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Peritumoral indocyanine green fluorescence injection during transanal total mesorectal excision to identify the plane of dissection

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Dear Sir,

TAMIS or transanal minimally invasive surgery for rectal cancer is becoming more popular. Besides its use in sentinel node mapping, indocyanine green (ICG) fluorescence has remained of interest to evaluate the adequacy of perfusion of the anastomosis.

This video presents the use of peritumoral ICG injection during transanal total mesorectal excision (TaTME) to demonstrate another advantage – that of enhancing visualisation of the plane of dissection and the relationship to the surrounding structures.

A 69 year old woman presenting with an adenocarcinoma (stage:T2N0M0) 5.5 cm above from the anal margin, underwent a TaTME assisted by single-incision laparoscopy. After positioning the reusable transanal platform, the distance between the tumour and the anal margin was measured and the ICG was injected. During TaTME, due to the fluorescence produced by the ICG, the presacral fascia was identified and the correct plane of dissection easily found. At the end of the procedure, the transanal dissection met the abdominal laparoscopic dissection within the pouch of Douglas at the sacral promontory. After transanal specimen removal, a handsewn coloanal anastomosis was performed.

The transanal dissection time was 124 minutes and there was 50 ml blood loss. The postoperative course was uneventful, and the patient was discharged after five days. The pathologic report was a pT1N0M0 adenocarcinoma with 16 lymph nodes found.

ICG fuorescence injection during TaTME helps the surgeon delineate the plane of dissection and its relationship to the surrounding structures.

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This video has been presented at 15th World Congress of Endoscopic Surgery, November 9-12, 2016, Shanghai- Suzhou, China

Supporting information: video

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Disclosure Statement

G.Dapri is consultant for Karl Storz-Endoskope, Tuttlingen, Germany. The other authors have no disclosure or financial ties to declare.