

Case Report

Missing Broken Needle During Caesarean Section

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Abstract:

Breakage of the needle and missing while repairing the uterine wound during cesarean section is an uncommon event. Subsequently it was removed under fluoroscopic guidance on the 7th postoperative day.

Key Words: Broken Needle, Foreign body, Caesarean section

Introduction:

Foreign bodies retained in the peritoneal cavity rarely are documented, owing to medical, legal and other reasons. Each such incident acquires major importance because it upsets patients, relatives, surgeons, hospital room staff and the hospital administrator. They may be symptomatic or remain asymptomatic for months and years and removed incidentally. The present report concerns one patient with intra abdominal foreign body (broken surgical needle left behind during cesarean section) which was retrieved successfully on 7th postoperative day.

Case Report:

A 30 years old lady, Para 2+0 was admitted at North Bengal Medical College Hospital (NBMCH) as a referred case from a peripheral hospital where an Emergency caesarean Section was done at term two days earlier, indicated as a result of a previous Caesarean section and severe Pregnancy Induced Hypertension and scar tenderness. According to the referral paper, while repairing the uterine wound during cesarean section, the needle was broken and in spite of thorough search the surgeon could not find it out and completed the operation and referred her to NBMCH. On admission her general condition was very poor with severe anemia, haemoglobin being 6 gm% and blood pressure 180/100 mm Hg. The relatives were very much anxious and concerned about the retained needle in the abdomen. Her general condition was improved by transfusing 4 units of blood. She was put on broad spectrum antibiotics and other supportive measures including antihypertensive namely Tablet Labetalol. All necessary investigations were done including a straight X-ray PA and lateral view of lower abdomen and pelvis which clearly demonstrated the presence of a broken needle in the abdomen; however its precise location could not be established even by ultrasonogram. After proper counseling on the 7th post operative day, laparotomy was performed. Under fluoroscopic guidance the needle was located deep inside the myometrium near the left angle of the uterine wound. Incision was made on the myometrium and it was deepened gradually until an artery forceps hit the embedded needle and a portion of it became visible which was then removed. The uterine wound was repaired and the abdomen was closed in layers. Post operative period was uneventful and she was discharged home in satisfactory condition on the 10th post operative day.

Discussion:

Retained foreign body (RFB) following cesarean section is not common and reported variedly in the literature. The commonest RFB is the surgical sponge.¹ In spite of all precautions, mistakes do occur resulting in various complications with considerable suffering for the patients. It may remain asymptomatic for months and years and removed accidentally.²

Some times diagnosis of RFB is difficult, and at times it is difficult to retrieve it at laparotomy,³ particularly for a small object like needle. In our case the diagnosis



Fig. 1 Straight X-Ray of Abdomen and Pelvis showing a Leftover broken surgical needle.

of RFB was no problem as the patient was sent with a note of a retained broken needle which could not be retrieved during cesarean section by the surgeon. This was because of the poor general condition of the patient which compelled him to close the abdomen quickly without getting adequate time for thorough search for the needle. Though the presence of a needle in the pelvis was confirmed by X-ray later on, its precise location could not be identified easily until the help of peroperative fluoroscopy (C-Arm) was taken which showed that the needle was embedded deep in the myometrium near the left angle of uterine wound. Some times in long standing cases RFB are surrounded by gut and fistulas may occur and may even migrate to other organs like intestine, urinary bladder etc., making retrieval difficult.^{4,5} Very rarely a tumour like thing may develop with the FB as nidus along with the adherent gut and omentum and discovered only after resection and removal of the mass at laparotomy.² According to some, removal of foreign bodies like needle or small part of surgical items may cause more harm than the item itself and removal is not recommended.⁶ But it is very difficult to translate this recommendation practically. As the patient as well as the relatives are very much worried about the left over needle in the abdominal cavity, and also from the medicolegal point of view, removal is preferred in spite of difficulty.

One should take utmost care to avoid RFB to occur at all. Recently, New England Journal of Medicine published an article about risk factors of RFBs. Of the 8 risk factors the authors identified (emergency operation, unexpected change in operation, more than one surgical team involved, change in nursing staff during procedure, body mass index (BMI), volume of blood loss, female sex, and surgical counts) only 3 were found to be statistically significant. The 3 significant risk factors were emergency surgery, unplanned change in the operation, and BMI.⁷ Proper counting of instruments / sponges repeatedly by different members of the team can prevent RFB to a great extent. New technologies are being developed that will hopefully decrease the incidence of RFB. An electronic article surveillance system has been examined which uses a tagged surgical sponge that can be identified electronically.⁸ Bar codes can be applied to all sponges, and with the use of a bar code scanner the sponges can be counted on the back table. The use of radiofrequency identification systems holds much hope for application in the area of detection of sponges.⁶

Conclusion:

As surgery is a team work, preventing RFB is also a team work; every member in the team including nurses should make conscious effort in this direction, abiding recommendations, more so in high risk cases, thereby preventing mortality and morbidity of the patients and averting litigations.

References:

1. Mirsharifi R, Aminian A, Jafarian A, Kalhor M, Dashti H, Ali FAH, Alibakhshi A, Tahvildary M, Heidari S, Tavakoli F .Retained Foreign Body, Brief Review. *Shiraz E-Medical Journal*. 2008;9(4)
2. Rodriguez GR, Mano DL, Rodriguez R et al. Intra-abdominal Foreign Body 19 Years After a Cesarean Section. *Journal of Pelvic Medicine & Surgery*. 2008;14(6):437-40
3. Revesz G, Siddiqi TS, Buchheit WA, Bonitatus M. Detection of retained surgical sponges. *Radiology*. 1983;149: 411-413.
4. Gupta NM, Chaudhary A, Nanda V, Malik AK, Wig JD. Retained surgical sponge after laparotomy: Unusual presentation. *Disease of the colon and rectum*. 1985;28:451- 53
5. Tomás Lázaro Rodríguez Collar, Yamel Gil del Valle, Basily Valdés Estévez, Víctor Osvaldo Barquín Carmona, José Antonio García Monzón. Bladder lithiasis secondary to intrauterine device migration. Case report. *Arch Esp Urol*. 2008;61(5):640-3
6. Gibbs VC, Coakley FD, Reines HD. Preventable errors in the operating room: retained foreign bodies after surgery. *Curr Probl Surg*. 2007;44:281-337.
7. Gawande AA, Studdert DM, Orav EJ, Brennan TA, Zinner MJ. Risk factors for retained instruments and sponges after surgery. *N Engl J Med*. 2003;348:229-235.
8. Fabian CE. Electronic tagging of surgical sponges to prevent their accidental retention. *Surgery*. 2005;137:298-301.