

AB011. Closure of retroperitoneal space in laparoscopic anterior resection with FlexDex

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Background: Internal hernia causing morbidity early after left sided resections are an uncommon but potentially a serious problem, resulting in reoperation and sometimes death. More common after laparoscopic resections, compromise of the small bowel in this way can be difficult to realize clinically and may only be easily spotted when the patient is frankly unwell.

Methods: FlexDex is a surgical handheld device designed to assist surgeons in precise intracorporeal suturing tasks. The system is attached to the surgeon's wrist and forearm through a series of cables working via a 3D gimbal. This converts upper limb movements to the instruments end

effector to allow "robotic" like dexterity and range of movements intraperitoneally. Midline retroperitoneal suturing could be assisted by such a system in laparoscopy and possibly even robotic assisted surgery (the Da Vinci system is often undocked at this stage in the operation and so unavailable for this end step).

Results: Following intracorporeal colorectal stapled anastomosis, patient underwent the added step of retroperitoneal closure. No additional ports were required. The 12 mm right iliac fossa used for stapling was also used for the FLEXDEX system (8 mm shaft diameter). Additional use was made of the 5 mm right lumbar port with or without an additional tissue traction via an epigastric port. A 30-degree laparoscope was used and suturing commenced cephalad.

Conclusions: Secure closure of retroperitoneal was possible, and this added step took approximately 10 minutes to carry out.

Keywords: Anterior resection; FlexDex; retroperitoneal space

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