

Case Report

A rare case of bilateral drain site abdominal hernia: a case report and review of literature

Santosh K. Sonker, Lizrose Kujur, Harsh M. Agrawal*

Department of Surgery, Pt. JNM Medical College, Raipur, Chhattisgarh, India

Received: 23 June 2020

Revised: 30 August 2020

Accepted: 02 August 2020

*Correspondence:

Dr. Harsh M. Agrawal,

E-mail: harshuji@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Use of abdominal drain is a tradition used since a long time. These is generally done to prevent or drain any post-operative intra-abdominal collection aiming to reduce morbidity and mortality and early recovery of patient. But drain has its own complication such as drain site infection, drain site hernia. We encountered a case of bilateral drain site hernia in a 55 year old female who was previously operated for perforation peritonitis. Both herniae were repaired successfully with onlay meshplasty. Drain placement has various complications like drain site infection, adhesion's, intestinal erosion, bleeding, anastamotic rupture and drain site hernia. There is greater risk of hernia in patient with poor nutritional status, obesity, ascitis, severe abdominal infection or with persistent cough. It is better to avoid unnecessary placement of drain. If a drain is placed, its removal should be done as early as possible. It is better to close the defect after removal of drain.

Keywords: Abdominal hernia, Complication of drain, Drain site hernia, Hernia

INTRODUCTION

Use of abdominal drain after a major abdominal surgery is a tradition used since a long time of Hippocrates in 460-377 BC.¹ These is generally done to prevent or drain any post-operative intra-abdominal collection or abscess formation. But placement of drain has its own complications such as drain site infection, adhesion formation, and erosion on walls of organs, fistula formation.² Drain site hernia is also a known rare complication. The incidence of drain site hernia is reported to be ranged from 0.14% to 3.4%.³ The contents of drain site hernia are found to be small intestine, appendix, colon, omentum, gall bladder, ovary, and fallopian tube.⁴⁻⁷ Though rare knowledge of such complication should be known, as the patient can present with obstruction, due to strangulation of contents of hernia, so that they can be identified early. We encountered a case of bilateral drain site hernia having small bowel and omentum as a content.

CASE REPORT

A 55 year old female patient came to our outpatient department (OPD) for general follow up as an operated case of hollow viscus perforation. The patient previously presented to the emergency department with complain of abdominal pain since one day and was diagnosed as a case of perforation peritonitis which was confirmed on x-ray abdomen erect showing air under both dome of diaphragm. Due to poor general condition of patient she was intubated and bilateral abdominal drain was inserted for continuous peritoneal lavage and on next day after 24 hours resuscitation, laparotomy and omentopexy of the prepyloric perforation with drainage of 1000 ml bilio-purulent fluid was done, and the drain were kept to facilitate the drainage of any intra-abdominal collection and post-operative monitoring. Drain was removed on 15th post-operative day and patient was discharged uneventfully on 22nd post-operative day. The patient came for a follow up after one month with complain of small

swelling in left lumbar region. On examination, the patient was found to have 4×4 cm swelling in left lumbar region which was soft in consistency, non-tender, reducible, having cough impulse, and a defect of approximately 3 cm in abdominal wall after reducing the swelling. Another swelling of size 2×2 cm with similar features was found in right lumbar region. The diagnosis of bilateral drain site hernia was made and confirmed by ultrasonography which showed small intestine and omentum as content of hernia sac. The patient was planned for elective onlay meshplasty. During surgery the hernial sites were operated separately through lumbar transverse incision, incision deepened in layers hernial sac identified with small intestine and omentum as a content, contents were reduced and defect was repaired with 1-0 prolene suture and on lay meshplasty was done. The patient was ten discharged uneventfully on 8th post-operative day.



Figure 1: Swelling in lumbar region.



Figure 2: Lumbar transverse incision.



Figure 3: Post surgery lumbar region.

DISCUSSION

Abdominal drain were first used by Hippocrates to drain an empyema of gall bladder, since then abdominal drains are routinely used.² Abdominal drains are placed to drain or prevent, intra-abdominal collection of blood, lymph pus, bile, urine pancreatic secretion or other body fluids.^{4,8} Drains also help to detect post-operative surgical complication like anastomotic leak or intra-peritoneal bleeding early. Various studies have shown that drain placement has various complications like drain site infection, adhesions, intestinal erosion, bleeding, anastomotic rupture and drain site hernia.⁹ Herniation occurs particularly in patient with poor nutritional status, obesity, ascitis, severe abdominal infection or with persistent cough. Steroid therapy, chemotherapeutic agent have also been implicated as cause of herniation.¹⁰ Surgical site infection is the most important predisposing factor for development of drain site hernia.

Herniation through drain site is very rare as these wounds are small and close spontaneously after the removal of drains. The drain site are usually not sutured after removal of drain.⁹ It is seen that drain site hernia has occurred 3-8 hours after removal of drain and commonly occurs after several months to several years following a laparotomy.⁹

Of all the few cases reported of drain site hernias different contents have been found, which include small intestine, appendix, colon, omentum, gall bladder, ovary, fallopian tube.⁴⁻⁷ Out of these most common was small bowel loops and appendix.⁹⁻¹¹ Omentum was found as a content in very few cases as reported by Bakka et al and Samarawickrama et al.^{12,13}

There are cases in literature found to have drain site hernia with small bowel and omentum as content but none of the case is found to have bilateral drain site hernia.

In our case the patient had bilateral drain site hernia these could have occurred probably as patient was a case of perforation peritonitis and so had a contaminated abdomen, also the drain was placed for a longer duration in our case and a large drain 32 fr was used, which all could have contributed to herniation.

As we have always been taught that “prevention is better than cure”, so it is better to avoid unnecessary placement of drain in non-complicated operations. If a drain is placed, its removal should be done as early as possible. Also it is important to choose the size of the drain appropriately, bigger sized drains should be avoided as they increase the risk of drain site hernia. Also it is better to close the defect after removal of drain in those patient who are at high risk of developing drain site hernia.

CONCLUSION

Hence, even though abdominal drain is generally used to drain any post-operative intra-abdominal collection or

abscess formation, their placement has its own complications such as drain site infection, adhesion formation, erosion on walls of organs, fistula formation. But many surgeons place drain without judging these complications. Hence, placement of drain should be avoided if necessary and if placed should be removed at the earliest with closure of the defect.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Hosgood G. The history of surgical drainage. J Am Vet Med Assoc. 1990;196:42-4.
2. Memon MA, Memon MI, Donohue JH. Abdominal Drains: a Brief Historical Review. Ir Med J. 2001;94:164-6.
3. Makama JG, Ameh EA, Garba ES. Drain Site Hernia: a Revive of the Incidence and Prevalence. West Afr J Med. 2015;34(1):62-8.
4. Radhika AG, Radhakrishnan G. Fallopian Tube Herniation: An Unusual Complication of Surgical Drain Lipi Sharma, Alpana Singh, Sruthi Bhaskaran. Case Rep Obstetr Gynecol. 2012;194350.
5. Kadian YS, Verma A, Verma V. Appendicular Evisceration via Drain Site - an Unusual Complication in a Child. Int J Contemp Med Res. 2016;3(9):2720-1.
6. Ruiz JV, Flor VL, Folqués JEP, Pérez MA, Moreno JF, Molina DM. Perforación de Ciego Secundaria a Drenaje Quirúrgico. Reporte de Un Caso. (Cecal Perforation Secondary to Surgical Drainage a Case Report). Cirugía y Cirujanos. 2015;83:70-3.
7. Jamadar NS, Saha S, Mondal S, Basu G, Das S. A Rare Case of Intestinal Obstruction: Herniation of Colon Through Drain Site. Hellenic J Surg. 2016;88:439.
8. Gupta R, Gupta AK, Kasliwal DK, Abbas M, Sharma SB. Is Abdominal Drain a Double Edged Sword? Ind J Basic Applied Med Res. 2014;3(2):661-4.
9. Kumarprasad PR. Drain Site Hernias - A Rare but Recognized Complication of Surgical Drainage. A Study of their Risk Factors, Management And Prevention. University J Surg Surgical Specialties. 2017;3(2).
10. Lee R, Raftery AT. Evisceration of small bowel at the site of an intra-abdominal drain: A complication of steroid therapy? Br J Clin Pract. 1982;36(7-8):282-3.
11. Falidas E, Mthioulaskis S, Vlachos K, Pavlakis E, Villias C. Strangulated Intestinal Hernia Through a Drain Site. Int J Surg Case Rep. 2012;3(1):1-2.
12. Bakka R, Chinthamani A, Vubbana N, Paidi A. Drain Site Hernia with Omentum as Content a Case Report and a Review of Literature. Medical Science. 2015;5(7).
13. Samarawickrama MB, Senavirathna RW, Hapuarachchi UI. (2017). Drain Site Abdominal Hernia: Known but Rare Complication of Abdominal Drains, a Case Report and a Review of Drain Site Complications. IOSR J Pharm (IOSRPHR). 2017;7(4):10-4.

Cite this article as: Sonker SK, Kujur L, Agrawal HM. A rare case of bilateral drain site abdominal hernia: a case report and review of literature. Int Surg J 2020;7:3463-5.