80%) presented with complaints of pain, 13 (52%) presented with complaints of bleeding PR and 13 (52%) presented with complaints of mass PR. This is in concordance with the studies conducted by Dr Nambula Malyadri et al and Dr Yogesh Yadav et al which showed no significant difference in the presenting complaints among individuals undergoing Conventional haemorrhoidectomy and MIPH.

c) Intra-operative findings

The duration of operation was compared between two groups.

In our study the mean operating time for Group A Conventional method was 35.08 when compared to MIPH Group B mean 31.24, the duration of surgery in MIPH group was significantly lower by 4 minutes when compared to the Conventional Group with a P-value of less than 0.001. There was no intraoperative complications and all the pedicles were ligated without any failure. The time difference of less than 4 minutes can be neglected as it did not affect the post operative morbidity. The findings were in concordance with studies conducted by:-

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- Dr Shalabh Gupta et al who conducted a case study of 60 individuals, among 30 individuals who underwent Conventional haemorrhoidectomy, the mean duration of surgery was 46.73 minutes while that for MIPH was 25.9 minutes (p-<0.001)
- Dr Nambula Malyadri et al observed similar findings with mean duration of surgery for Conventional haemorrhoidectomy was 50 minutes and for MIPH was 40 minutes (p-<0.001)
- Dr Yogesh Yadav et al case study produced identical data to study conducted by Dr Shalabh Gupta et al with mean duration for Conventional haemorrhoidectomy being 46.73 minutes while that for MIPH being 25.90 (p-<0.001)
- Mean duration for Conventional Haemorrhoidectomy was 36.2 minutes while that for MIPH was 28.76 (p-<0.05) in study conducted by Dr Varun Raju et al (13).

d) Post operative assesment

The most common encountered and troublesome morbidity post haemorrhoidectomy is the pain. Emphasis has been made to counter the problem as the pain is so excruciating that it can lead to other morbidities like urinary retention and constipation. Various approaches to haemorrhoids have been advised over time keeping in mind the post procedural pain assosciated with Conventional haemorrhoidectomy.

In our study the post operative pain was assessed and was scored using visual analogue scale from 0 to 5. Patients were administered analgesics as required.

Comparison was done between two groups with regards to pain VAS score. The pain scores were noted at 12th hour, 24th hour, 48th hour post operatively. In our study the mean pain score at 12th hour was 4.04 for Group A (Conventional haemorrhoidectomy) and 3.4 for Group B (MIPH). The pain score at 12th hour was significantly low in stapled haemorrhoidectomy with P value of 0.0004. The mean score at 24th hour for Group A was 03 and 1.92 for Group B which was also statistically significant with p value of 0.0001. But the mean pain score at 48th hour showed no significant difference between the two groups. Hence the post operative pain was significantly low in stapled haemorrhoidectomy group in comparison to Conventional approach. The data is in concordance with the studies conducted by Dr Shalabh Gupta et al and Dr Yogesh Yadav et al for significant pain comparison at 12th and 24th hours but contradicting to data for later stage.

- Dr Shalabh Gupta et al in their study noted a mean pain score of 6.87 in patients who underwent Conventional haemorrhoidectomy as compared to 3.73 among patients who underwent MIPH (p-<0.0001), at 24th hour among the individuals who underwent Conventional haemorrhoidectomy the mean pain score was 5.67 as compared to 2.10 among patients who underwent MIPH (p-<0.0001). The study also showed significant mean pain score difference on post operative day 7 among the two groups.
- Dr Yogesh Yadav et al in their study noted a mean pain score of 6.90 in patients who underwent Conventional haemorrhoidectomy as compared to 3.37 among patients who underwent MIPH (p-<0.0001), at 24th hour among the individuals who underwent Conventional haemorrhoidectomy the mean pain score was 3.57 as compared to 1.43 among patients who underwent MIPH (p-<0.0001). The study also showed significant mean pain score difference on post operative day 7 among the two groups.

In our study the requirement for breakthrough analgesia for Group A conventional method was 07 out of total 25 patients while that for MIPH Group B was 01 out of total 25 patients, the breakthrough analgesia requirement in MIPH group was significantly low when compared to the conventional group and has a P value of 0.02

e) Duration of hospital stay

Faster wound healing, better patient compliance, less post operative pain along with shorter stay at hospitals has resulted in better acceptability of stapled haemorrhoidectomy over the years.

In our study the mean duration of stay for Group A conventional method was 4.92 days while that for MIPH Group B was 3.04 days, the duration of hospital stay in MIPH group was significantly low when compared to the conventional group and has a P value of less than 0.0001. The results are consistent with the findings of Dr Shalab Gupta et al (Conventional method – 5.93 days, MIPH -2.07 days (P - <0.0001)), Dr Yogesh Yadav et al (Conventional method – 5.93 days, MIPH – 1.07 days (P - 0.001)), Dr NambulaMalyadri et al (Conventional method – 3 days, MIPH – 1 day (P - <0.001)) and Dr Varun Raju (Conventional method – 2.3 days, MIPH – 1.1 days (P - <0.05)).

f) Cost of surgery

In our study the mean operating cost for Group A conventional method was 18960 when compared to MIPH Group B mean 30280, the cost of surgery in MIPH group was significantly higher by 11320 when compared to the conventional group with a P value of 0.001. It is in concordance with the findings of study conducted by Dr Yogesh Yadav et al who reported a mean difference of Rs 22,000 among the two groups mainly attributing the findings to the cost of MIPH stapler guns.

g) Post operative complications

In our study the immediate complications among Group A conventional method were

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comparatively higher being 05 out of total 25 patients (Urinary Retention=03, Post operative Bleeding=02) while that for MIPH Group B was 02 out of total 25 patients (Urinary retention=01, Post-operative bleeding=01), the immediate complications in MIPH group was comparitively low when compared to the conventional group.

In present study the early complications among Group A conventional method for recurrences were comparatively higher being 04 out of total 25 patients while that for MIPH Group B was 01 out of total 25 patients, no anal incontinence cases were reported in either of groups, while anal stenosis incidence were high In MIPH Group B with 02 out of total 25 patients as compared to 01 out of 25 patients for conventional method Group B.

In present study the post operative complication such as bleeding, urinary retention, incontinence, recurrence and anal stenosis were noted in both the groups following Conventional haemorrhoidectomy And MIPH without any significant difference. This is in concordance with the studies conducted by Dr Shalab Gupta et al, Dr Nambula Malyadri et al, Dr Yogesh Yadav et al and Dr Varun Raju et al. However a contradiction can be found to the findings among the post operative bleeding with a significant difference among the two groups in studies conducted by Dr Nambula Malyadari et al who reported a significant difference regarding post operative bleed among individuals who underwent Conventional haemorrhoidectomy (12) as compared to those who underwent MIPH (2)(P - <0.001) while Dr Shalabh Gupta et al reported greater number of individuals who underwent MIPH (8) to have post operative bleed when compared to individuals who underwent Conventional haemorrhoidectomy (1)(P – 0.05). Dr Yogesh Yadav et al showed a significant association between anal incontinence and individuals who underwent Conventional haemorrhoidectomy (6) as compared to those who underwent MIPH (0) (P – 0.024).

V. Conclusion

There are reports of better post operative outcome following stapler haemorrhoidectomy in terms of pain and wound healing. Both conventional and stapler approach are less expensive and safe, easy to perform with satisfactory results. In present study we found that the important advantages of MIPH over the Milligan-Morgan conventional approach is that there are reduced pain in post operative period with fewer less breakthrough analgesics requirement to control the pain, leading to reduced hospital stay and early return to work along with better wound healing rate. but the stapled technique has these advantages at the expense of higher cost and surgical expertise. The present study thus recommends MIPH stapler haemorrhoidectomy has better results over conventional approach for Grade III and Grade IV haemorrhoids.

References Références Referencias

1. Chong PS, Bartolo DCC. Hemorrhoids and fissureinano. Gastroenterology Clinics of North America. 2008; 37: 627–644.
2. World J Gastroenterol. 2012 May 7; 18(17): 2009–2017.
3. Kaidar-Person O, Person B, Wexner SD. Hemorrhoidal disease: a comprehensive review. Jam Coll Surg. 2007; 204: 102–117.
4. Alonso-Coello P, Castillejo MM. Office evaluation and treatment of hemorrhoids. J FamPract. 2003; 52: 366–374.
5. KannBR, Whitlow CB. Hemorrhoids: diagnosis and management. Tech Gastrointest Endosc. 2004; 6: 6–11.
6. Jayaraman S, Colquhoun PH, Malthaner RA. Stapled versus conventional surgery for haemorrhoids. Cochrane Database Syst Rev. 2006; 4: CD005393.
7. Tjandra JJ, Chan MK. Systematic review on the procedure for prolapsed and hemorrhoids (stapled hemorrhoidopexy). Dis Colon Rectum. 2007; 50(6): 878-892.
8. Nambula Malyadri, Veera Jayachandra Allu. A Prospective Comparative Study of Stapler Hemorrhoidectomy Vs Open Haemorrhoidectomy (Milligan Morgan) in its Outcome and Postoperative Complications. Journal of Surgery and Research 4 (2021): 4-13.
9. Yogesh Yadav et al. Minimal invasive procedure for haemorrhoids (MIPH) versus Open haemorrhoidectomy: a comprehensive study. International Journal of Scientific Research, 2018; 7(8): 2277-8179.
10. Shalabh Gupta et al. A comparative study between open haemorrhoidectomy and minimal invasive procedure for haemorrhoids (MIPH) in cases of grade III and IV haemorrhoids. Panacea Journal of Medical Sciences, January-April, 2019; 9(1): 29-32.
11. P. Krishna Kishore, B. Manju Sruthi, G. Obulesu. Comparative study between stapler and open hemorrhoidectomy in the management of grade III/ IV hemorrhoids. IAIM, 2016; 3(9): 218-221.
12. Singh SP et al International Surgery Journal. Int Surg J. 2018 Jun; 5(6): 2069-2073.
13. Varun Raju Thirumalagiri, Ramachandrer Rao. A Comparative Study of Open Haemorrhoidectomy with Minimally Invasive Procedure for Haemorrhoids. IOSR Journal of Dental and Medical Sciences (IOSR-JDMS).Volume 16, Issue 1 Ver. VIII (January. 2017), PP 51-56.

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Acknowledgments

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The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.

Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11'", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

a) A title which should be relevant to the theme of the paper.
b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
d) An introduction, giving fundamental background objectives.
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.
f) Results which should be presented concisely by well-designed tables and figures.
g) Suitable statistical data should also be given.
h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
j) There should be brief acknowledgments.
k) There ought to be references in the conventional format. Global Journals recommends APA format.

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Author details

The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

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A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

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

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning 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 a research paper?” Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

Numerical methods used should be transparent and, where appropriate, supported by references.

Abbreviations

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

Formulas and equations

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

Tables, Figures, and Figure Legends

Tables: Tables should be 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. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

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Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

Preparation of Eletronic Figures for Publication

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). 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).

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Tips for writing a good quality Medical Research Paper

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. 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.

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

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

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

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

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11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. 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 for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

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

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

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

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

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22. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. Upon 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 for 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 of 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 criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

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- Submitting a manuscript with pages out of sequence.
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- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

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

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite 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 approaches 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. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a 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 limit the initial two items to no more than one line each.

Reason for writing the article—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 for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity 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 of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
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- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets 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 for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

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This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate 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 to give the least amount of information that would permit another capable scientist to replicate 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 section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show 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:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the 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—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and 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.



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Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as 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. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give 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 manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit 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 section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an 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 implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully 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 the prospect, and let it drop at that. Make a decision as to whether each premise is supported or 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 an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of 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 other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

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References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

INDEX

A

Abscesses · 22
Adipose · 25, 29

D

Dissection · 1, 3

E

Excruciating · 36

G

Glistening · 3

I

Incision · 6, 10, 11
Incontinence · 17, 31, 32, 33, 34, I

P

Perforation · 11, 19, 21, 22, 23
Protrusion · 34

R

Recessive · 7
Resuscitation · 8
Revelation · 9

V

Viscera · 9, 10
Voiding · 12, 13, 14, 17

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