

Laparoscopic management of bilateral irreducible Amyand's herniae in an infant

Sandesh VP, Rahul KG*, Beejal S, Kedar M, Rujuta S, Deepa M, Kavimozhy I, Ashutosh S, Manish K, Soundharya S, Kamalkant M, Abhijeet K

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A 3 months old boy presented to us with bilateral irreducible inguinal herniae. After manual reduction, the herniae appeared clinically reduced, so he was posted for laparoscopic hernia repair the next day. Diagnostic laparoscopy showed a widely open left deep inguinal ring with edematous margins and no contents. On the right side, the proximal half of the appendix was seen entering the hernia sac and the distal half was adherent with the sac, preventing its repositioning to right iliac fossa. The appendix was carefully

dissected from the sac using a 3-mm monopolar hook cautery followed by its reposition into the abdomen. Both deep inguinal rings were closed by intracorporeal knotting using polyethylene 3-0 suture on 16 mm cutting needle. Postoperative course was uneventful. The patient is asymptomatic at 6 months follow-up postoperatively. In the present case, laparoscopy not only allowed simultaneous bilateral hernia repair but also allowed inspection of the bowel along with incidental diagnosis and management of Amyand's hernia.

Key Words: Amyand's hernia; Laparoscopic; Infantile

INTRODUCTION

We are routinely doing paediatric laparoscopic inguinal hernia repair in our centre since 2005. We have already published our data for the same (1). Till today we have successfully repaired 752 deep inguinal rings of paediatric patients (less than 12 years including neonates) of manifest hernia as well as patent processus vaginalis by laparoscopy. The present case was the first infantile case of Amyand's hernia encountered by us. On review of literature, we found very few reports of laparoscopic treatment of Amyand's hernia in infants with incarcerated hernia (2-4). We present an interesting case of a male newborn with bilateral irreducible inguinal hernia.

CASE REPORT

A 3 months old boy was brought to us in emergency with bilateral inguinal swelling. Physical examination showed bilateral irreducible inguinal hernia. The patient was kept nil per oral with IV fluids and on nasogastric decompression. After manual reduction, the hernia on both sides appeared clinically reduced, so he was posted for laparoscopic repair next day. We used a 5 mm 30° telescope and two 3-mm working ports. Insufflation pressure was 6 to 8 mmHg with flow rate of 2 litres/min. Diagnostic laparoscopy showed wide open left deep inguinal ring with edematous margins. To our surprise, despite clinical reduction of the hernia, on the right side, we could see the distal half of the appendix entering the hernia sac (Figure 1).

The appendix was adherent with the sac, preventing its repositioning into the abdomen. The appendix was carefully dissected from the sac using a 3-mm monopolar hook cautery followed by its reduction into the abdomen. Bilateral deep inguinal rings were closed using intracorporeal knotting using polyethylene 3'0' suture on 16 mm cutting needle (Figure 2).

The post-operative course was uneventful. The patient is asymptomatic at 6 months follow-up postoperatively.

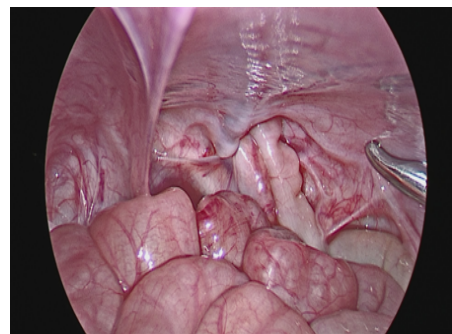


Figure 1) Widely open left deep inguinal ring with oedematous margins and on the right side proximal half of appendix was seen as distal half was present inside the hernia sac

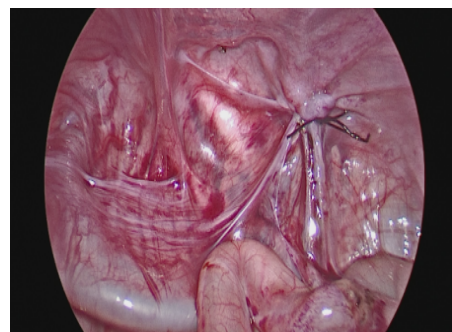


Figure 2) Bilateral deep inguinal rings were closed using intracorporeal knotting using polyethylene 3'0' suture

Department of Paediatric Surgery, Seth G. S. Medical College and King Edward Memorial Hospital (K.E.M. Hospital) Parel, Mumbai, India

Correspondence: Rahul Kumar Gupta, Department of Pediatric Surgery, Ward 3, Old Building, Seth G. S. Medical College and King Edward Memorial Hospital, Parel - 400012, Mumbai, India. Telephone + 09833112941, email drrahulg78@yahoo.co.in

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DISCUSSION

Amyand's hernia was first described by Claudius Amyand on 1735 in an 11 year old boy. In this case the appendix was present in inguinal canal. The incidence of this hernia is 0.1% of all cases of appendicitis. There are no specific clinical features which can help in preoperative diagnosis. It is mainly detected as an incidental finding on diagnostic or therapeutic laparoscopy as in our case. Worldwide, the most common surgical technique of paediatric inguinal hernia repair is inguinal herniotomy by open approach (2,5). In the last decade, many centres started laparoscopic treatment of inguinal hernia and published their data, including our centre (1,5-6). On review of literature, we found only a few reports of laparoscopic management of Amyand's hernia in infantile age group (7,8). There can be a variety of hernial contents like omentum, small and large bowel, and bladder. In rare cases, Meckel's diverticula and appendix can also be there in the hernial sac in infants, without clinical manifestation. Laparoscopic approach can easily diagnose and treat this condition. The advantages of diagnostic laparoscopy followed by inguinal hernia repair in infantile age group are (1) Contralateral patent process us vaginalis can be detected (>89% in infants) (2-5). In obstructed or non-obstructed hernia, laparoscopic reduction of hernia contents under vision is safer than manual reduction. The first intervention in cases of irreducible hernia is manual reduction. Disadvantages of this approach are that it is blind with no visual control (3) and can cause internal damage to hernial contents leading to incomplete reductions and complications (4). Later surgical intervention becomes difficult due to altered anatomy (3,4). This concept of conservative management versus operative intervention increases hospital stay and cost (3,4). On the other hand, the advantages of laparoscopy are widening of the deep inguinal ring with insufflations facilitating reduction, reduction under vision along with inspection of hernia contents with laparoscopic repair of hernia in the same sitting. It also helps in identification of unusual hernial contents as we found in our case of Amyand's hernia. Due to availability of better optics, smaller 3-mm instruments, and better laparoscopic skills acquired with time in our centre, there is no additional risk of laparoscopic approach for infantile hernia. It also allows us to do simultaneous bilateral hernia repair as well as identification and closure of patent processus vaginalis in cases of unilateral manifest hernia thus reducing chances of metachronous hernia (9-12).

CONCLUSION

By our report we can conclude that laparoscopic approach by experienced surgeon for unilateral or bilateral irreducible inguinal hernia in infantile age

is not only safe and effective but also helps in identifying unusual contents like appendix.

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