EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 7
Issue: 7
579-581
Year: 2020

A STRANGULATED INDIRECT INGUINAL HERNIA IN THE SCROTAL SAC HAVING SMALL INTESTINAL LOOPS: A CASE REPORT

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Article Received on 12/05/2020 **Article Revised on 01/06/2020** **Article Accepted on 22/06/2020**

ABSTRACT
Strangulation of inguinal hernia extending up to scrotal sac is one of the common crises reported in surgical emergency. We reported a case of a strangulated left inguinal hernia containing the coils of intestinal loop mainly ileum. Scrotal exploration shows lower position of testicle on the left side whereas no abnormality or atrophy were observed on the right side. Such finding and associated features with extensive review the relevant literature is of utmost importance for clinicians in the differential diagnosis of various indirect inguinal hernia.

Index terms: hernia; inguinal; indirect; strangulation; intestine.

INTRODUCTION
Protrusion of contents from normally encasing body cavity through any normal or abnormal opening is hernia. Hernias are classified by their location. There are several types of hernias in the groin region as indirect, direct, pantaloon and femoral.[1]

Inguinal hernia comprises of protrusion of abdominal contents through the defect in inguinal region. In its subtype, indirect hernia contents from abdomen follows a specific path as first from deep to superficial inguinal ring to reach the scrotum. In another one, known as direct inguinal hernia, in which contents of abdomen pass through the weak posterior wall of the inguinal canal. Laxity of wall plays crucial role so its common in old people.[2] Indirect inguinal hernias are attributed mainly to congenital patent processus vaginalis.[3] Any hernia consists of a sac, contents and coverings. Contents ranges from any abdominal viscera to coils of intestine. The layers of coverings are basically formed by walls of abdomen.

Several clinical complications occur due to inguinal hernia namely, obstruction and strangulation etc. Inguinal hernias are found to be more common on right side.[4] The neck of the direct hernia is wide. As a result, these are rarely strangulated. On contrary to this, indirect hernia shows more strangulation as it has narrow neck.[5] Surgical intervention is most often management in most of the cases of hernias.

CASE REPORT
We discovered a huge scrotal sac on the left side of a cadaver during routine dissection session for first year medical students. In this 51- year -old male cadaver, a unilateral inguinal swelling was noticed outspreading up to scrotum. The scrotal sac was massive. On initial observation, considering anatomical features it was sure to be an inguinal hernia but to ensure the type further dissection was done. The muscular strata of anterior abdominal wall were exposed and it make sure that the hernial sac descending through inguinal canal. Further while dissecting through walls of scrotum the sac was seen extending up to the scrotal sac from triangular superficial inguinal ring. The neck of the hernial sac at the deep inguinal ring was found to be wider. No unusual finding was associated with spermatic cord. However, spermatic cord on left side was somewhat thin as compared to that on its counterpart. Hernial sac showed presence of coils of intestine with fat within it. The loops were found to be strangulated and were conical downwards. Any abnormality or atrophy were not observed in regard to testicles on right side, whereas on the left side it was positioned slightly to the lower part of scrotal sac. The measurements of the hernia sac were taken. To measure the length of the sac with herniated mass, measurement was taken from neck to apex on all four aspects as anterior, posterior, medial and lateral. The maximum length was taken as final measurement. In present case the maximum length is found on medial side i.e. 5.82 cm. Breadth of the sac at neck was least i.e. 2.5 cm and at the apex was 3.0 cm. it was maximum in the body of sac i.e. 2.8 cm.

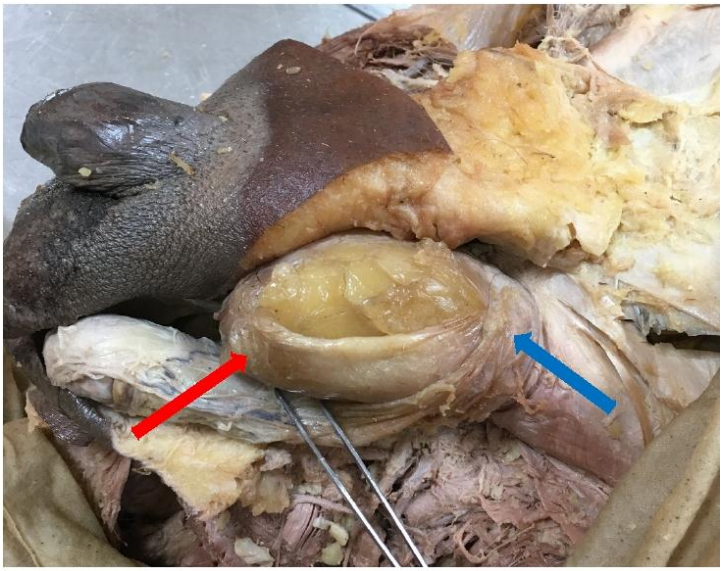

Figure 1: Showing the hernia mass within the scrotal sac.
Red Arrow: hernia mass within the scrotal sac, Blue arrow: Inguinal canal.

DISCUSSION

Out of the total abdominal hernias, inguinal hernias constitute approximately 75-80% of it. It is usually difficult to make a differential diagnosis between direct and indirect inguinal hernias at physical examination.[6]

There incidence is despite of the sexes, being more common in males. The present case was also a male cadaver.[4,7] Incidence in Male to female ratio is found to be 7:1.[8] Indirect inguinal hernia is the commonest type and mostly found congenitally in most of the cases.[9] It owes to the patent processus vaginalis. With descent of testis, it is generally obliterated post birth.[3] Hernia might be congenital or occur just after birth and even sometimes seen to happen later in life. But its noteworthy that sac of hernia occur always since birth.[10] Occurrence of all types of hernia rises with age.[8]

Indirect inguinal hernias may have a wide neck as also seen in our case and clogging of the deep inguinal ring seems to be ineffective with applying normal physical pressure.[11] Inguinal hernia shows complications as irreducible hernia, obstructive hernia, strangulated and inflamed hernia. In strangulated the constriction restricts blood flow by compressing vessels.[3]

Contents of an inguinal hernia range from various abdominal content. It might comprise of small intestine loop i.e. mostly ileum, meckle's diverticulum, part of omentum and sometimes even the appendix, uterine tube, ovaries, urinary bladder, caecum and parts of large intestine.[2] In the present study content of the hernial sac was ileum. Literature also reported presence of sigmoid colon in the content of congenital inguinal hernia.[12] Similar rare finding was observed in another study presented with sigmoid colon in the strangulated right inguinal hernia.[13] In another case summary, colonic inguinal hernia where the content of sac was sigmoid colon with double constriction of the segment.[14]

Increased occurrence of inguinal hernias is concomitant with several clinical syndromes as Hurler and Hunter Syndromes, Marfan's syndrome, Alport's syndrome etc. Undescended testis is also often seen to be associated with inguinal hernias.[15] Other conditions include abdominal aortic aneurysm, ascites, constipation, obstructive uropathies, obstructive pulmonary diseases and history of open appendectomy etc.[16]

CONCLUSION

The pain in groin region is usual but the differential diagnosis is comprehensive. It is indeed a challenge to reduce it to the diagnosis of an inguinal hernia. Conservative management with precision can be best applied for treating hernia to circumvent post-surgical complications. It is of utmost importance for the surgeons to keep in mind the anatomical details and variations with rare findings of the region. This case in particular will add on to existing knowledge of strangulated inguinal hernias to avoid complications.

Conflicts of interests: None declared.

Source of Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethical approval: This is a case report and does not require ethics committee approval.

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