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Lost Needle During Laparoscopic Surgery: Irksome Problem

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Abstract

Needle loss during laparoscopic surgery is an irksome problem for the surgical team and patient. This case report presents a loss of needle during laparoscopic surgery for a myomectomy in 30 years old female. We highlighted the consequences of the retained needle. In our case report, we mentioned the protocol followed during the search, followed by finding it in between subcutaneous fat and anterior abdominal muscle layer with the aid of intraoperative X-rays and subsequent successful retrieval.

Conclusion: *Protocols for preventing the loss of needles and strategies for managing the recovery of the lost needle are very important. Imaging the patient plays important role in locating a lost needle.*

Keywords: *Laparoscopic surgery, loss of needle, irksome problem*

Introduction

Although uncommon, loss of needle during laparoscopic surgery is an irksome problem. Prolongation of surgical time, associated harm to the patient, chronic pain, irritation, prolonged hospital stay, readmission, reoperation, patient dissatisfaction, and medicolegal issues are usually negative consequences associated with this unintentional problem [1,2]. High BMI of the patient, difficult anatomy, limited visual field, difficult manipulation of intracorporeal structures, multiple instrumentations, multiple surgical team involvement, staff changeover during surgery, non-availability of imaging modalities, and inappropriate positioning of the patient for imaging on OR table, are some of the hurdles faced by the surgical team during hunting for the lost needle [3]. The tendency to shift position during the search operation and the small size of the needle pose a challenge to discover the lost needle during the surgical procedure. Usually, most hospitals have protocols for prevention and strategies for recovery of lost surgical items including needles during surgical procedures. There are numerous case reports available in the literature regarding lost needles during laparoscopic surgery, true incidence is difficult to determine, which may be due to confidentiality of the information and medicolegal consequences. According to one estimate incidence of retained instruments such as needle during surgeries is 0.06-0.11% [4].

This report describes a lost needle during laparoscopic myomectomy surgery, and after a meticulous and systematic search protocol, finding it at an unusual place with the use of intraoperative X-rays.

Case Report

After a thorough preoperative evaluation, 30 years old female patient was scheduled for a laparoscopic myomectomy for menorrhagia. Under general anaesthesia, after skin asepsis and draping pneumoperitoneum was created. After the dissection of the myoma, surgical bed haemostasis was achieved by intracorporal suturing. As the size of the myoma was large, multiple sutures were used for achieving haemostasis. During the perioperative period, one of the needles was found missing while counting. A thorough inspection of the surgical field was done, a meticulous examination of trocars was done, and suction devices were checked. But we were not able to locate the needle. On closely reviewing the laparoscopic video we were able to find out that the needle was lost during extraction. Intraoperative X-rays of the abdomen were ordered.

In our case needle was found in the anterior abdominal wall stuck between subcutaneous fat and anterior abdominal muscle layers, which most probably happened while extraction after suturing (Fig 1, 2 and 3). The needle was successfully retrieved with artery forceps.

Fig 1

Fig 2

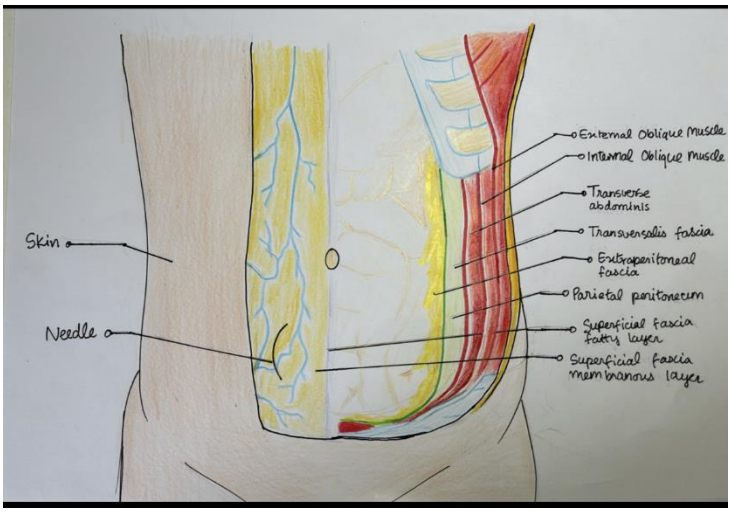

Fig 3

Discussion

Due to its minimally invasive nature and enhanced recovery, laparoscopic surgeries and more recently robotic surgeries have become quite common [1,2]. Retained foreign bodies e.g. surgical needles, can increase patient morbidity, reoperation, and medicolegal problems. As the loss of a needle during surgery is regarded as never event, it creates an irksome challenge for the surgical team to retrieve the needle. When the size of the needle is small (<5mm), it's very difficult to discover the lost needle [5].

As endorsed by the literature, immediate surgery should be stopped and meticulous protocol for needle search should be applied starting from the anterior abdominal wall, intraperitoneal all quadrants of the abdomen, camera inspection of the ports, review of the laparoscopic recording, and imaging of the patient as we did in our case [4,6]. Usually, Xrays assistance by a portable machine or C arm is sufficient to localize the needle but sometimes due to difficult patient positioning or unavailability of devices, it may be required to do 3D CT and in some instances, especially contrast-enhanced CT can help in delineating its relationship to adjacent structures [5].

Damage to surrounding structures, if dissection is required for retrieval of the needle, x-ray exposure, and additional investigations may potentially complicate this problem.

Although the use of special devices like a laparoscopic magnet has been mentioned in the literature for retrieval of intracorporeal needles from difficult locations, we have no experience with that [7.8]. Proper attention and communication among the scrub nurse, assistant, and surgeon during the introduction and retrieval of the needle can prevent the loss of the needle during a surgical procedure.

Conclusion

Protocols for preventing the loss of needles and strategies for managing the recovery of the lost needle are very important. Imaging the patient plays important role in locating a lost needle.

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