

Hernia Recovery Assist Device: Trocar Site Closure Device to Prevent Hernia after Laparoscopic Procedures (13053)

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Technology description

University of Louisville researchers have developed an inexpensive and effective trocar site closure device for preventing trocar site hernias. It involves a novel single-use biodegradable site closure cinching system for rapid deployment that is completely enclosed within a reusable applicator tool.

Hernia Recovery Assist Device

Trocar Site Closure Device to Prevent Hernia after Laparoscopic Procedures



Technology

Laparoscopic surgery has gained wide acceptance as a replacement for open abdominal surgery because of improved postoperative outcomes and the ability to perform intricate procedures via relatively small incisions.

However, more complex laparoscopic surgeries often require larger trocars and, in turn, larger incisions which increase the possibility of postoperative complications such as trocar site hernias.

To solve this problem, University of Louisville researchers have developed an inexpensive and effective trocar site closure device that is relatively easy to manufacture and operate as part of a single-port procedure. It involves a novel single-use biodegradable site closure cinching system for rapid deployment that is completely enclosed within a reusable applicator tool.

Successful closure of larger trocar sites reduces the possibility of such complications. While a number of needle and suture based devices have been developed to facilitate trocar site closure, they can be cumbersome and imprecise in use and may cause extreme pain due to incorporation of the peritoneum in closure.

This novel system mechanically engages the fascial tissue without significantly penetrating the tissue, reducing postoperative discomfort.

This technology may reduce post-operative complications and impact patient recovery positively.

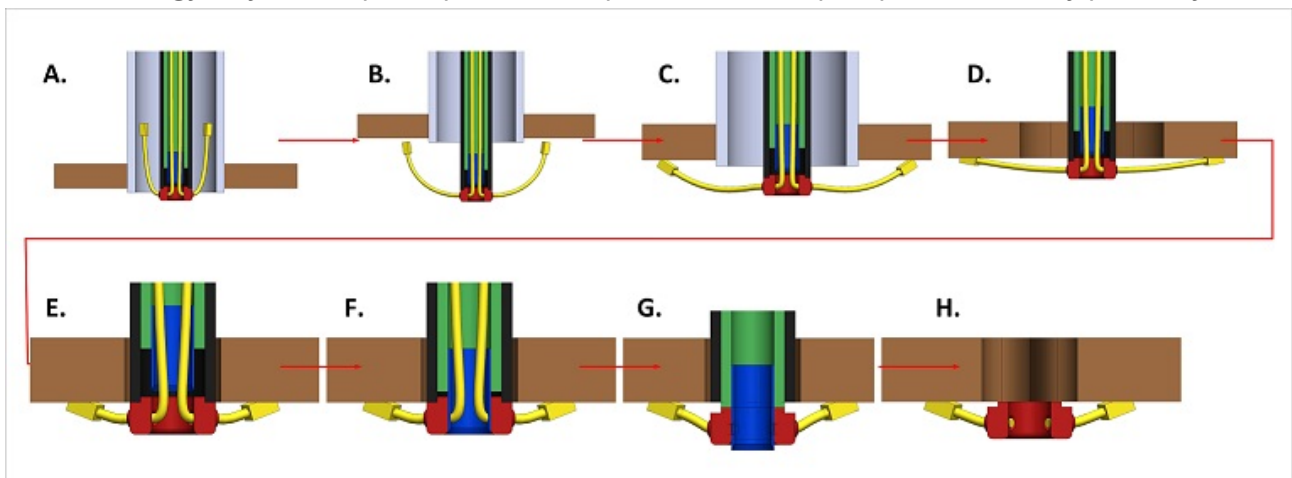


Figure 1. Graphical representation of the order of operation of the current trocar site closure device concept.

Application area

Fields of Use Available: All

Advantages

Effective and inexpensive device and technique for preventing trocar site hernias;

Scalable in size to function with various trocar openings;

Biodegradable, allows abdominal wall and fascia to heal naturally.

Institution

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