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Title : Laparoscopic resection of extensive endometriosis in a combined gynaecological and colorectal operating setting.

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Objective : To evaluate safety and efficacy of treatment of extensive endometriosis in a combined gynaecological – colorectal operating list.

Design : Retrospective audit study.

Setting : District Hospital in the United Kingdom.

Results : Twenty-four patients were identified retrospectively between September 2005 and June 2009. These patients had extensive endometriosis and were operated by a gynaecologist and a colorectal surgeon together in a monthly occurring list set at a district hospital in the UK. The patients to be included in the operating list were identified by their symptoms and preoperative investigations, as well as previous surgery which identified endometriosis. The mean age for the twenty-four (24) patients included was 36 years and eighteen (18) (75%) of them were nulliparous. The mean body weight of the patients was sixty-seven (67) Kgrs. In the preoperative symptoms, dysmenorrhea and pelvic pain were the commonest, seen in twenty-two (22) (92%) of the patients. Dyspareunia occurred in seventeen (17) (71%) patients, rectal bleeding in three (3)(12%) , and tenesmus in one (1)(4%). Ultrasound scan was performed preoperatively in thirteen (13) (54%) of the patients, with two (2) raising the suspicion of adenomyosis and four (4) showing ovarian cysts, two (2) of which were having ultrasonographic features of endometriomas.

During surgery recto-vaginal/vaginal nodules, deep infiltrating endometriosis (DIE) of the uterosacral ligaments and endometriomas were identified and surgically treated in five (15) (63%) of the patients (5 in each group) . Endometriosis infiltrating deep into the pouch of Douglas was removed from four (4) (17%) patients and into the utero-vesical fold from two (2)(8%). The ovaries were involved in seven cases (7) (29%) and treated with diathermy, removal of endometrial tissue or salpingo-oophorectomy. All the above treatments as well as three (3) (12%) hysterectomies were decided and performed laparoscopically by the gynecologist. The sigmoid and the small bowel were involved in two (2) (8%), and were resected accordingly. The modality of treatment to bowel endometriosis was decided by the colorectal surgeon intraoperatively. Superficial excision (shave) of endometriosis from the rectum was performed in ten (10) (42%) of the patients, disc excision in seven (7)(29%) and bowel resection in three (3) (12%) patients. The operating time varied greatly between forty (40) and three-hundred (300) minutes (median 105 minutes) depending on the treatment modality, and unsurprisingly was higher

where extensive bowel work was done. The median postoperative hospital stay was three (3) days, ranging between one (1) and fourteen (14). The longest hospital stay was observed in a patient with completely obliterated pouch of Douglas, who had extensive adhesiolysis, removal of endometriosis and an anterior bowel resection, followed by a slow recovery. A seven (7) day hospital stay was seen in another patient with an accidental ureteric damage during a hysterectomy and removal of a rectovaginal nodule. Both these patients recovered without any long-term complications. Intraoperative complications included a patient with blood loss of five-hundred (500) ml, due to very difficult dissection, who had an anterior resection, small bowel resection and an ileostomy, with a three-hundred (300) minute operative time, a fundal perforation of the uterus which did not necessitate anything further, and a ureteric transection during a hysterectomy, mentioned above. Postoperatively, a ureterovaginal fistula was noticed in a patient who had a superficial excision (shave) of an endometriotic nodule on the rectum, which was infiltrating the vagina, leading to opening the vagina to excise the nodule and resuturing vaginally. She also had a mesothelial cyst drained and removed and the uterosacral ligaments removed because of DIE. Four (4) (17%) readmissions during the recovery period were mainly due to pain (three) and one (1) to remove the urinary catheter that was left in the bladder after the intraoperative ureteric injury. Two (2) patients had a planned ileostomy closure. An overall subjective pain reduction was reported from fifteen (15) patients (62%) in the three (3) to six (6) month follow-up period.

Discussion : Deep infiltrating endometriosis and endometriosis involving the bowel occur in various rates and have been reported in 30-50% of the patients with advanced stages of the disease, causing debilitating morbidity and posing challenging surgical management. Its surgical treatment is well recognized to improve pain symptoms. Major and minor complications of the laparoscopic treatment of extensive endometriosis, as well as operating times and duration of hospital stay depend on the extent of the disease and the treatment modality (whether hysterectomy, bowel resection, discoid excision or shaving of endometriosis from the bowel was performed) correlated with those from other studies, suggesting that a combined specialty surgical approach is feasible and safe in a district general hospital.

Keywords : endometriosis, laparoscopy, bowel resection