Alexandria Journal of Medicine (2016) **xxx**, xxx–xxx

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Alexandria Journal of Medicine

http://www.elsevier.com/locate/ajme

Clinical outcome of ovarian vein embolization in pelvic congestion syndrome

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Received 4 October 2015; accepted 21 January 2016

KEYWORDS

Pelvic congestion;
Ovarian vein;
Embolization

Abstract *Introduction:* Pelvic congestion syndrome (PCS), is a condition associated with ovarian vein (OV) incompetence among other causes. It is manifested by chronic pelvic pain with associated dyspareunia and dysmenorrhea. The diagnosis of PCS is often overlooked and the management can be difficult. Traditional therapy for PCS has included both medical and surgical approaches and more recently endovascular therapy.

The aim of this work: The aim of this work was to assess the clinical efficacy of ovarian vein embolization in treatment of PCS associated with OV incompetence and in the management of pelvic varices via catheter directed coil embolization.

Conclusion: From our and previous results, we can conclude that catheter directed OV coil embolization is a feasible procedure for treatment of pelvic congestion syndrome associated with OV incompetence. Presence of bilateral OV incompetence should always be investigated prior this therapy. Further prospective trials are required to assess the full benefits and efficacy of this technique, and to assess which may be the best embolic agent.

1. Introduction

Chronic pelvic pain (CPP) is a significant health problem in women particularly during childbearing age and may account for 10% of outpatient gynecologic visits.[1,2] Etiology of chronic pelvic pain includes irritable bowel syndrome, endometriosis, adenomyosis, pelvic congestion syndrome, atypical menstrual pain, urologic disorders, and psychosocial issues.[3,4]

Pelvic congestion syndrome occurs mostly because of ovarian vein reflux, but can also occur because of the obstruction of ovarian vein outflow resulting in reversed flow.[5]

Ovarian vein reflux (OVR) is found and PCS is diagnosed most frequently in multiparous women. During pregnancy, ovarian vein flow may increase up to 60 times. This increase in blood flow causes ovarian vein dilatation and may result in venous valve incompetence. PCS is likely caused by the incompetence of the venous valves of the ovarian and pelvic veins, which results in OVR leading to ovarian and pelvic vein dilatation and stasis. Therefore incompetence, venous reflux, and dilatation of the ovarian veins lead to the development of pelvic varicosities and congestion, which are known causes of pelvic pain and the most likely etiology of PCS.[6]

The presence of OVR by itself does not make the diagnosis of PCS. But venous reflux in the ovarian veins of patients with CPP and with no other identifiable cause of organic pain makes the diagnosis of PCS.[6]

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Peer review under responsibility of Alexandria University Faculty of Medicine.

http://dx.doi.org/10.1016/j.ajme.2016.01.006

(a)

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Patient Satisfaction Survey

Please answer all appropriate questions accordingly, making sure you use a black or blue pen. Please mark all boxes with a cross eg ☒ and write all numbers and letters clearly as they will be processed by computer. Many thanks.

Section A - Medical Condition Prior to Procedure

1) How would you describe the level of lower abdominal/pelvic pain prior to the procedure?
☐ Very Painful ☐ Painful ☐ Bearable ☐ No Pain

2) Would you describe this pain as being?
☐ Continuously present ☐ Intermittently present

2a) If Intermittently present, when did it occur?
☐ Just Before or During Period ☐ Different Moments of the Month ☐ Both

3) Did you experience painful Sexual Intercourse? ☐ Yes ☐ No

4) Did you have vulval varices (swelling)? ☐ Yes ☐ No ☐ Can't remember/Don't Know

If you answered 'NO' or 'Can't Remember/Don't Know' go to Q5

4a) If Yes, What symptoms did you experience?

4b) How are you now in respect of this?

5) Please state the number of Pregnancies you have had: ☐☐

6) In your profession, Please indicate which position you spent the majority of your day?
☐ Standing ☐ Sitting Down ☐ Both equally

7) Did you experience Urinary Urgency (poor control of urination)? ☐ Yes ☐ No

Section B - Medical Condition Post Procedure

1) How would you describe the level of lower abdominal pain post procedure?

	Very Painful	Painful	Bearable	No Pain
1 Month after procedure	☐	☐	☐	☐
2-3 Months after procedure	☐	☐	☐	☐
4-6 Months after procedure	☐	☐	☐	☐
>6 Month after procedure	☐	☐	☐	☐

2) If you have experienced/experience pain after the procedure, Would you describe this pain as being?

	Continuously present	Intermittently present	Disappeared
1 Month after procedure	☐	☐	☐
2-3 Months after procedure	☐	☐	☐
4-6 Months after procedure	☐	☐	☐
> 6 Months after procedure	☐	☐	☐

DRAFT

Figure 1 (a and b) Mailed questionnaire.

Pelvic congestion syndrome can present with nonspecific pelvic pain, dyspareunia, and persistent genital arousal.[5] The pelvic pain of PCS may vary along the menstrual cycle and worsen during menses and be exacerbated by conditions that may increase congestion such as the upright position, bending and lifting, and coitus. The pelvic pain may be described as fullness and heaviness. The pelvic examination may demonstrate pelvic tenderness, congestion of the vaginal walls, and varices.[6] Pelvic varices can be seen in 10% of women in the general population and up to 60% of patients with pelvic varices may develop pelvic congestion syndrome. Varices can be seen in the vulva, buttocks, and legs.[5]

Venography, CT, MRI, and Doppler US can demonstrate OVR. Noninvasive imaging such as sonography, MR, or CT not only may demonstrate the retrograde ovarian vein flow but also may exclude other pelvic pathologies that may be the cause of CPP as well as determine the size of the ovarian veins, and the presence of pelvic varicosities.[6] MRI is preferable as it avoids the large radiation dose associated with CT, which should be avoided where possible in young women. For PCS, an ovarian vein diameter of 8 mm on CT or MRI is considered diagnostic.[7]

Non-steroidal anti-inflammatory drugs may help relieve pain in the short term but these are not a long-term solution

Please cite this article in press as: Abdelsalam H Clinical outcome of ovarian vein embolization in pelvic congestion syndrome, *Alex J Med* (2016), http://dx.doi.org/10.1016/j.ajme.2016.01.006