ISSN: 2581 – 3633
PubMed - National Library of Medicine - ID: 101745081

International Journal of Medical Science and Advanced Clinical Research (IJMACR)

Available Online at: www.ijmacr.com

Volume – 3, Issue – 2, March - April - 2020, Page No. : 12 - 15

A Rare Case of Right Inguinal Hernia in a Patient with MRKH Syndrome

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Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Inguinal hernia in females is relatively uncommon as compared to males.Inguinal hernias containing ovary have a documented incidence of 2.9% and most of these cases are associated with congenital anomalies of genital tract.(1) This is the case of a 16 year old female who presented to our institution with pain and swelling in the right side of the groin. On examination the patient had an irreducible swelling in the right inguinal region. MRI abdomen showed right inguinal hernia with ovary as its content. Laparoscopic right inguinal hernioplasty was done.

Keywords: MRKH syndrome, inguinal hernia, ovarian hernia

Introduction

Repair of groin hernia is one of the most common operations performed in general surgery, with over 20 million operations per year. Only 8 percent of all groin hernia repairs are performed in women.The disparity between outcomes after groin hernia repairs in women and men stems from differences in anatomy.The shape of the pelvis differs between the sexes as do the musculoaponeurotic attachments and the structures passing through the inguinal canal.

Mostly inguinal hernial sac contains omentum or small bowel, but caecum, appendix,sigmoid colon or urinary bladder are also seen occasionally. Ovarian hernia in female infants and paediatric patients are often associated with congenital genitourinary tract anomalies such as Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome.(2) MRKH syndrome refers to congenital aplasia of the uterus and the upper two-thirds of the vagina in females with normal ovaries and fallopian tubes, secondary sexual characteristics and 46XX karyotype. MRKH syndrome is classified into two types based on associated anatomical features. It was earlier considered as sporadic but now the theory of being autosomal dominant has been incorporated. The incidence is 1 out of 4500 females.Type I MRKH syndrome is usually isolated type while Type II MRKH syndrome (MURCS association or genital renal ear syndrome) is associated with renal,vertebral,and to a lesser extent, auditory and cardiac defects.(2) We report a case of a MRKH syndrome with right inguinal hernia with ovary as content.

Case Report

A 16 year old female presented to the opd with complaints of swelling in the right side of her groin since two days associated with pain. She is a known case of MRKH syndrome with karyotyping done earlier for primary

amenorrhoea. On examination she had an irreducible swelling in the right side of the groin. Further evaluation with MRI abdomen revealed right inguinal hernia with ovary as content. Size, morphology and location of both the kidneys were normal without any evidence of anomalies.The patient was planned for laparoscopic right inguinal hernioplasty. Right preperitoneal flap was created and the sac was dissected. The hernial sac contained the right rudimentary horn of the uterus, round ligament and the right ovary. Round ligament was divided and the contents were reduced. Prolene mesh was placed in the preperitoneal plane and anchored to the pubis using tackers. Right oophoropexy was done. Post operative period was uneventful.

Figure 1:contents of the Right inguinal hernia

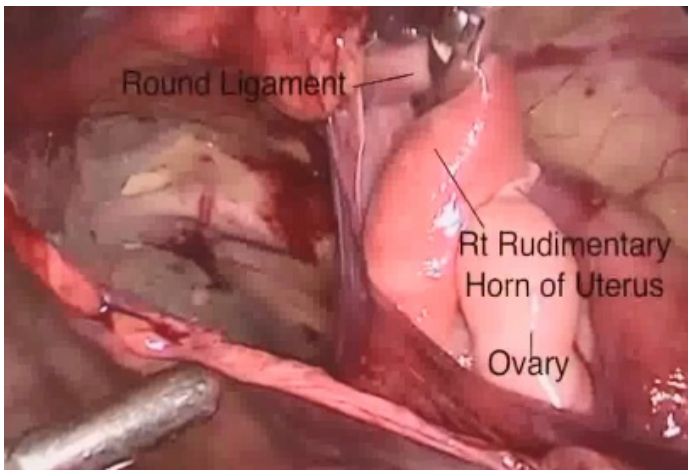
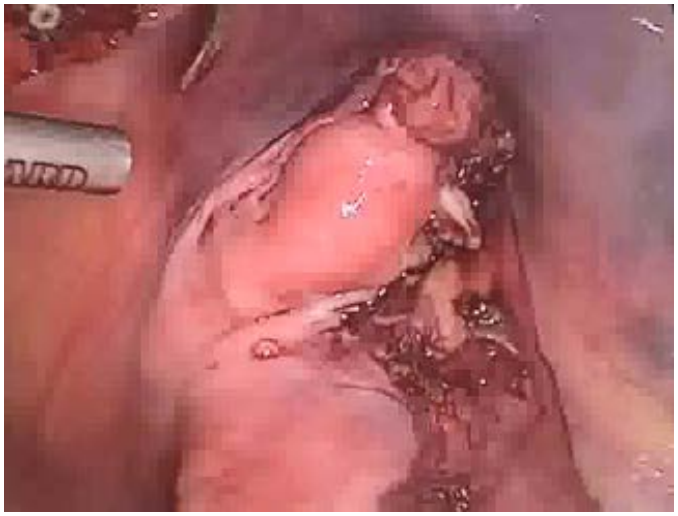


Figure 2: Mesh placement

Figure 3:Right Oophoropexy



Discussion

A hernia is defined as the protrusion of a portion of an organ or tissue through the wall normally containing it. Inguinal hernias are more common in males than in females. Inguinal hernias in infants and young adults result from the persistence of a patent peritoneal pocket. In males it is the patent processus vaginalis and it accompanies the testicle through the abdominal wall as it descends into the scrotum. In females the ovaries also descend into the pelvis but do not exit from the abdominal cavity. The peritoneal extension, if it remains patent in females, is known as the diverticulum of Nuck and leads to indirect inguinal hernia.(3)

The mullerian duct and the mesonephric duct are intimately related in the first months of fetal life.Toward the third month the renal and the genital system are well separated. When the ovary passes into the true pelvic cavity it stops in its descent because of the fixation of the gubernaculum of the ovary. The other end of the gubernaculum of the ovary reaches the base of the labium majus. The canal of Nuck, which extends into the labium majus at this point, usually becomes obliterated at the eighth month of fetal life. If, however, the canal of Nuck remains open along with shortening of the distal end of the

gubernaculum, it causes the ovary to be pulled into the canal of Nuck lying within the inguinal canal.(4) An inguinal ovary is at risk of torsion and infarction. Management therefore is aimed at preservation of ovarian function by repositioning the gonad to ensure an adequate source of oocytes and estrogen production. Repositioning and herniorrhaphy are advisable as soon as the condition is recognized, irrespective of mullerian status. This repositioning may be performed by an open or laparoscopic approach.(5)

In our case laparoscopic reduction of the rudimentary horn of the uterus, round ligament and right ovary was done. Right Trans Abdominal Preperitoneal mesh plasty was done. Most of the cases reported in literature underwent open method. We decided laparoscopy due to the young age of the patient and unmarried status. Right oophoropexy by suturing it to the lateral pelvic wall was done to prevent torsion.

Omari et al performed Herniorrhaphy with repositioning of the uterus, fallopian tube, ovary and Williams vulvo vaginoplasty for a 31 year old married women with MRKH syndrome with rudimentary uterus,round ligament and ovary as content in inguinal hernia.(5)

Open inguinal hernioplasty with excision of the mullerian tissue was done by Verma et al in a 45 year old female with MRKH syndrome with congenital agenesis of left kidney.(6)

Laparoscopic Left inguinal hernioplasty was performed by Khan et al in a 18 year old female with left inguinal hernia with left ovary and fallopian tube as content.The patient also had an left renal agenesis. (7)

Bilateral inguinal hernia with torsion of ovary as content was noted by Palepu S et al for which Bilateral open inguinal hernioplasty was done.(8)

Demirel F et al report the case of a 10 year old girl who underwent left inguinal hernioplasty with ovary as content. Karyotyping later revealed her with MRKH syndrome.(9)

Conclusion

Most of the studies reported in literature involves open method for management of an inguinal ovary.Since our patient is young and unmarried we decided to go ahead with an Laparoscopic approach.Since ovary was preserved in this patient she can have genetic children through IVF with embryo transfer to a gestational carrier.

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How to citation this article: Dr Pradushana V P, Dr Naveen Alexander, "A Rare Case of Right Inguinal Hernia In A Patient With MRKH Syndrome", IJMACR- March - April - 2020, Vol – 3, Issue -2, P. No. 12 – 15.