



Contents lists available at ScienceDirect

Gynecology and Minimally Invasive Therapy

journal homepage: www.e-gmit.com

Letter to the Editor

Broken tip of mono-polar surgery probe located in the abdominal wall after laparoscopically assisted myomectomy: A case report



Dear Editor,

Incidents involving the breakage of operative instruments occurs in 0.07% of surgeries.¹ We experienced a case of a broken operative instrument left in the abdominal wall.

A 36-year-old woman was admitted to our hospital for primary infertility. We performed an infertility screening including hysterosalpingography (HSG). The patient was found to have multiple uterine myomas and left hydrosalpinx. At that time, no abnormal shadows were found in the abdominal wall.

The patient's height was 158 cm and weight was 53.5 kg. Laparoscopically assisted myomectomy and left salpingectomy were performed. Three suprapubic ancillary ports were inserted as follows: lateral side ports were inserted at 5 mm bilaterally near the anterior superior iliac spines; transverse incision for the central port was set at 3 cm; and myomectomy and uterine suturing were performed using the central port. The peritoneal cavity was washed using an Endopath surgery probe (Ethicon, Tokyo, Japan; Figure 1A). A follow-up HSG was performed 1 month after the surgery and showed a normal shaped uterus and spill into the right tube. At that time, a ski-shaped shadow was visualized in the right flank (Figure 2A); however, we could not identify it.

After the surgery, the patient conceived by *in vitro* fertilization and embryo transfer, and was referred to the obstetrical clinic at 10 weeks of pregnancy. The pregnancy course was uneventful and she delivered at full term by a cesarean section due to the history of myomectomy. A follow-up radiographic image was obtained after the cesarean section to scan for intra-abdominal foreign bodies, such as gauze. A 3-cm ski-shaped shadow was visualized at the right flank (Figure 2B), and the same was visualized using computed tomography (Figure 2C). The foreign body was located in the subcutaneous region. This was 7 years after the laparoscopic surgery.

The foreign body was removed with radiographic assistance. It was not a sharp needle, but a 3-cm blunt metallic object, which was identified as the tip of the broken Endopath surgery probe (Ethicon; Figure 1).

Despite reviewing the record of this surgery, we could not detect the broken part of the mono-polar surgery probe which would



Figure 1. (A) Endopath electro-surgery probe plus II (Ethicon); (B) mono-polar electro-surgery suction and irrigation shaft with curved dissector electrode; (C) outer casing of the Endopath electro-surgery probe plus II (Ethicon, Tokyo, Japan) was cut; (D) the broken tip of mono-polar curved dissector electrode resected from the abdominal wall.

Conflicts of interest: The authors have no conflicts of interest relevant to this article.

<http://dx.doi.org/10.1016/j.jgmit.2016.08.003>

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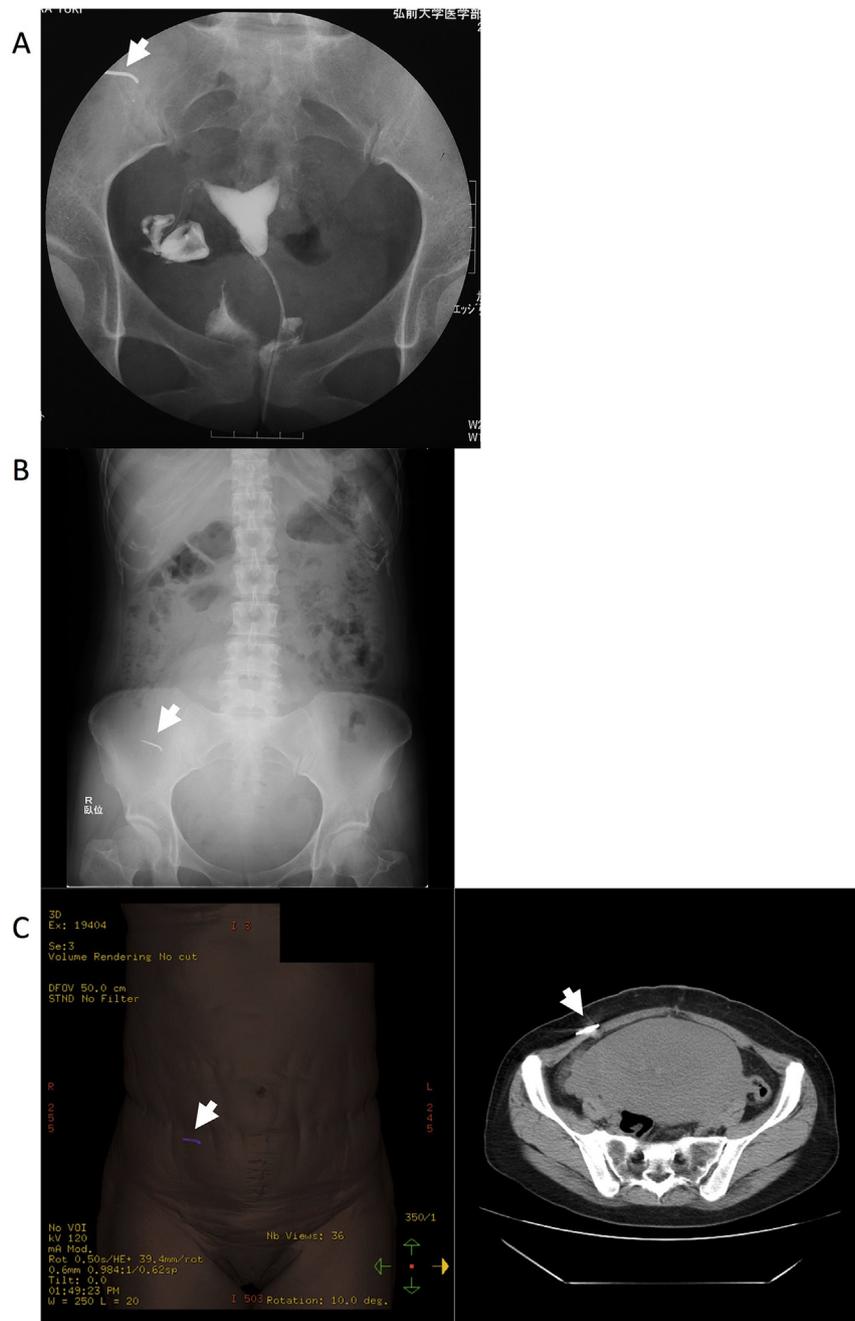


Figure 2. Broken tip of the mono-polar surgery probe located in the abdominal wall. (A) Hysterosalpingography after laparoscopically assisted myomectomy; (B) follow-up radiographic image after the cesarean section; and (C) computed tomography image after the cesarean section. A ski-shaped shadow exists in all images (white arrow).

allow us to determine if forced or excessive manipulation of the probe resulted in its breakage. We often use this mono-polar surgery probe to coagulate bleeding from trocar ports after the removal of trocars. An Endopath surgery probe (Ethicon) is used for mono-polar coagulation, irrigation, and aspiration. For safety purposes, the point of a surgery probe can be retracted into the irrigation system. During irrigation and aspiration the top point is usually retracted, and it is exposed when coagulating or cutting tissues. We speculated that when the tip of the probe broke, the operators might have mistakenly thought that the tip was retracted and did not realize it had broken. It has been reported that knowledge of electro-surgical devices is important in order to recognize and

reduce electro-surgical complications.² Checking the returned operative instruments from the operative field is also important.

We found some reports of breakage of suturing needles used for laparoscopic surgery.^{1,3,4} In these reports, radiography was shown to be effective in searching for the lost items.

At the time of follow-up HSG after laparoscopy, we had the opportunity to find the foreign body. However, we missed it initially as we usually focus only on the area of interest, such as the uterus and fallopian tubes, for HSG. Evaluating the image in wide view is important. Written informed consent was obtained from the patient for publication. The local Institutional Review Board exempted our case from the need for approval.

In conclusion, checking all items after the laparoscopic surgery is important. Not only reusable items, but single-use items such as the mono-polar surgery probe with irrigation must also be checked.

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24 December 2015
Available online 22 September 2016