

Case Report

A CASE REPORT ON SCROTAL HERNIATION AND ITS VARIATIONS

D. Krupa Daniel ^{*1}, Roja Nayak ², Prasanjeet Swain ³, Jianqiang Qin ⁴.

^{*1} Associate Professor Of Anatomy, Southern Medical University, Guangzhou P.R, China.

² MBBS ^{2nd} Year, Southern Medical University, Guangzhou P.R, China.

³ MBBS ^{3rd} Year, Southern Medical University, Guangzhou P.R, China.

⁴ Professor Of Anatomy, Southern Medical University, Guangzhou P.R, China.

ABSTRACT

Background: The scrotum is an anatomical male reproductive structure that consists of a suspended sack of skin and smooth muscle that is dual-chambered located under the penis. One testis is typically lower than the other, which functions to avoid compression in the event of impact. The scrotum contains the external spermatic fascia, testes, epididymis, ductus deferens. It is a distention of the perineum and carries some abdominal tissues into its cavity including the testicular artery, testicular vein and pampiniform plexus. Structures passing through are spermatic cord or round ligament of uterus enters through the deep inguinal ring & Structures passing through are spermatic cord or round ligament of uterus, Ilio-inguinal nerve.

Materials and Methods: Presenting variations were found at the department of anatomy, Southern Medical University, Guangzhou P.R, China, during our routine Anatomy dissections.

Discussion: The anatomic arrangement of muscular and fascial layers in the lower abdomen makes this area a site of potential weakness with possible development of inguinal hernias. Passage through this region by the vas deferens and spermatic vessels in the male and by the round ligament in the female makes the area more vulnerable to hernia protrusions. Inguinal or groin hernias may be congenital, exiting along the spermatic cord or round ligament as "indirect hernias," or may occur due to weakness of the transversalis fascia, producing "direct hernias." In our regular dissection course we found with an peculiar absence of penoscrotal raphe which has appeared as a single chambered scrotum with unified penis as absence of left corpora cavernosa & only presence of right corpora cavernosa and corpus spongiosum. The single chambered scrotum which was been herniated with the coils of intestines especially with terminal ileum & appendix with its omenta also peculiarly found with the absence of left side testis & its spermatic cord

Conclusion: Present study we found the following variations i.e. complete absence of left side testis & its spermatic cord, Single chambered scrotum with right testis only & herniated content, Absence of median raphe, Inguinal herniation should occur on right side but looping over towards the left side scrotal sac with the terminal ileum, vermiform appendix and its mesentery.

KEY WORDS: Scrotum, Testis, Direct Hernia, Indirect Hernia, Median Raphe.

Address for Correspondence: Dr. D. Krupa Daniel, Associate Professor of Anatomy, Southern Medical University, Guangzhou P.R, China. Phone no.: +86-15626441489

E-Mail: danielkrupa1309@gmail.com

Access this Article online

Quick Response code



DOI: 10.16965/ijar.2016.260

Web site: International Journal of Anatomy and Research
ISSN 2321-4287
www.ijmhr.org/ijar.htm

Received: 13 Jun 2016 Accepted: 15 Jul 2016
Peer Review: 13 Jun 2016 Published (O): 31 Aug 2016
Revised: None Published (P): 31 Aug 2016

INTRODUCTION

The scrotum is an anatomical male reproductive structure that consists of a suspended sack

of skin and smooth muscle that is dual chambered located under the penis. One testis is typically lower than the other, which functions

to avoid compression in the event of impact. The scrotum contains the external spermatic fascia, testes, epididymis, ductus deferens. It is a distention of the perineum and carries some abdominal tissues into its cavity including the testicular artery, testicular vein and pampiniform plexus. A central cord like line running over the scrotum from the anus to the root of the penis, marking the position of the scrotal septum. [1]. Inguinal canal is an Musculo-aponeurotic tunnel with 4 cms length which is extended between deep inguinal ring to the superficial inguinal ring which is directed downwards, forwards and medially. Structures passing through are spermatic cord or round ligament of uterus enters through the deep inguinal ring & Structures passing through are spermatic cord or round ligament of uterus, Ilio-inguinal nerve [2].

MATERIALS AND OBSERVATIONS

Presenting variations were found at the department of anatomy, Southern Medical University, Guangzhou P.R, China, during our routine Anatomy dissections.

Fig. 1: Bulging of Scrotum.



Fig. 2: Specimen after reflection of Skin



Fig. 3: Showing Normal Right Testis & Left side Herniation



Fig. 4: Showing the Herniated Intestines with Mesentry.



Fig. 5: Scrotal Herniated Sac.



Fig. 6: Showing the Absence of Left Testis & its Spermatic cord.



DISCUSSION

The scrotum (or scrotal sac) is a part of the external male genitalia located behind and underneath the penis. It is the small, muscular sac that contains and protects the testicles, blood vessels, and part of the spermatic cord. The scrotum is divided internally into two compartments by a septum and each compartment contains a testicle. The scrotum protects the testicles from temperature changes. When the abdominal content is covered by a sac of Peritoneum enters the Inguinal canal abnormally, it is known as Inguinal Hernia. The contents of Hernial sac vary from omentum to large gut part. Hernia is of two types Oblique Hernia/Indirect Hernia and Direct Hernia [3].

The anatomic arrangement of muscular and fascial layers in the lower abdomen makes this area a site of potential weakness with possible development of inguinal hernias. Passage through this region by the vas deferens and spermatic vessels in the male and by the round ligament in the female makes the area more vulnerable to hernia protrusions. Inguinal or groin hernias may be congenital, exiting along the spermatic cord or round ligament as "indirect hernias," or may occur due to weakness of the transversalis fascia, producing "direct hernias." Defects medial to the femoral vein as it passes beneath the inguinal ligament allow for the development of femoral hernias. Approximately 80% of all inguinal hernias occur in males, whereas 85% of all femoral hernias occur in females [4].

Inguinal hernias occur when bowel tissue or fatty tissue protrudes into the groin area at the top of the thigh. These hernias make up 75% of all abdominal hernias and mainly affect men[5]. Femoral hernia also occur when abdominal contents protrude through to the groin area. However, these hernias tend to be more rounded than inguinal hernia and mainly occur in women rather than men [5]. Hesselbach's Triangle [6] divides the Direct Hernia into Medial Direct Inguinal hernia & Lateral Direct Inguinal hernia by the passage of Obliterated Umbilical Artery. The boundaries of Hesselbach's Triangle are bounded medially by lateral border of rectus abdominis, laterally by inferior epigastric artery,

base is formed by inguinal ligament. Medial Direct Hernia is bounded medially by obliterated umbilical artery, laterally by lateral border of rectus abdominis, base is formed by inguinal ligament. Lateral Direct Hernia is bounded medially by obliterated umbilical artery, laterally by inferior epigastric artery, base is formed by inguinal ligament [7-9]. Testicles started to develop in fetus. They began high inside the abdomen, near the kidneys at the back. Testis runs forwards and downwards towards the groin. Meanwhile, the scrotum develops and gets ready to receive them. About a month or two before birth, the testicles normally complete the journey by descending into the scrotum. In 2-4% of boys, one testicle doesn't make the journey from the back of the abdomen to the scrotum before birth. Instead, it becomes stuck inside the abdomen or at the groin. It is called undescended testicle. It is more common in premature babies. Most babies with undescended testicle do not need any treatment – in 2 out of 3 cases the testicle will come down naturally before the baby is 3 months old. If not, the baby will usually need an operation to bring the testicle down. This should be done between 6 and 12 months of age [10]. In our regular dissection course we found with an peculiar absence of penoscrotal raphe which has appeared as an single chambered scrotum with unified penis as absence of left corpora cavernosa & only presence of right corpora cavernosa and corpus spongiosum. The single chambered scrotum which was been herniated with the coils of intestines especially with terminal ileum & appendix with its omenta also peculiarly found with the absence of left side testis & its spermatic cord [11].

CONCLUSION

Present Case report describes the following findings viz., complete absence of left side testis & its spermatic cord, single chambered scrotum with right testis only & herniated content, Absence of median raphe, Inguinal herniation should occur on right side but looping over towards the left side scrotal sac with the terminal ileum, vermiform appendix and its mesentery.

Conflicts of Interests: None

REFERENCES

- [1]. www.healthline.com/human-body-maps/scrotum
- [2]. Kjaer S., Mikines K.J. HCG in the treatment of cryptorchidism. The effect of age and position of the testis. *Ugeskr Laeger*. 2006;168(April (14)):1448–1451.
- [3]. Primary Surgery: Volume One: Non-trauma – Chapter-7, Hernias
- [4]. Walker HK, Hall WD, Hurst JW, editors. Boston. Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd edition. Butterworths; 1990.
- [5]. Inguinal hernias - *BMJ* 2008; 336 doi: <http://dx.doi.org/10.1136/bmj.39450.428275.AD>
- [6]. <http://clinanat.com/mtd/179-hesselbachs-triangle>
- [7]. Condon RE, Nyhus LM. Complications of groin hernia and of hernia repair. *Surg Clin N Am*. 1971;51:1325–36
- [8]. Nyhus LM, Harkins HN. *Hernia*, 2d ed. Philadelphia: Lippincott, 1964.
- [9]. Zimmerman LM, Anson BJ. *Anatomy and surgery of hernia*. Baltimore: Williams and Wilkins, 1967.
- [10]. Undescended (missing) testicle(s) - *Seminars in Pediatric Surgery* 2010;19:215-24
- [11]. .Peno-Scrotal Raphe Absence & Its Herniation, April 2016- *The FASEB Journal* 2016;30(1):1046.6.

How to cite this article:

D. Krupa Daniel, Roja Nayak, Prasanjeet Swain, Jianqiang Qin. A CASE REPORT ON SCROTAL HERNIATION AND ITS VARIATIONS. *Int J Anat Res* 2016;4(3):2630-2633. **DOI:** 10.16965/ijar.2016.260