Case report

Duodenal gossypiboma following complicated cholecystectomy – A rare cause of gastric outlet obstruction

Shyam K. Gupta, Sumaya F. Shad, Zahur Hussain, Ankush Banotra

A surgical sponge, left accidentally inside a patient’s body remains an infrequent but serious surgical complication. The retained sponges can lead to significant morbidity and mortality.

Case presentation: A 40 year old female patient presented with recurrent pain in epigastric region associated with postprandial vomiting. The patient had undergone a difficult laparoscopic conversion to open cholecystectomy 2.5 months ago in another hospital. Physical examination revealed previous surgical scar with tenderness over right hypochondrium. CECT abdomen showed thickening of gastric antropyloric region with possibility of neoplasia. An Upper GI endoscopy showed a large gossypiboma in antral region. With failed endoscopic retrieval, patient underwent an Exploratory Laparotomy with removal of the surgical compress via a duodenotomy and thus the final diagnosis of gossypiboma was made.

Clinical discussion: Gossypiboma or textilomas are infrequent complications of surgery leading to significant morbidity and mortality, medicolegal consequences and lawsuits against the surgeon and hospital.

Conclusion: Gossypiboma eroding into duodenum presenting as gastric outlet obstruction, usually diagnosed and retrieved endoscopically but surgical removal is required for failed endoscopic management.

1. Introduction

A surgical sponge is the most common type of retained foreign body in the abdominal cavity following an abdominal operation. Deriving its name from the Latin gossypium (cotton) and the Swahili (place of concealment) or textiloma, the first case reported in 1897 by Wilson [1].

Gossypibomas are serious but avoidable surgical complications which often present in different clinical scenarios and radiological can be perplexed with tumours and abscesses. The reported incidence of retained foreign bodies following surgery is 0.01% to 0.001% and gossypibomas make up 80% of such cases. [2]

The work has been reported in line with SCARE criteria. Agha RA, Franchi T, Sohrabi C, Mathew G, for the SCARE guideline: Updating Consensus Surgical Case Report (SCARE) Guidelines. International Journal of Surgery 2020. [3]

2. Historical background

Wilson reported the first case in 1897 [1] and the first malpractice suit was filed in 1993 [4]. Though an under reported complication, the reported incidence of this clinical condition is 1 in 1000 to 1500 open abdominal surgeries and 1 in 3000 of all surgical interventions [5].

Here we are presenting a case of duodenal gossypiboma leading to gastric outlet obstruction in the patient 2.5 months following a difficult cholecystectomy.

3. Case history

A 40-year-old female hypothyroid patient presented with complaints of recurrent episodes of epigastric pain associated with nausea and vomiting usually 1 h following her meals. No history of anorexia, weight loss or abdominal distension. Patient had underwent a difficult laparoscopic conversion to open cholecystectomy 2 and half months ago with postoperative surgical site infection managed conservatively. Patient was apparently well till 2 weeks following her surgery after which she developed above mentioned complaints.

Patient started developing gradual onset postprandial pain and vomiting, her symptoms progressed over the period and she could not digest solid food. There was no associated history of anorexia, weight loss, fever, abdominal distension or altered bowel habits. There was no
history of drug, alcohol or tobacco abuse. There was no significant family history pertaining to the disease. Physical examination of the patient was unremarkable with evidence of well healed right subcostal scar and laparoscopic port sites. No lump or mass was palpated in abdomen. Abdomen was soft with tenderness in right hypogastrium. All routine lab investigations were normal. USG abdomen was unremarkable. CECT abdomen was done which was suggestive of thickening of antropyloric region of stomach (Fig. 1). An Upper GI endoscopy was done which revealed a large gossypiboma in the central region (Fig. 2). Patient was planned for endoscopic removal with enteral SEMS placement but was not successful. Patient was planned for surgical intervention. Patient underwent diagnostic laparoscopy and conversion to Open exploration in view of dense intraabdominal adhesions. Patient underwent adhesiolysis, duodenotomy (Fig. 3) with extraction of surgical sponge in toto, repair of duodenum and feeding jejunostomy. Post operative period remained uneventful. Patient was started on jejunostomy feeds from POD 1. On POD 5 oral gastrograffin study was done to check for duodenal leak. Patient tolerated oral diet and was discharged on POD 7. Patient was followed up in Surgical OPD, suture removal done on POD 10. Patient had uneventful recovery and is on followup.

4. Discussion

Gossypibomas are retained surgical cotton matrix material inside body cavities after a surgical procedure. Cases are usually under reported due to medico-legal concerns. Although infrequent, it causes serious morbidity and even mortality if left undiagnosed [5]. Gossypiboma in the abdominal cavity may lead to formation of adhesion, abscess, intestinal perforation and other severe complications. [6]. The reported incidence of retained foreign bodies following surgery has been around 0.01% to 0.001% of which gossypibomas account for 80% of the cases [7].

The body usually reacts to the retained foreign body in two different ways. Either the process is exudative leading to the formation of abscess thus early detection due to systemic symptoms and signs or fibrotic reaction to the foreign body which leads to formation of masses and pseudotumors. [8]

Post cholecystectomy gossypibomas are generally rare with even lesser reported cases of transduodenal migration [9]. The patient gradually develops sign of gastric outlet obstruction which may include but are not limited to GERD, nausea, vomiting, pain abdomen, anorexia. If not diagnosed on time it can have life threatening consequences. Once diagnosis is made the retained foreign body can be removed either by open surgery, laparoscopy or endoscopy.

5. Conclusion

Gossypibomas are rare but a serious complication that can be reduced by proper perioperative pack counting and maintaining a register Duodenal gossypibomas are rare and present with features of gastric outlet obstruction. Endoscopy is the procedure of choice to make the diagnosis and can also be used to retrieve the foreign body. However most cases require surgical intervention, either laparoscopic or open surgery.

CRediT authorship contribution statement

Dr. Sumaya F. Shad: Conceptualised the case report and drafted the manuscript.
Dr. Shyam Gupta: Literature review and drafting of manuscript.
Dr. Zahur Hussain: Literature review and supervision.
Dr. Ankush Banotra: Radiology images.

Declaration of competing interest

The authors declare no competing interests.

Acknowledgements

Nil.
Source of support

Nil.

Funding

No funding received for the work reported.

Ethical approval

N/A

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Registration of research studies

Not applicable.

Guarantor

Dr. Sumaya Fatima Shad Post Graduate Department of Surgery Govt Medical College Jammu.

Provenance and peer review

Not commissioned, externally peer-reviewed.

Ahmed R. Gastric gossypiboma. PJR 2011; 21(1):37-39

References

[1] P.R. Lauwers, R.H. Van Hee, Intraperitoneal gossypibomas: the need to count sponges, World J. Surg. 24 (5) (2000) 521–527.
[2] H.S. Kim, T.S. Chung, S.H. Suh, S.Y. Kim, MR imaging findings of paravertebral gossypiboma, Am. J. Neuroradiol. 28 (4) (April 2007) 709–713.
[3] R.A. Agha, T. Franchi, C. Sohrabi, G. Mathew, For the SCARE guide-line: updating consensus surgical CAse Report (SCARE) guidelines, Int. J. Surg. 84 (2020) 226–230.
[4] M. Garg, M.G. Aggarwal, A review of medicolegal consequences of gossypiboma, J. Indian Acad. Forensic Med. 32 (4) (2010) 358–361.
[5] S. Velasco-Mata, M. Díaz-Gómez, T. Cova-Bianco, E. Hopp-Mora, R. Rodríguez-Rojas, Y. Chirinos-Malave, M. Carreiro-Rodríguez, Duodenal gossypiboma: a case report and literature review, Invest. Clin. 56 (3) (2015 Sep) 296–300.
[6] Farheen Rizwan, Ahmed Swaleh, Furqan Ahmed, Gastric gossypiboma, Pak. J. Radiol. 21 (1) (January – March 2011) 37–39.
[7] L.K. McIntyre, G.J. Jurkovich, M.L. Gunn, R.V. Maier, Gossypiboma: tales of lost sponges and lessons learned, Arch. Surg. 145 (8) (2010) 770–775.
[8] V.C. Gibbs, F.D. Coakley, H.D. Reines, Preventable errors in the operating room: retained foreign bodies after surgery, Curr. Probl. Surg. 44 (2007) 281–337.
[9] H.M. Olnick, H.S. Weens, J.R. Rogers Jr., Radiological diagnosis of retained surgical sponges, JAMA 159 (16) (1955) 1525–1527.