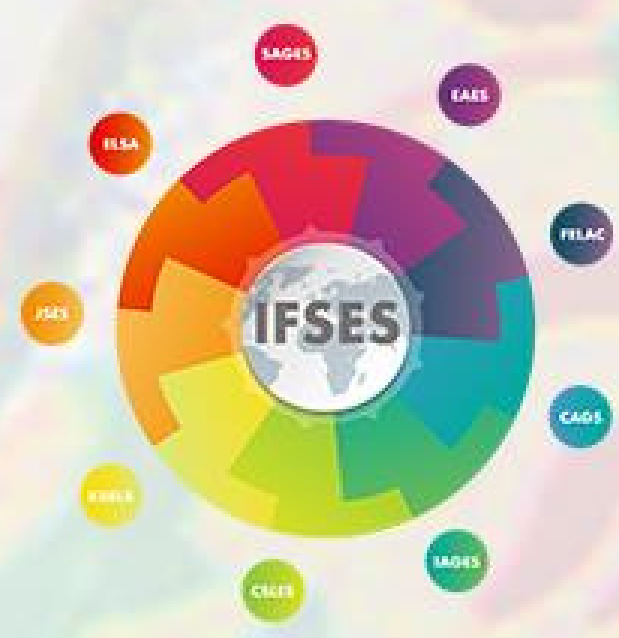




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Laparoscopic right hemicolectomy with intracorporeal anastomosis using HandXTM hook and needle holder

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PURPOSE / OBJECTIVES

HandXTM is a handheld, powered laparoscopic device with interchangeable single-patient fully articulating instruments, that was recently introduced to the market. The HandXTM consists in a modular platform that could be used by the operating surgeon beside the patient's bed. It is electromechanically controlled, and, as the manual interface is handled by the surgeon, the movements of the surgeon's fingers are translated to the instrument-articulating tip. In times of an increasing awareness for healthcare system costs, it offers the possibility to improve surgeon's dexterity, precision and ergonomics in a more cost-effective manner than other platforms. Previously it has been used either for tissue manipulation or suturing. This report is to show the feasibility and safety of this technology implemented with a monopolar dissecting hook in a complex abdominal procedure.

MATERIAL & METHODS

We report one of the first experience of a major abdominal surgical procedure performed with the aid of the HandXTM articulating monopolar hook and needle holder

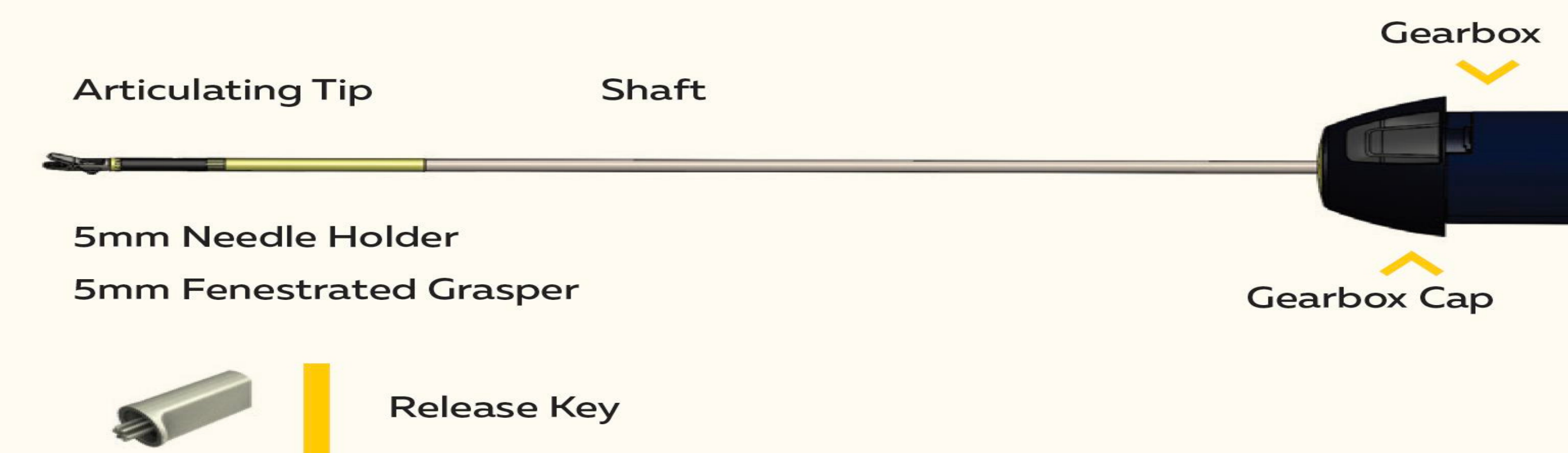
RESULTS

The index case was a 37-year-old female with right colon cancer. Three 5 mm trocars 1 umbilical, 1 in the right iliac fossa and 1 right pararectal were used. An additional 12 mm epigastric trocar was placed in the left midclavicular line to allow the insertion of the stapler. A medial to lateral approach was used. Dissection was carried out with the HandXTM monopolar hook enabling precise dissection in vessels and lymph nodes isolation, in the dissection of the omental attachments to the colon and mobilization of the right colon along the Toldt's fascia. Other sources of energy were resorted when a monopolar dissection was not considered safe enough as in the division of major vessels or in the dissection of highly vascularized tissue. A side-to-side, iso-peristaltic intracorporeal anastomosis was performed and the HandXTM monopolar hook was used to perform the enterotomies for the laparoscopic stapler. The articulating needle holder was used to close the remaining defect with a running absorbable two layered suture. The specimen was removed through a Pfannestiel incision. The operative time was 124 minutes, no blood loss nor intraoperative complications were observed the patient was discharged after 4 days after the operation.

Watch the video in the link below:

<https://vimeo.com/662264639>

RESULTS



Watch the video in the link below:

<https://vimeo.com/662264667>

SUMMARY / CONCLUSION

This report showed the feasibility and safety of the new HandXTM platform applied to a major abdominal procedure. The hook HandXTM technology can be safely adopted to obtain fine dissection and combines the higher maneuverability and dexterity that this kind of technology can offer, when compared with the traditional stiff laparoscopic instruments, with the possibility to use an energy device for tissue dissection.