

# Uterine artery embolisation as management of postoperative gynaecological haemorrhage

Jessica Nogueira García, Teresa Gómez García, Rocío Moreno Selva, Guadalupe Aguarón Benítez, José Pedrosa Jiménez, Gaspar González de Merlo

Department of Obstetrics and Gynecology, Hospital and University Complex of Albacete, Albacete, Spain

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**Corresponding author:**

Jessica Nogueira Garcia

Hospital and University

Complex of Albacete

Yeste 7

02002 Albacete, Spain

Phone: +34654441034

E-mail: jesnogar@gmail.com

Uterine artery embolisation is already known as a simple, effective procedure for management of a wide variety of obstetric [1] and gynaecological [2] haemorrhages. Embolisation aims to achieve immediate and effective control of haemorrhaging. In what follows we shall report a clinical case dealt with at the Albacete General University Hospital, where embolisation was performed in order to manage bleeding in the early gynaecological postoperative period. The patient has given informed consent for publication of this research.

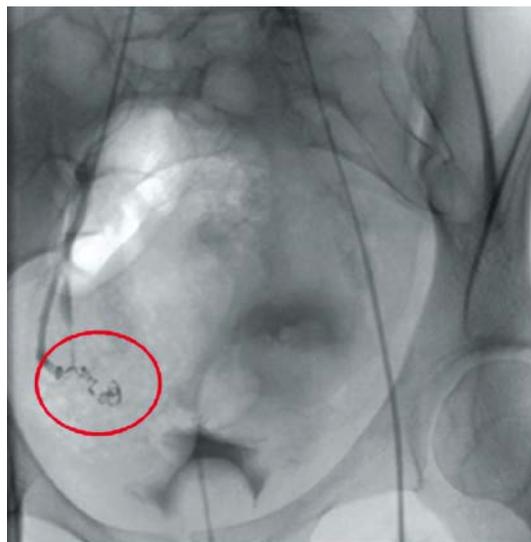
The case concerns a 44-year-old woman with menorrhagia and intramural myoma of 82 × 69 mm. In December 2012 simple vaginal hysterectomy was carried out on the patient. No complications arose during surgery, but in the immediate postoperative period the patient suffered heavy vaginal bleeding and needed a blood transfusion due to symptomatic anaemia (Hb: 7.1 g/dl, Hto: 19%). The patient being young and haemodynamically stable, it was decided to perform uterine artery embolisation 24 h after surgery; we chose such a conservative measure in order to avoid laparotomy. The patient was informed of all advantages and disadvantages of this technique and agreed to its use.

In our hospital there is a round-the-clock, long-experienced Interventional Radiology Service with enough human and material resources. Uterine artery embolisation was carried out using Seldinger's technique. First of all, access was obtained to the left hypogastric artery, where an area of hypervascularisation associated with the cranial uterine artery going to the urinary bladder was found. Therefore, embolisation with 3 mm coils was performed. Accessing the right hypogastric region afterwards, an image similar to the one in the left region was seen, leading to an additional embolisation (Figure 1). In Figure 2 embolisation of the right uterine artery with coils can be observed. A control arteriography subsequently confirmed cessation of vascular leakage (Figure 3). The technique was performed without complications, causing an immediate end of the patient's vaginal bleeding. Her evolution was favourable, and she remained totally asymptomatic.

The aim of this paper is to suggest that selective embolisation of uterine arteries is a technique to be taken into account in the management of haemorrhages arising in the immediate postoperative period of gynaecological surgery. In the literature there are many research papers describing embolisations done in order to manage obstetrical haemorrhages [3]. But published data on the embolisation of haemorrhages



**Figure 1.** Arteriography of the right hypogastric artery, visualising the vanishing point



**Figure 2.** Catheterisation of the right uterine artery and subsequent embolisation with coils



**Figure 3.** Control arteriography confirming cessation of vascular leakage

that arise in the immediate postoperative period following gynaecological surgery are limited [4, 5]. It is generally believed that the same techniques and general principles of embolisation are also applicable in such cases.

However, this technique is not free of complications. Complications such as transient fever, transient buttock ischemia, lower limb paraesthesia, groin haematoma and pelvic abscess or vesicovaginal fistula formation have been reported. But these situations are exceptional; the benefits of embolisation are greater than the disadvantages [4].

Embolisation is more complex to perform in gynaecological than in obstetrical haemorrhages. This is due to the fact that patients who have undergone surgery, radiotherapy or even both are distorted, as well as their normal anatomic relationships, which renders the existence of atypical

sources of vascular replacement for the bleeding point perfectly possible. That is why gynaecological embolisation, in order to be effective, sometimes needs to be more extensive than what is usually the case for obstetrical embolisation [2].

To conclude, selective uterine artery embolisation can be described as a simple, minimally invasive technique that should be taken into account in the management of gynaecological postoperative bleeding. It could play an important role in complex patients, since it achieves good haemorrhage control without need of further surgical intervention.

#### Conflict of interest

The authors declare no conflict of interest.

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