Original Article

TREATMENT OF GOSSIPIBOMA – AN EXPERIENCE OF 20 CASES

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ABSTRACT

OBJECTIVES: To share personal operative experience of patients with gossipiboma in terms of clinical presentation, diagnosis, treatment, outcome and preventive measures to minimize the incidence with review of relevant literature.

STUDY DESIGN: retrospective study

PLACE AND DURATION: Multiple army hospitals since Jan1995 to Sep2015.

PATIENTS AND METHODS: The study includes collective personal surgical experience of two vascular surgeons, one general surgeon, one orthopaedic surgeon and one chest surgeon, with patients of gossipiboma. The data of 20 patients was collected and analysed. The literature was searched for current information.

RESULTS: Male and female were 5 and 15 respectively. The mean age was 33 years ranging from 16 to 53 years. Gossipiboma found in patients after Caesarean section (08), hysterectomies (04), thoracotomy (02), appendectomy (01) mastectomy (01), thigh abscess (01), throidectomy (01), shoulder surgery (01) and arteriovenou fistula(01). In almost 16 cases abdominal sponge and in 04 cases surgical gauze were removed. Ultrasonography and CT scan were the investigations used to help in diagnosis. All patients recovered after removal of gossipiboma.

CONCLUSION: Retained surgical sponge is a medical error occurring inadvertently commonly in obstetrical emergency procedures. CT scan is the investigation of choice for diagnosis. Correct counting thrice, x-rays of the involved area, use of bar coding of sponge, use of radioactive identification chip system and training of the operating room staff can minimize this error.

KEYWORDS: abdominal mass, caesarean section, gossipiboma, intestinal obstruction,

INTRODUCTION:

Gossipiboma is the term used to describe a mass of cotton (gauze piece, sponge or surgical towel) left in the human body during a surgical procedure[1,2,3]. The exact incidence is always under reported due to professional privacy and legal concerns[4,5,6]. However, the reported incidence is 0.1% in abdominal surgery and 0.3% in all surgical procedures[7, 8, 9,10]. Most ofstudies done in this regard have suggested that caesarean sections performed in emergencies[11,12] , are the commonest procedure where gossipiboma are left in abdominal cavity followed by hyterctomies[13,14.] But it can be left anywhere in the body[4,9,10,13,14]. X-rays of involved area, USG and CT scan are the investigations used to diagnose gossipiboma. Proactive risk strategies like perioperative triple counting of gauze and sponge[15], use of barcode,

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radiofrequency identification chip detector system, can reduce the incidence of its occurrence. In our study, we reported 20 cases of gossipiboma encountered by principle author and co- authors during their surgical carrier, having their primary surgery both in civil and army hospitals. Few of these patients had their primary surgery by the authors themselves. The idea is, to explain clinical presentation, diagnosis, treatment and post operative outcome of gossipiboma. Preoperative risks and preventive measures are also highlighted with review of literature.

MATERIAL AND METHODS:

A total of 20 patients having gossipiboma after their primary surgery in various hospitals during 1995-2015, have been included in our study. The data regarding age, sex, primary operation, interval between primary surgery and diagnosis of gossipiboma, clinical features, diagnostic work, second surgery and outcome was collected and analysed along with literature review.

RESULTS:

Male and female were 5 (25%) and 15 (75%) respectively (Fig.1). The mean age was 33 years ranging from 16 to 53 year (Fig.2). Eight Gossipiboma found in patients after Caesarean section (40%), 04 hysterectomies (20%), 02 thoracotomy (10%), 01 appendectomy (5%), 01 mastectomy (5%), 01 thigh abscess (5%), 01 throidectomy (5%), 01 shoulder surgery (5%) and 01 arteriovenou fistula (Fig.3). The interval between primary surgery and diagnosis of gossipiboma ranges from 5days to 4 years. The primary complaint was pain abdomen after primary surgery in 10 cases (50%), intestinal obstruction in 2 cases (10%), diffuse peritonitis in 1 case (5%) and discharging sinus in 07 cases (35%). In almost 16 cases (80%) gossipiboma was a sponge and in 4 cases (20%), surgical gauze were removed (Fig.4). Ultrasonography helped in 17 cases (85%) confirmed by CT scan.Three cases (15%) were diagnosed clinically. All patients recovered after removal of gossipiboma.

DISCUSSION:

Retention of surgical gauze in human body during a surgical procedure is a medical error which has been occurring since the first surgery was performed by human[1-6,16,17,18.] Although the exact incidence remains under reported due to professional privacy and legal concerns, but still reported incidence is 0.03-0.1% in all abdominopelvic and 0.3% in overall surgical procedures[4-10]. In our study, the initial surgery was performed in various civil and army hospitals, so the incidence is difficult to report. Emergency surgical procedures, fatty patients[19], incorrect counting[20], change in shift, change in surgical plan, poor provider to provider communication[21,22,23] and closure by junior doctors are the usual risk factors responsible for retained surgical sponge. In our study emergency surgeries, change in shift, obesity and closure by the junior doctors were probably responsible for its occurrence. Abdominopelvic cavity is the commonest site where the surgical sponge are usually left unintentionally although they can be left anywhere in the body[4,9,10,11,12,13,14.] In our series, 70% surgical sponge left during abdominal and pelvic procedures (out of which 60% retained during caesarean section and hysterectomy while 10% occurred after appendectomy), 10% after thoracic surgery and 5% after vascular procedure while incidence is72% in abdominopelvic ,10% in vascular and 6% in orthopaedic procedures in international studies[24].

The retained surgical sponge clinically may remain asymptomatic resulting from aseptic fibrinous inflammatory reaction and adhesions which encapsulate the retained sponge in omentum and surrounding structures making diagnosis difficult. The retained sponge are detected incidentally, or they present with tumor liker symptoms[25,26,27.] In the other form, retained surgical sponge result in

exudative inflammatory reaction, with an abscess or chronic internal or external fistula formation. This usually presents much earlier with discharging sinusor intestinal obstruction[28,29]. In some case retained sponge erode the hollow viscera and then penetrate into it with resulting adhesions or healing of the eroded part. The peristalsis cause the foreign body to move further and clinically represent as sub acute intestinal obstruction or impacted usually in terminal ileum to present as a case of acute intestinal obstruction[19,21,28,29.] Sometimes, the sponge passes down through the rectum and patient becomes symptom free. In our study, the average time of presentation was 5 days to 04 years consistent with that reported by others[16.] The patients presented with pain abdomen, intestinal obstruction, vaginal purulent discharge, peritonitis and discharging sinus. Sponge or gauze found incidentally, in four of our patients with long standing discharging sinus.

Once there is doubt of a retained sponge, x-rays (if sponge is radio opaque), USG, CT scan and MRI of the involved area should be performed for the diagnosis[30,31,32,33]. We used to do an USG of the involved area and then CT scan. Treatment after early detection of retained sponge, reduces the morbidity and mortality. Laparoscopic, endoscopic or surgical exploration must be done to remove the retained sponge[34,35,36,37]. In our series, we removed most of the retained sponge surgically but two sponge were removed laparoscopically and thoracoscopically. Retained sponge is a human medical error and cannot be completely abolished but the incidence can be reduced by continuous medical training emphasizing on harmful effects of retained sponge and strict adherence to operating room regulations[38]. Use of radio-opaque sponge[39], counting thrice[40], use of radiofrequency identification chip detector system[41], better communication between provider to provider, thorough inspection before closure, closure by or in presence of senior surgeon, x-rays or re exploration on table in case of doubtful counting and the taking adequate time for surgery by surgeon[41], are all which can help to minimize the incidence of retained sponge.

SUMMARY:

Retained surgical sponge is a medical error having a lot of professional and legal implications. Clinically it may be asymptomatic and may present with mass or may present with abscess, intestinal obstruction, pain abdomen, discharging sinus or fistula. USG and CT Scan of involved area, are the investigation of choice. Surgically, laproscopically or endoscopically gossipiboma should be removed immediately after dectection. Team oriented surgical education and strict adherence to operating room regulations, are important in minimizing its occurrance.

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1	Muhammad Jamil	Principal
2	Rashid Usman	Co author
3	Muhammad Afzal	Collected data for general surgery

A VIRTUOUS PERSON IS BETTER THAN VIRTUE AND A VICIOUS PERSON IS WORSE THAN VICE.

Hazrat Ali (Karmulha Wajhay)