

approach of thrombin injection. Informed consent was obtained before the procedure. Under ultrasound-guidance, a 22G needle was advanced into the lesion of the pseudoaneurysm (Fig. 1.3). Thus, we started injecting thrombin (Vascular Solution DStat Flowable Hemostat). Approximately 5000 units of thrombin with 200 mg of collagen were injected into the pseudoaneurysm until formation of an echogenic thrombus was seen on US (Fig. 1.4). The post-injection course was uneventful and the patient was discharged the same day. At 6 months, follow-up US showed complete occlusion and thrombosis of the pseudoaneurysm.

It is important to recognize vascular complications after laparoscopic surgical procedures, not only to establish how to manage diagnosis and treatment but also to allow the surgeon safe access into the abdominal wall. Saber et al. [2] studied 100 patients with CT scan mapping through the abdominal wall and found the inferior epigastric artery at 5.32 ± 0.12 cm on the right and 5.25 ± 0.11 cm on the left from the midline midway between the umbilicus and pubic symphysis (Fig. 1.2). It is therefore important during trocar insertion to avoid the danger areas near the arteries, also using, when possible, the trans-illumination method. Fourteen cases of iatrogenic IEA pseudoaneurysm have been described in the literature: only one of those was a result of insertion of the trocar for gynecological laparoscopy and only one was treated with thrombin injection.

Pseudoaneurysms can be treated with aneurysmectomy. Some authors affirm that the surgical approach is more simple, rapid and inexpensive, and that aneurysms treated with endovascular methods in some cases do not decrease in volume for a long time causing discomfort [1,3]. In our case external or ultrasound-guided compression was not feasible due to the location of the lesion. Percutaneous transcatheter embolization may represent an alternative to surgery but the procedure is invasive and needs administration of contrast medium.

US-guided thrombin injection is a potential alternative approach but cannot rule out recurrence as well as thrombosis. Thrombin stimulates conversion of fibrinogen to fibrin, and has been used for many years in surgery and radiology [4]. Its coagulant potential is dose-related, so it is better to use the smallest possible amount of thrombin needed to thrombose the pseudoaneurysm. The short and long-term immunological effect of thrombin injection is still unclear but allergic type responses are extremely uncommon. We used a dilute solution of thrombin 200/mL based on other studies reported in the literature. The success rate of injection varies between 95% and 100% [5] with poor recurrence rate. In our patient after six months the anatomical result was excellent in absence of swelling and pain.

The lack of data about this rare condition makes it impossible to standardize the treatment but in our opinion thrombin injection under ultrasound guidance is an effective, safe, rapid and inexpensive approach for iatrogenic pseudoaneurysms, and could be considered the first-line strategy to exclude lesions where other treatment options are not feasible.

Conflict of interest

None.

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M. Mitidieri*
E. Picardo
P. Petruzzelli

Department of Surgical Sciences, Azienda Ospedaliera Città della Salute e della Scienza di Torino, Presidio Ostetrico Ginecologico S. Anna, University of Turin, Via Ventimiglia 3, Turin 10126, Italy

M.A. Ruffino

Department of Vascular and Interventional Radiology, Azienda Ospedaliera Città della Salute e della Scienza di Torino, Presidio Ospedaliero S. Giovanni Battista Torino, Corso Bramante 88, Turin 10126, Italy

G. Garbagnini
T. Todros

Department of Surgical Sciences, Azienda Ospedaliera Città della Salute e della Scienza di Torino, Presidio Ostetrico Ginecologico S. Anna, University of Turin, Via Ventimiglia 3, Turin 10126, Italy

*Corresponding author. Tel.: +39 3405851940;
fax: +39 0114114004

E-mail address: mitidieri.m@gmail.com (M. Mitidieri)

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Ejaculatory sperm production in non-obstructive azoospermic patients with a history of negative testicular biopsy after the administration of an aromatase inhibitor: report of two cases



Dear Editors,

We report two cases of infertile men with non-obstructive azoospermia and negative testicular biopsies diagnosed previously with maturation arrest. Both were treated with letrozole for a period of 4 months (2.5 mg/48 h), resulting in normal spermatogenesis demonstrated by testicular biopsy and semen analysis.

In the first case, a 26-year-old man with a BMI of 44.3 kg/m² was evaluated for primary infertility of two years' duration. Physical examination was normal with testicular volume of 25/25 ml. Two previously performed semen analyses revealed normal volume azoospermia. Hormonal status revealed normal FSH and LH levels and low testosterone level of 3.3 nmol/L (normal range: 10–30 nmol/L). Normal 46XY karyotype was diagnosed, with no evidence of Y chromosome microdeletions. The patient had had a testicular biopsy (testicular sperm extraction (TESE)), with bilateral multiple biopsies, in 2012 at another fertility center. No spermatozoa were retrieved and histology revealed maturation arrest. All different treatment options were discussed and it was opted to start the treatment with letrozole (Femara) 2.5 mg orally every other day for 4 months.

In the 2nd case a 32-year-old man with a BMI of 34.3 kg/m² was evaluated for primary infertility of nine years' duration. His physical examination was unremarkable with testicular volume of 15/15 ml. Two previously performed semen analyses revealed normal volume azoospermia. FSH was within the normal range and

testosterone was low: 6.4 nmol/L (normal range: 10–30). Normal 46XY karyotype was diagnosed, with no evidence of Y chromosome microdeletions. The patient underwent TESE, at our fertility center in 2012, with bilateral multiple biopsies. No spermatozoa were retrieved and the biopsy revealed Sertoli cell only syndrome. All different treatment options were discussed with the patient and medical treatment with letrozole (Femara) 2.5 mg orally alternate day for 4 months was commenced.

In both cases, after two and a half months of medical treatment serum testosterone had increased, to 10 nmol/L (case 1) and to 23.47 nmol/L (case 2). A new TESE was performed finding, after enzymatic digestion with collagenase 17, motile sperm A + B (rapid and slow progressive motility). Sperm was used for fertilization and also testicular tissue was cryopreserved for later use. Both patients continued their treatment and after 4 months ejaculatory semen analysis showed a concentration of 0.016 mill/ml with 36% progressive motility (case 1) and a concentration of 0.023 ml/ml and a progressive motility of 22% (case 2). One month later semen concentration was 0.416 mill/ml for the patient in the case 1. The patients continue treatment with letrozole while planning ICSI treatment.

Men with impaired spermatogenesis appear to commonly have an excess of aromatase activity, likely from increased conversion of testosterone to estrogens in Leydig cells. Treatment of infertile men with low serum testosterone levels using aromatase inhibitors is rational, and has been associated with improved semen parameters as well as increased total serum testosterone levels and suppressed estradiol levels [1]. Several studies have reported improved spermatogenesis following the use of aromatase inhibitors in men with oligospermia [2–4].

The present two cases confirm the activation of spermatogenesis, proven by ejaculation, after the administration of 2.5 mg letrozole/48 h. The dose was chosen arbitrarily since there are no dose-finding studies for estrogen inhibitors.

The fact that both men discussed in the present report are obese is also an issue that requires further investigation. It is known that fatty tissue has high aromatase activity, promoting estrogen synthesis and decreasing testosterone production. If an aromatase inhibitor specifically benefits only those patients with excess aromatase activity, then it may not demonstrate benefit in men with idiopathic infertility [1].

The use of letrozole could represent an alternative treatment for obese men with non-obstructive azoospermia and normal FSH levels.

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D. Kyrou*

I.P. Kosmas

B. Popovic-Todorovic

V.U.B./C.R.G., Laarbeeklaan 101, 1090 Brussels, Belgium

P. Donoso

Clínica Alemana de Santiago, Facultad de Medicina Clínica Alemana, Universidad del Desarrollo, Santiago, Chile

P. Devroey

H.M. Fatemi

V.U.B./C.R.G., Laarbeeklaan 101, 1090 Brussels, Belgium

*Corresponding author. Tel.: +32 2 477 6699;

fax: +32 2 477 6333

E-mail address: mimikyrou@yahoo.gr (D. Kyrou)

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Surgical treatment of recurrent prolapse after Le Fort partial colpocleisis



Dear Editor,

The Le Fort partial colpocleisis is an obliterative procedure performed for the treatment of pelvic organ prolapse among patients with or without a uterus who no longer desire preservation of coital function. Reported success rates are 90–100% [1]. Rarely, recurrence may be encountered and the optimal management of these cases is unknown. Here we report a case of recurrent prolapse after Le Fort partial colpocleisis treated with total colpocleisis and repeat perineorrhaphy.

A 68-year-old woman presented with complete uterovaginal prolapse of Pelvic Organ Prolapse Quantification (POP-Q) stage 4, hesitancy, straining to pass urine, incomplete emptying, and urge incontinence. Her body mass index was 31 kg/m² and she suffered from chronic constipation. Urodynamics with reduction of the prolapse with a tampon revealed detrusor overactivity and occult stress urinary incontinence. The patient was not sexually active and gave informed consent for Le Fort partial colpocleisis. She underwent transobturator tape operation, vaginal hysterectomy, Le Fort partial colpocleisis, and perineorrhaphy with levator plication. Colpocleisis was performed after the vaginal stump was closed. Single 0 polyglycolic acid sutures 0.5 cm apart were used for colpocleisis. The postoperative course was uneventful. At the four-week follow-up, the prolapse symptoms were relieved with no urinary incontinence. At the three-month follow-up, the patient had no symptoms, but recurrent prolapse was observed at the left lateral vaginal channel which progressed to symptomatic total vaginal eversion at the seven-month follow-up. The vaginal mucosa had everted completely through the left vaginal channel to a distance of 8 cm beyond the hymen with a widened genital hiatus and weakened support at the level of prior perineorrhaphy. The patient gave consent for total colpocleisis and repeat perineorrhaphy.

The everted vaginal mucosa was held using Allis clamps, and the vaginal epithelium was dissected to expose the underlying fibromuscular tissue from the apex to a distance approximately 3 cm proximal to the external urethral meatus (Fig. 1a). The vaginal epithelium was dissected circumferentially. A series of purse-string sutures of 2–0 and 0 polyglactin was used to obliterate the recurrent prolapse (Fig. 1b). The vaginal mucosa was closed with a running suture of 2–0 polyglactin (Fig. 1c). The widened introitus was narrowed with posterior colporrhaphy and levator ani plication. One year after the operation the patient was asymptomatic with no pelvic organ prolapse or urinary incontinence.

Recurrent prolapse after obliterative procedures for pelvic organ prolapse is rare. Recommended techniques aimed at decreasing recurrence include concomitant perineorrhaphy, plication of levator ani muscles and fascia, performing cervical amputation, making the vaginal channels narrower, and postop-