Original Investigation

The Effect of a Subsequent Pregnancy After Ovarian Vein Embolization in Patients with Infertility Caused by Pelvic Congestion Syndrome

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Rationale and Objectives: To report the effect of pregnancy on patients who have undergone pelvic vein embolization with pelvic congestion syndrome, which was suspected to be the only cause of infertility.

Material and Methods: Data from a total of 12 women (mean age: 36.5 ± 4.3 years, range: 29–45 years) were collected between May 2013 and June 2016. Transvenous embolization with fibre platinum coils combined with anhydrous alcohol was performed in unilateral or bilateral ovarian veins after the diagnosis of venous varices confirmed by transvaginal ultrasound or pelvic venography. The follow-up time was 2–3 years. The primary outcomes of this study were the technical procedure and clinical effect, especially the pregnancy rate and complications.

Results: The successful embolization rate was 100% with no significant complications during or after embolization. Ovarian vein embolization was performed unilaterally (7/12, 58.3%) or bilaterally (5/12, 41.7%). A total of 66.7% (8/12) of women had a subsequent pregnancy and complete pelvic pain relief, and 33.3% (4/12) of patients had partial pain relief. The numeric pain perception scores improved from 6.7 ± 1.1 to 2.7 ± 1.2 ($p < 0.001$).

Conclusion: Ovarian varices may be associated with infertility in some patients, and embolization of ovarian varices is a safe and effective method for those trying to become pregnant.

Key Words: Pelvic congestion syndrome; Ovarian varices; Infertility; embolization.

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INTRODUCTION

Pelvic congestion syndrome (PCS) is characterized by chronic pelvic pain for at least 6 months as a result of varices or the insufficiency of pelvic veins. It usually manifests as chronic pelvic pain, dyspareunia, dysmenorrhea, or sterility, etc. (1). The aetiology of PCS is diverse, involving congenital or acquired nonobstructive causes and secondary obstructive factors as well as other factors contributing to venous dilatation (>5 mm) and insufficiency (2,3). There is an abundant interconnecting plexus of veins in the bladder, vagina, uterus, and rectum in the pelvis. The fundus of the uterus drains to either the uterine or the ovarian plexus within the broad ligament (4). Many pelvic veins are devoid of valves and have weak attachments between the adventitia and supporting connective tissue. All of these factors contribute to retrograde venous flow, progressive development of pelvic varicosities and dilatation. Secondary pelvic insufficiency is often caused by compression, such as nutcracker syndrome or May-Thurner syndrome (5). Structural and hormonal changes with parity may have a role in the progression of PCS.

A clear diagnosis should be made based on clinical manifestation, a physical examination, and an imaging examination. Currently, retrograde selective ovarian venography

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