Culdotomotic approach to tubal sterilization: our experience

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SUMMARY: Culdotomotic approach to tubal sterilization: our experience.

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According to the most recent trend of mini-invasive surgery through natural orifices (NOTES), we briefly remind the classic technique of culdotomy and report our experience in culdotomotic tubal sterilization. Among 138 patients operated between 2006 and 2015 we checked a minimum discomfort for the patient; a low incidence of complications; a short post operatory in-patient and a low rate of surgical conversions. We may conclude that the tubal sterilization by culdotomotic approach can be alternative to laparoscopic approach and become a golden standard for tubal sterilization.

KEY WORDS: Culdotomy - Tubal sterilization.

Culdotomia - Sterilizzazione tubarica.

Introduction

The laparoscopic approach to endo-abdominal organs has spread in the last decades. This technique allowed a reduced surgical invasion, blood loss, traumatisms, neuro-muscular stress, tissue inflammatory reactions, post operatory pain, in-patients recovery and offered good aesthetic results.

In the last decade, beyond LESS (Laparo Endoscopic Single-site Surgery) and robotic Da Vinci® surgery, several Surgery Schools of different Specialties started practicing NOTES (Natural Orifices Transluminal Endoscopic Surgery) which utilizes natural orifices as the mouth, the umbilicus, the rectum, the bladder, the vagina. In this purpose the culdotomy has already been practiced by Kelly (1) in 1896 in ten cases of extra-uterine pregnancy.

To give full details, we remind that: 1) the Culdocopy is a celioscopy executed by vaginal route with eventual utilization of flexible optics; 2) the Colpoceliotomy is the peritoneal opening (celiotomy) executed through anterior and posterior fornix in case of colpo-hysterectomy and/or other gynaecological operations; and 3) the Culdotomy is the transverse incision of the posterior fornix, the cul-de-sac, to approach the female pelvic cavity.

In the years several surgeons have utilized culdotomy to practice salpingectomies, ovariectomies, myomectomies, appendicectomies, although its main employes are the extraction of myomas and other solid gynaecologic tumors during laparoscopy and the reduction of trans-abdominal incision (2, 3).

Given the simplicity, security and compliance of culdotomy, since 2006 we selectively adopted culdotomy for tubal sterilizations. We present our experience in culdotomotic tubal sterilization.
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Material and method

A retrospective study has been completed on all the patients undergone culdotomic sterilizations between January 2006 and December 2015 in the Simple Department of Obstetrics and Gynaecology of Asiago (VI, Italy) public Hospital. A post-operatory follow-up was offered one month after operation and the patients who deserted have been exclude.

All culdotomies have been executed with the same usual classic technique (4-6): following peri-dural anesthesia and litotomic position, the posterior lip of the cervix is pulled in front and up with Martin forceps to expose the posterior fornix. A transvers semicircular incision is executed with electric bistoury and adapted with Metzenbaum scissors. The tubes are generally easy identified and clamped, tied with two not-absorbable suture and the median tract cut off. The peritoneal shift is sutured together with the vaginal margins with absorbable material.

The reported rare possible complications of culdotomy (5,8%) are rectum, bladder and ureteral lesions; blood loss; vaginal hematomas; pelvic abscess (7-9).

Results

Between January 1 2006 and December 31 2015, 138 women underwent culdotomic tubal sterilization in our department. Five of them omitted control and were excluded.

The following data have been valued: age at operation (39,6±2 years); parity (2,2 living sons); previous abdominal-pelvic surgery (27 patients: 21%) consisting in 1 or 2 Cesarean sections in 24 cases (19%) and in 3 cases of laparoscopic ablation of ovarian cyst (2%); post operatory permanence in hospital was 7±1 hours (48 h in one case). Five cases (3,7%) were complicated by 1 rectum/vaginal fistula; 1 blood loss; 1 piometra; 1 fever >37,5°C; 1 pelvic pain. In two cases (1,5%) a laparoscopic conversion was necessary because of an important pelvic adhesive syndrome which impeded to isolate the tubes in security.

Conclusions

The minimum discomfort for the patient; the low incidence of complications [4 of 5 cases of Grade 1 in Cla-vien-Dindo (10) Classification of postoperative complications]; the short postoperative in-patient and the low rate of surgical conversions show that the tubal sterilization by culdotomic approach can be alternative to laparoscopic approach and become a golden standard for tubal sterilization (11).

References