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Short Communication

Ovarian Vein Embolization Might be an Option in Treatment of Recurrent Varicose Veins of Lower Extremities

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ABSTRACT

On the basis of 60 patients with ovarian vein reflux, we were able to show that catheter-based ovarian vein embolization is a safe interventional procedure that leads to significant improvement of subjective symptoms. Although the development of peripheral, recurrent varicose veins often cannot be prevented, iliac vein congestion appears to play an important role in the pathomechanism. Therefore pelvic vein obliteration (coiling) should be considered as a well suited treatment option for (recurrent) varicose veins.

Keywords: Recurr ent varicose vein; Embolization; Ovarian vein; Ovarian Vein Reflux (OVR); Pelvic Congestion Syndrome (PCS)

DESCRIPTION

Insufficient pelvic veins can induce reflux in the venous system of the lower extremities and cause varicose veins [1,2]. If an insufficiency of the ovarian vein is found as the causative factor, this is also referred to as Ovarian Vein Reflux (OVR) [3-5]. OVR as one cause of Pelvic Venous Insufficiency (PVI) can lead to Pelvic Congestion Syndrome (PCS). The term Chronic Pelvic Pain (CPP) is also used synonymously for venous congestion symptoms in the pelvis region. If varicose veins develop consecutively, this is referred to as Ovarian Vein Insufficiency Syndrome (OVIS) [6].

One treatment option for varicose veins originating in the pelvis is permanent occlusion by catheter-based embolization of the ovarian vein. The primary technical success rate is close to 100% [4]. Therefore, embolization is recommended as the treatment modality with the best results with an evidence level 2B [7]. However, there is little scientific research addressing the relationship between ovarian vein embolization and clinical outcomes regarding peripheral lower extremity varicose veins.

In our study, the treatment success of ovarian vein embolization in 60 patients with OVR was investigated with regard to the development of recurrent varicose veins. In addition, subjective complaints of the patients were questioned and the relationship between complaints and renewed OVR in one of the ovarian veins was investigated. At follow-up after an average of 51.9 months, recurrent varicose veins were diagnosed in 95.2% by duplex sonography and in 88.1% clinically. In 15.2%, a new intervention was necessary. The median recurrence-free time was 47.0 ± 5.5 (95% CI 36.2-57.8) months. There was significant improvement with embolization in all subjective symptoms in pelvis and leg regions. Thus, there was a discrepancy between subjectively reported and objectively observed incidence of recurrent varicose veins.

Comparing these results with other studies, the recurrence rate of patients with phlebectomy and embolization of the ovarian vein was not reduced compared with patients with phlebectomy alone [8,9]. Other authors describe a significant reduction in the prevalence of recurrent varicose veins after coiling of the ovarian vein. For example, at 5-year follow-up Laborda et al. reported about a recurrence rate of 12.6%; and Greiner et al. only in 1 of 24 patients with recurrent varicose veins after four years [10,11]. However, in both studies, duplex ultrasonography of the venous leg system was not performed during follow-up, nor was it described whether reintervention was performed or necessary, resulting in limited comparability to our study. In addition the (follow-up) observation period must be considered

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to discuss and define what recurrence is and what progression of disease is.

There was no significant association between reflux in any of the ovarian veins on MRI and the occurrence of recurrent varicose veins or symptoms in our observed patients. A possible explanation could be the lack of graduation of reflux on MRI examination, especially in the supine position [12]. In our study, both ovarian veins were examined by MRI and phlebography, and then each of the ovarian veins in which reflux was detected were embolized. Other venous sources such as the internal iliac vein or hypogastric vein were neither investigated nor intervened in this study.

Even though the treatment success of occlusion of the ovarian vein could not be objectified in relation to recurrent varicose veins, we propagate that the method should definitely be considered as an alternative, safe option, since the subjective symptoms of the patients could be significantly reduced and the quality of life increased.

CONCLUSION

If there is a clinical suspiction that the source of filling (proximal point of insufficiency) is in the iliac vein, medical history of female patients with peripheral varicose veins should obligatorily include the question of symptoms in the pelvis. An appropriate diagnostic should follow in order to prevent a possible overlook of a pelvic leak point. Only then an individually adapted therapy for symptom relief is sensibly possible.

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