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Is laparoscopic sclerotherapy justified in the management of endometriomas?

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ABSTRACT

Endometriomas represent a common finding among women at fertile age and usually associated with pelvic pain, infertility, heavy menstrual periods and dyspareunia. For a long period of time surgical resection has been considered the golden standard in such cases. However, although resection aims to take off only the cyst, in certain cases a decrease of the ovarian reserve and secondarily, to a decrease of the fertility is observed. Due to this reason, attention was focused on creating other methods for cyst destroying without impeding the ovarian reserve. The aim of the current paper is to discuss about the effectiveness and safety of sclerotherapy as part of the therapeutic strategy for endometriomas.

Keywords: endometrioma, fertility, surgery, sclerotherapy

INTRODUCTION

Endometriosis is represented by the presence of endometrial tissue at the level of the pelvic cavity, outside the uterus, in different locations such as ovaries, rectovaginal pouch, peritoneum, small bowel, large bowel, uterine ligaments or ureters

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and is estimated to affect up to 10% of all women at the reproductive age (1). Meanwhile, is estimated that endometriosis is expected to be found in up to 70% of cases investigated for fertility (2).

Ovarian endometrioma is a common finding in these cases and is characterised by the presence at the level of the ovaries of an ovarian cysts containing thick, dark fluid. Whenever such a cyst is diagnosed, it should be treated.

THE ROLE OF SURGERY IN ENDOMETRIOMA

For a long period of time surgery remained the standard of care in patients with endometriomas and consist of the complete removal of the cyst, attention being focused on avoiding the intraperitoneal rupture of the lesion due to the high capacity of developing secondary peritoneal implants. Although theoretically the method consists of removing exclusively the ovarian cyst while the remnant ovarian parenchyma is completely preserved, in the daily practice things are a lit bit more complicated; therefore it is almost impossible to remove only the ovarian cysts, most often a certain amount of the normal ovarian stroma being resected. Moreover, after resecting the cyst local usage of the means of electrosurgery usually destroys the subsequent ovarian follicles diminishing in this way the ovarian reserve (3,4). In this respect, attention was focused on exploring other therapeutic strategies in such cases, sclerotherapy being proposed for almost four decades (5).

SCLEROTHERAPY IN OVARIAN ENDOMETRIOMAS

As mentioned before, sclerotherapy was proposed for the first time in 1988 and was performed through a percutaneous manoeuvre; at that moment the method consisted of percutaneous ultrasound guided aspiration followed by injection of sclerotherapy agents (6,7). Although the method was associated with promising results, it also associates certain risks, especially due to the fact that the needle which is introduced in the cyst has a poor stability and therefore the spillage can occur; therefore, both the endometriotic content as well as the sclerotherapy agent can get in contact with the peritoneal cavity inducing secondary effects (7). In order to minimise these risks other authors proposed local insertion of a thicker catheter through which the content of the endometrioma can be more easily aspirated while the sclerotherapic agent can be safely introduced (8). However, the method has a major inconvenient, it can not offer the possibility of retrieving a biopsy from this level, the association or degeneration of the ovarian endometrioma in endometroid ovarian cancer being widely known.

LAPAROSCOPIC APPROACH FOR SCLEROTHERAPY OF OVARIAN ENDOMETRIOMAS

Due to these disadvantages, minimally invasive approach through laparoscopy has been proposed. The method associates the benefits of preserving the entire ovarian reserve and offers a good control of the procedure; therefore, in these conditions if fluid spillage occurs, it can be rapidly removed, minimizing in this way the contact with the peritoneal cavity. Meanwhile, at the end of the procedure, after retrieving the catheter through which the agent for sclerotherapy had been introduced, a biopsy of the solid part of the lesion should be retrieved in order to prove the benignity of the lesion (9,10).

When it comes to the type of agent which is introduced, it can widely vary from ethanol, methotrexate or antibiotics such as tetracycline. In cases in which ethanol is used, it is usually injected at a volume ranging between 50% and 100% of the initial volume of the aspirate, left in place for maximum 15 minutes and afterwards removed; however, certain authors opiniate to leave in place the injected agent. As for methotrexate or tetracycline, it is usually injected at a volume of 50-100% of the initially retrieved volume and left in place (11,12).

An interesting study which was conducted on the issue of laparoscopic approach in endometriomas was conducted by De Cicco Nardone et al. and included 53 patients who were diagnosed with 64 endometriomas measuring 4 to 10 cm. In all cases the lesions were aspired under laparoscopic approach and ethanol was further injected; after a median length of follow up of 31 months recurrence rate was of 9% while pregnancy was obtained in 16 of the 28 patients desiring childbirth (13).

CONCLUSIONS

Laparoscopic approach for injection of sclerotherapy agents in endometrial cysts represents a safe and effective method in order to achieve a good local control of such lesions. Oppositely to ultrasound guided aspiration and injection, laparoscopic approach offers the possibility of performing this procedure under direct visualization and can control the spillage. An even more important advantage of the method is represented by the possibility of retrieving a biopsy in order to provide a histopathological proof of benignity for the underlining lesion.

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