

# CASE REPORT

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## UNUSUAL PRESENTATIONS IN INGUINAL HERNIA: FOUR CASES WITH REVIEW OF LITERATURE.

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**ABSTRACT:** Inguinal Hernia is a very common clinical entity with varied presentations. We are presenting four unusual cases of inguinal hernias, who came to us at The Sri Aurobindo Medical College and Postgraduate Institute at Indore. Out of the four cases three presented with incarcerated inguinal hernias in emergency, while one was a routine case. They presented with following unusual features; (1) Strangulated Meckel's Diverticulum as content (2) Inflamed Appendix Vermicularis as content (3) Strangulated omentum showed metastasis of a hidden intraabdominal adenocarcinoma (4) Beaded hernial sac which revealed mesothelial hyperplasia on histopathology.

Abdominal hernia is the result of abnormal protrusion of abdominal content through a defect in the abdominal wall. Its treatment is the surgical repair of the defect with satisfactory results. Although these unusual presentations of contents have no implications on the outcome of its surgical repair, but one should be aware of such possibility at exploration. We have presented these cases with review of literature as it will be beneficial to all.

**CASE 1:** Nineteen year old male presented with incarcerated right inguinal hernia, which on exploration was found to have a Strangulated Meckel's Diverticulum. Resection of ileal segment bearing the Meckel's Diverticulum, with an end to end ileal anastomosis done. Posterior wall of the inguinal canal was repaired by herniorrhaphy. Postoperative recovery was uneventful. It was a case of Strangulated Littre's Hernia.

**CASE 2:** Eighteen year old male presented with right inguinal hernia with pain. There was no history of vomiting or fever. Hematological investigations showed polymorphonuclear leucocytosis. On exploration the sac had the Appendix Vermiformis as its content. Appendectomy and repair of hernia by herniorrhaphy was done. Appendix showed congestion and mesentery was oedematous. Postoperative recovery was uneventful and patient was discharged on 7th postoperative day. Histopathological examination revealed

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features of acute appendicitis in the specimen of the appendix. This was a case of Amayand's Hernia.

**CASE 3:** Sixty five year old male was admitted with Left incarcerated inguinal hernia with pain and difficulty in walking. The patient did not have any other complaint. Physical examination and routine investigations were within normal limits. On exploration, sac of the hernia had strangulated omentum. Hernial defect was repaired by hernioplasty with prolene mesh. Excised omentum and sac were sent for the routine histopathological examination which showed deposits of metastasis from hidden intraabdominal adenocarcinoma. This was a case of metastatic adenocarcinoma in an incarcerated omentum in inguinal hernia.

**CASE 4:** Twenty nine year old male was operated for right inguinal hernia. Hernial sac was atypical. Peritoneum forming the sac was beaded and rough. Although there were no adhesions with the omentum but it was thickened. Hernioplasty with prolene mesh was done after excising the sac. Histopathological examination revealed features of mesothelial hyperplasia in the excised sac of this hernia.

**DISCUSSION AND REVIEW OF LITERATURE:** Hernia is the result of a defect in the abdominal wall. Surgical treatment is complete when the defect is closed efficiently. Contents of an abdominal hernia usually are small bowel, omentum, ovary and fallopian tube. Unusually any peritoneal organ can present as a content of a hernial sac. Review of literature shows many unusual presentations with varied contents.

In our series of such unusual presentations the first case is that of Littre's hernia i. e. a hernial sac containing a Meckel's Diverticulum. Littre's hernia is defined as the protrusion of the Meckel's Diverticulum through a potential abdominal opening (Ref 1). Littre's Hernia is uncommon and a detailed review of literature revealed that very few cases of a strangulated Littre's hernia are reported (ref 2). Reviewed literature and this case report shows that Meckel's Diverticulum can be safely resected with repair of hernia. Multiple pathologies encountered in the course of an abdominal operation should be dealt with, on its own merits and established principles of surgery.

Amayand's hernia is named after Claudius Amayand (1680-1740), an English surgeon who did the first recorded successful appendectomy (Ref 3). When a hernial sac contains vermiform appendix, inflamed or un-inflamed, it is called as an Amayand's Hernia. True incidence of this condition is difficult to estimate as all the cases are not registered. Ryan WJ et al (Ref 4) have reported only 11 cases of appendicitis out of 8692 (0.13%) cases of hernial sacs with appendix. D. Alia et al observed presence of appendicitis in 0.8% of 1341 operations of inguinal hernia. Vermiform appendix can be safely removed and hernia can be repaired in the usual way.

Case (3) showed presence of metastatic deposits of an adenocarcinoma in the excised omentum from the hernial sac. (Ref 5) Mayo clinic's retrospective study on inguinal hernias (1950-1988) reported that only 15 out of 22816 patients had metastatic deposits in their hernial sacs (0.05%). An intraabdominal malignancy can spread to omentum or peritoneum of the hernial sac by direct contiguity or by transcoelomic implantation. The hernial sac can be involved in three ways namely intrasaccular, saccular and extrasaccular (Ref 6) Extrasaccular involvement of sac is by the malignancy of a nearby structure for example a malignant inguinal lymph node infiltrating a sac of an inguinal hernia. Saccular is the primary mesothelioma of peritoneum. Omentum with

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secondary deposits is intrasacral involvement as it was in the reported case. Other examples of intrasacral involvement are malignancies of appendix, colon, and ovary when these organs with malignancy become a content of the hernial sac(Ref 7). This case emphasizes the importance of histopathological examination of hernial sacs and contents removed at operation(ref 8)

Case (4) is that of nodular mesothelial hyperplasia in a hernial sac. Mesothelial hyperplasia results in formation of nodules over the wall of the sac. Nodules can be lying free or can be attached to the wall of sac. Histopathologically these nodules are formed exclusively of one cell type. These cells show moderate degree of anisocytosis and pleomorphism. Rosai J et al (ref 9) reported a series of thirteen cases of hernial sac exhibiting mesothelial hyperplasia of such a degree as to simulate a malignancy i.e. mesothelioma. Mesothelioma has to be differentiated with mesothelial hyperplasia by immunohistochemistry.

Review of literature regarding unusual presentations in inguinal hernias gave us an insight of many clinically interesting cases. Intraperitoneal or retroperitoneal haemorrhages as well as many other congenital, infectious, or neoplastic processes occurring in the vicinity of groin may present within an inguinal hernia.

Gibbon CE et al(ref 10) reported a rare presentation where a dilated stomach of gastric outlet obstruction became a content of inguinal hernia. Sherman HF et al (ref 11) reported a patient presenting with incarcerated inguinal hernia which turned out to be collected blood due to a bygone splenic rupture. Mayank Jain et al(ref 12) had an inflamed appendage epiploicae in an incarcerated left inguinal hernia on trans peritoneal pre peritoneal (TAPP) hernioplasty.

Nishikant N Gujar et al (ref 13) reported a case of male form of persistent Mullerian Duct Syndrome of type I (hernia uteri inguinalis) which presented as an obstructed inguinal hernia. Prasannan S et al(ref 14) have documented one case with a ruptured ectopic pregnancy presenting as an irreducible inguinal hernia. Seema Khanna et al(ref15) described a case where an atrophied uterus was the content of the sac of an inguinal hernia in an adult female.

Aberrant Adrenocortical tissue was found in the hernial sac of a male by Demellawy et al(ref 16). Smithi Sripathi et al (ref 17) reported a case of left inguinal hernia in a new born with left ureter as its content. Diagnosis was done by an intravenous urography, as interesting earlier ultrasonography could not detect. A dress maker's pin was swallowed accidentally by a 18 month old boy. this pin was removed from inguinal hernial sac after two weeks(ref 18).

We conclude with quote by Sherman HF et al "Swelling in groin may represent much more than an inguinal hernia and an inguinal hernia may be much more complicated than it seems upon superficial consideration. Intraperitoneal or retroperitoneal hemorrhages, as well as many other congenital, inflammatory, infectious, or neoplastic processes occurring either locally or at distance from the groin may present in the groin, simulating a hernia or within an inguinal hernia itself" (ref 19). This list of unusual findings is endless and many more will be added in the future.

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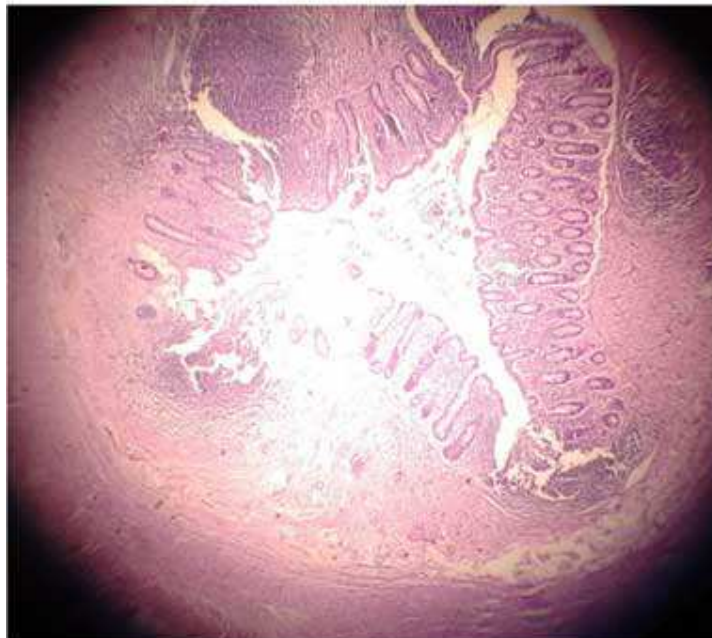
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Amayand's Hernia



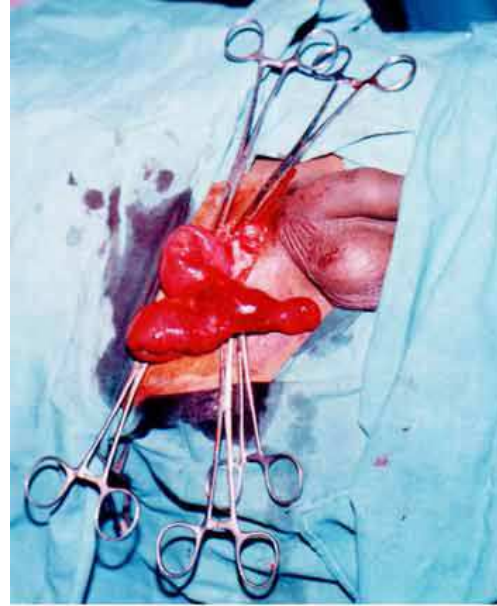
Microscopic View of Appendix

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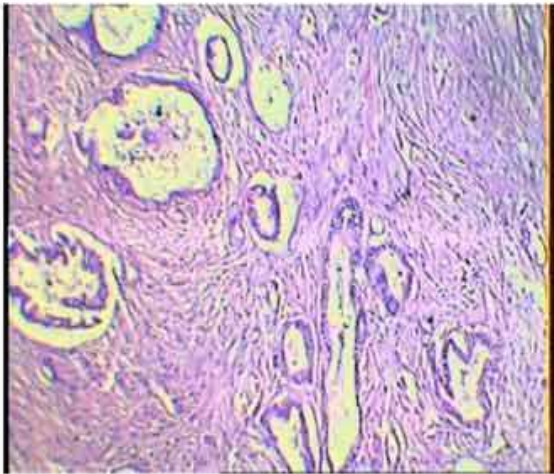
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Intra operative photograph showing involved omentum in left inguinal hernia



Strangulated Littre's Hernia



Microphotograph showing the malignant acinar structures infiltrating the fatty tissue of omentum 100x Hematoxylin and eosin stains.

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Beaded hernial sac of mesothelial hyperplasia



Histopathological view of mesothelial hyperplasia