

**Don't miss it!****Controversies in new fields of embolisation  
Special Session**

Sunday, September 11, 08:30–09:30  
Auditorium 1



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Prof. Vávra received his medical degree from Palacky University in Olomouc, Czech Republic in 1991 and earned his Ph.D. in 2003 from Comenius University in Bratislava, Slovakia. Prof. Vávra currently works as the Team Leader in Hepatic Surgery at the Surgical Clinic of the University Hospital Ostrava. Since 2014, he has also been the Head of the Department of Surgery at the University of Ostrava. He has performed a number of studies as the principal investigator or co-investigator and is credited for over 200 publications, including a textbook, two patents, and three book chapters.

**References:**

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**Haemorrhoid embolisation – Con**

Michiel de Haan (EBIR)

Symptomatic patients with haemorrhoids are one of the most frequent visitors of the out-patient surgical department, with a prevalence of 43.5%. Patients experience anal pain, rectal bleeding, anaemia and defecation difficulties. These symptoms are caused by oedematous tissue cushions covered by an anastomotic plexus between the superior rectal artery and rectal veins.

The initial treatment consists of hygiene improvement and higher dietary fibre intake, which helps to improve the microclimate of the anorectal area, possibly alleviating some of the symptoms and, occasionally, even leading to a complete remission of all symptoms. Some patients may benefit from less common types of treatment, such as local anaesthetics, corticosteroids or flavonoid medication. However, a surgical solution is usually the fastest and safest way to treat patients [1, 2]. Many types of surgical procedures have been developed, showing good results in large groups of patients. The new "emborrhoid" technique tackles the problem from an entirely new perspective, possibly bringing new possibilities into the treatment of haemorrhoids. However, the new method raises several important questions which need to be addressed.

**Is it safe for the patient?**

The complications of the haemorrhoid treatment may include oedema, rebleeding, necrosis of the rectum, pseudoaneurysm, prolapse and others. Up to 70% of patients experience pain after sclerotherapy treatment, which is often recurring or accompanied by other complications [3]. The percentage of patients experiencing post-operative pain is lower in the most frequent types of treatment. With open surgery, the complication rate is 8-10% for urinary retention, 4-15% for bleeding and up to 5% for continence disorders [4]. Post-operative pain is common, however, it usually disappears within three weeks. The stapled haemorrhoidectomy is less painful compared to open surgery, although less effective with a 7% recurrence rate compared to 2% for open surgery [5]. The most common complications include urinary retention (0.3-22%) or rectal bleeding (4-17%) [6]. The Doppler-guided ligation is even better tolerated; however, the total recurrence rate is 17.5% [7]. Elastic band ligation shows frequent recurrence: up to 68% in a 5-year follow-up [3]. As the ligation can usually be repeated quickly and safely in the out-patient clinic, the impact of the high recurrence rate is greatly diminished.

The safety of the "emborrhoid" technique has not been well-documented and further research is required to fully evaluate the short- and long-term complication rates. Out of 14 patients, four experienced rebleeding and one experienced painful oedema [8]. During the procedure, it is necessary to embolise all arteries connected to the haemorrhoid tissue, which may lead to ischaemia and necrosis of the rectum. A common complication is painful oedema, which usually disappears within two weeks [2]. It may also cause a prolapse of the haemorrhoid tissue. The range of possible complications is extended by a set of catheterisation-specific complications, i.e. an infection of the catheterisation site or pseudoaneurysms of rectal arteries. Most of these complications require surgical treatment. The patient is also inevitably exposed to a small dose of radiation (averaging 62 Gy/cm<sup>2</sup> [8]), which can be avoided by a surgical approach.

**Is it fast?**

The length of the surgery depends largely on the chosen method. From experience in our institution, the majority of haemorrhoids (stages I and II) can be solved by the elastic band ligation, which is usually performed in a couple of minutes, depending on the number of haemorrhoid cushions (approx. 30 seconds per one ligature). The Longo haemorrhoidectomy is the fastest invasive technique and can be performed in 15-20 minutes. The Doppler-guided ligation requires 20-30 minutes to perform, while open surgery is usually completed in about 40 minutes. The "emborrhoid" technique is reported to be completed in an average of 69 minutes [8].

**Is it necessary?**

The initial choice of treatment depends on the clinical findings in the anorectal area. Aside from conservative treatment, ligation is the most frequently used treatment method of stage I or II haemorrhoids [4, 6]. This method is very fast and reliable and can be performed repeatedly, but, on the other hand, it cannot be used to treat external haemorrhoids. In more complicated or severe cases, the circular stapled haemorrhoidectomy is usually the method of choice. In other cases, the Doppler-guided ligation or open surgery (the latter performed in 10% of cases [9]) is usually advised. The latter is very effective with a recurrence rate of only 2% [5]. The "emborrhoid" technique allows haemorrhoids to be treated in difficult terrain, for instance during massive bleeding or oedema. Even in acute cases, it is usually necessary to haemo-

dynamically stabilise the patient first. In these rare indications, the embolisation may prove effective. It needs to be noted that several sources report the occurrence of post-operative complications, including significant anal pain or recurrent bleeding [10]. Further research is necessary in order to compare it to other methods of treating complications.

**Who really leads the treatment?**

The main question arises while discussing the management of patients. The haemorrhoid treatment has always been performed by surgical departments, as these are best suited for the complex treatment of haemorrhoids. The surgeon takes the medical history, performs a rectoscopy or anoscopy, performs the surgery and treats possible complications. Then patients receive their follow-up in surgical outpatient clinics. This unified concept of care would be interrupted by using the "emborrhoid" method, as the embolisation would be performed by an interventional radiologist. Therefore, the patient would have to be transferred to the department of radiology to undergo the procedure and then returned to the surgical department for post-operative care. The division of the treatment between two departments is not advisable, and it is unlikely for this practice to be accepted by many departments.

**Conclusion**

The "emborrhoid" technique is a completely different approach to treating haemorrhoids. It is a feasible method for very specific cases, usually in patients with a plentiful history of haemorrhoid surgeries. However, it features many downsides, including radiation exposure and complicated management of the patient. Current methods of treatment are very effective and may be performed safely and repeatedly even in out-patient clinics, and the efficiency and safety of the "emborrhoid" technique is still to be determined.