

Drain site hernia in adult - case report and review of literature

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Abstract

Hernia is a very common surgical problem. Drain site hernias are very rare (0.1-3.4 %) incidence quoted in literature. We report the case of a 40year old male who presented with a swelling in the right lower abdomen. CT scan revealed herniation of small bowel with interstitial spread through a former drain site placed after a previous laparotomy 10 years back.

Keywords- Drain, Complications, Hernia, small bowel

Introduction

Intraperitoneal drains are frequently placed to drain the post-operative collections. The routine use of drains for abdominal surgical interventions has become less common because of variety of post drainage complications. These complications include infection, pain, breakage, hemorrhage, tissue damage, blockage

and herniation of viscera [1] [2]. Small bowel herniation through drain site is very rare long term complication of intraperitoneal drain placement. We report a case of irreducible hernia through drain site in 40 year old male.

Case Report

A40 year old male presented with pain and bulge in the right lower quadrant of the abdomen since 4 weeks. He had an emergency laparotomy for small bowel enteric perforation 10 yrs back. During that admission he had intrperitoneal drain

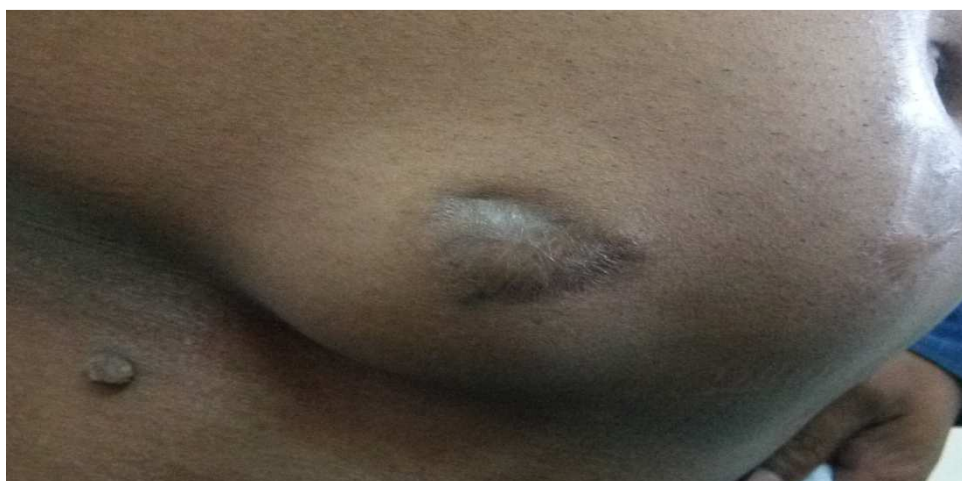


Figure-1: Preoperative image showing bulge at previous drain site

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insertion at the same site of bulge. He noticed the bulge in right lower quadrant 3 months after laparotomy. To start with bulge was painless and reducible. Since last one month bulge has become painful and irreducible. On clinical examination vitals were stable. On examination ill-defined irreducible mass noted at the previous drain site. (Figure-1) Laboratory investigations were normal. CT abdomen showed a defect at the drain site and herniation of small bowel with interstitial spread (Figure-2). On exploration a defect of around 3cm noted which was closed with prolene suture.(Figure-3) An onlay prolene mesh repair was done. Postoperative period was uneventful.



Figure-2: CT Scan showing defect in the anterior abdominal wall

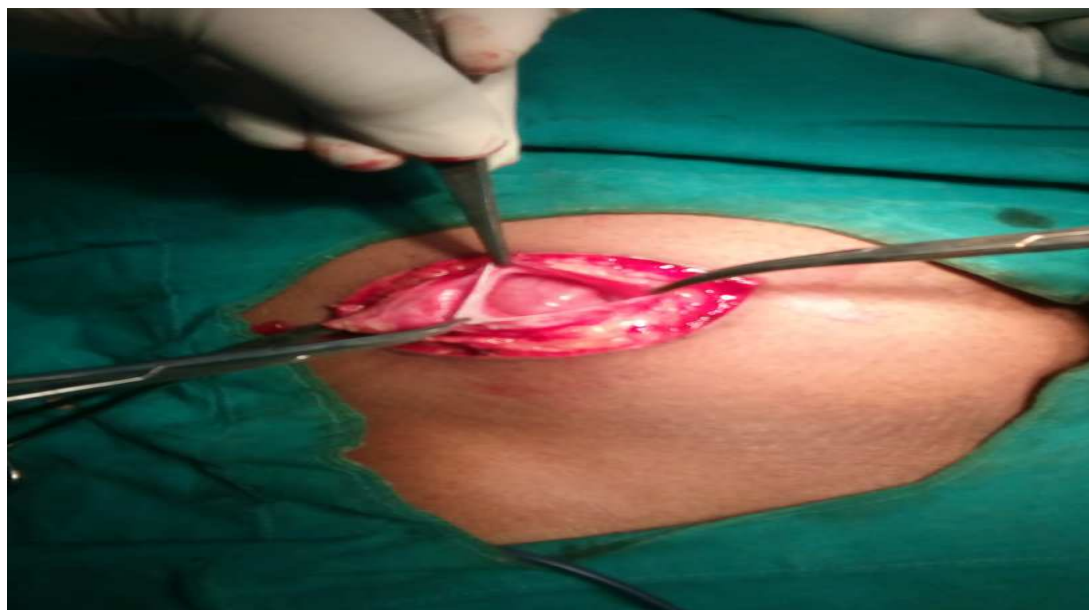


Figure-3: Intraoperative image showing defect

Discussion

Drain site hernia is very rare long term complication of drain insertion [3] Previous reports quoted the incidence rate of 0.1-3.4% [4]. Drain site hernias are more common after post open as compared to post laparoscopic surgery. Content of the hernia is usually omentum and small bowel [5]. Morbidity and mortality

is usually because of strangulation of the small bowel. Appendix, gallbladder have been reported as content of the drain site hernia [6] [7]. Large size of the drain (>10mm), surgical site infection, obesity, increased intraabdominal pressure, steroid administration has been prominent predisposing factors [5] [8]. Incidence

of port site hernia following laparoscopic surgery reported to be 0.65%–2.5% [9]. Probably the same factors which cause port site hernia govern herniation from surgical drain site following open surgery.

Various suggestions have been made by previous reports on prevention of drain site hernia. These include use of drain size less than 10mm external diameter, oblique or transverse insertion through abdominal wall, obliteration of the tract with non absorbable suture after removal and shortening of the drain progressively before it is removed [5] [10]. In laparoscopic surgery drain should be placed through the port size less than 5mm. If for any specific reason drain is placed through larger size port single narrowing facial stitch or purse string suture is recommended [11].

Conclusion

Use of intraperitoneal drain should be minimized as potential complications can cause significant morbidity. If drain is absolutely required it should be inserted and removed by strictly adhering principles of proper insertion and removal.

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