

# A CADAVERIC EXPOSURE OF AN OBLIQUE INGUINO-SCROTAL HERNIA

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## ABSTRACT

We present a rarest exposure of an untreated indirect inguinal hernia in a seventy year old formalin fixed male cadaver. Even though inguinal hernia is a common finding, the challenge lies in its surgical reduction. Present report not only emphasizes on the content of the hernia sac but also on the morphological and structural alterations occurring in the abdominal cavity to accommodate a longstanding, untreated, non-obstructed inguinal hernia.

**Key Words:** Oblique Hernia; Indirect Inguinal hernia; Inguinoscrotal Hernia

## INTRODUCTION

Oblique inguinal hernias are commonly encountered clinical condition in day to day practice (Fitzgibbons et al., 2006). Hernia with congenital background can occur soon after birth or may be evident at latter stages of life. It is important to realise even in the latter case that the sac into which the hernia occurs may have existed since birth (Valioulis et al., 1997). Even though

extensive literature is available on the etiology, signs, symptoms and also the treatment options concerning inguinal hernia, present report may be one of its kind mainly focusing on the structural deformation, morphological changes that occurred in the abdominal cavity due to mal-positioning of intestinal loops in along standing inguinal hernia.

## CASE

During routine dissection of the anterior abdominal wall in formalin fixed male cadaver of about 70 years, inguinal swelling extending up to scrotum was noted on the right side. On reflecting the skin of the inguinal region and the scrotal sac, we noted an enlarged superficial or external inguinal ring due to the presence of hernia enclosed in a thickened external spermatic fascia which was extending till the scrotal

base. On further dissection, the external oblique aponeurosis was exposed and the dissent of the hernia was evident, entering through enlarged internal or deep inguinal ring and passing through the inguinal canal. To clearly understand and identify the content of the hernia sac, anterior abdominal wall was opened with a midline incision and it was found that the sac contained a non-obstructed loop of

transverse colon and greater omentum. The pull of the transverse colon towards inguinal canal on the right side has pushed the coils of the small intestine to the left side and due to constraint of space, the ileum had occupied the recto-vesical pouch and the right para-rectal space before terminating in caecum which was located in right lumbar region instead of rightiliac fossa (Fig. 1,2). Ascending colon was shorter and enlarged. Hepatic

flexure was lower in position. The splenic flexure, descending colon and sigmoid colon showed no abnormalities and were positioned normally. Right spermatic cord was located in the inferior aspect of the hernia and the testis was atrophied. No abnormality was found in the left testis and spermatic cord.

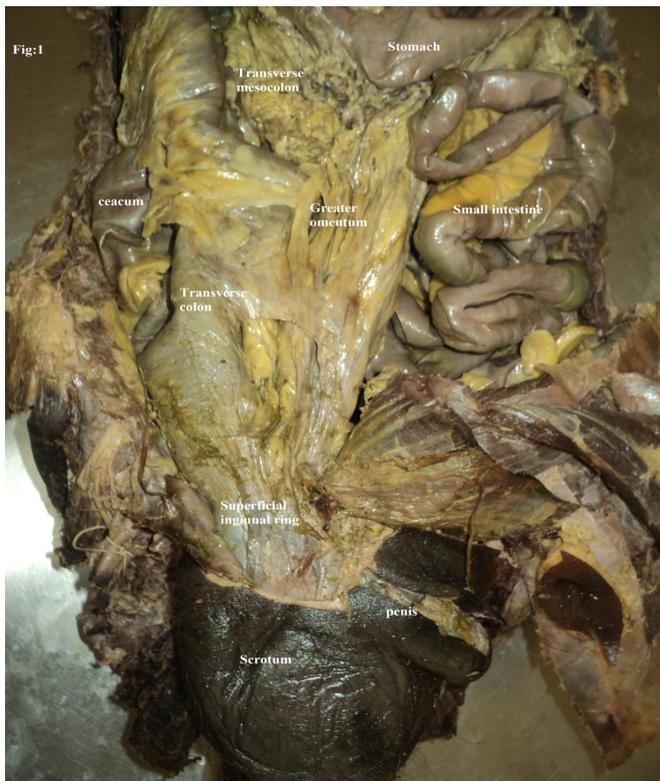


Figure 2: The extent of hernia with its coverings scrotal skin has been reflected.



Figure 3: Diagrammatic representation of the transverse colon and loops of small intestine

Figure 1: The transverse colon, the mesocolon and the greater omentum being pulled down through the inguinal canal into the scrotum.

### DISCUSSION

Terminal ileum, caecum, ascending colon along with the coils of small intestine are the commonest contents of hernia sac. In the present case, however, the transverse colon, mesocolon and the greater omentum

were the contents of the scrotal sac. Structural deformation was noted especially in the transverse colon, which was elongated to double its normal length and its walls were thickened, especially near the

inguinal region probably due to the constant friction with the inguinal ligament during hip movements. As the transverse colon and the mesocolon, were pulled towards the right inguinal canal, the left side of the abdominal cavity was filled by the loops of small intestine and right quadrant was occupied by caecum, ascending colon and the part of transverse colon giving a false impression of reverse rotation of gut (fig 1,2). The location of the superior mesenteric artery in relation to the duodenum is a key finding to diagnose the mal-rotation. Here artery was located anterior to duodenum indicating the normal rotation of mid gut. These compensatory mal-position of the gut coincides with reversed rotation of the gut which is a congenital condition where in the large intestine sometimes occupies the right side and small intestine is seen on the left of the abdomen (Fig 3) and the superior mesenteric artery lies posterior to duodenum (Valioulis 1997,Seung 2012).The contents of the hernia sac were found patent and healthy indicating the maintenance of the vascular integrity by the marginal artery branches and epiploic arteries (fig 1).Sergio et al suggest that vascular deficit, abdominal compartment syndrome and stretched mesentery may impair colonic vitality and anastomotic integrity.

Primary focus of the article was on the morphological changes and structural deformations occurring in the abdominal cavity due to the abnormal descent of the

gut. There are many reports about asymptomatic inguinal hernia without any medical or surgical intervention. This is probably because of the internal compensatory alterations occurring after the herniation, which may have minimised the discomfort and made patients endure hernia for longer period. Fitzgibbons et al(2006). states that, for men with minimal symptomatic inguinal hernia, who have no hernia pain or discomfort, limiting usual activities or difficulty in reducing the hernia, watchful waiting may be an acceptable option.

Congenital oblique inguinal hernia results from a patent processus vaginalis, which usually gets obliterated after birth following the descent of testis. Abdominal contents may herniate through patent vaginal sac till the scrotal base as seen in the vaginal type of inguinal hernia. Hernia is commoner on the right side as the processus vaginalis on the right closes little later than the left side (Mc Gregor 1986).

To conclude, even though inguinal hernia is a common finding, challenge lies in the reduction, probably because of the wide variation in the content of the hernia sac and also the deformation occurring in the abdominal cavity. Our report has highlighted the compensatory deformation occurring in the abdominal cavity, not just to accommodate the stretched structures of the gut but also to maintain the functional vitality of the gut, which may aid the surgeons in better understanding of the hernia and for surgical reduction.

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