

Management of Hemorrhagic Shock Secondary to Uterine Leiomyoma

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Abstract

Case Report

Uterine leiomyomas are the most common benign tumour in women, with an estimated prevalence of between 20 and 77% depending on the series [1]. Leiomyomata are most often asymptomatic (50-80%) [2], they can become symptomatic (uterine haemorrhage, abdominal pain, dysuria, reproductive disorders) [3], and in rare cases can be complicated by hemorrhagic shock [4]. We report the case of a patient with a polymyomatous uterus complicated by haemorrhagic shock, who underwent emergency polymyomectomy and we discuss the indications of surgical and/or non-surgical techniques (uterine artery embolisations) for management hemorrhagic shock secondary to uterine leiomyoma.

Keywords: Hemorrhagic shock, uterine leiomyoma.

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INTRODUCTION

Uterine fibroids, affecting approximately 235 million women worldwide [5], are benign tumours that arise from myometrial cells of the uterine smooth muscle tissue [6].

Although most are asymptomatic [7], fibroids can often cause excessive menstrual bleeding, iron deficiency anemia, and pelvic pressure and pain [8]. When required, hysterectomy with removal of the fibroid can eliminate fibroid symptoms, as well as chances of fibroid recurrence, and is thus a definitive solution [9]. However, for women of reproductive age with a desire for fertility, myomectomy—whether by the abdominal, laparoscopic, robotic, or hysteroscopic route—is the preferred surgical procedure for uterine preservation [10].

We report the case of a patient with a polymyomatous uterus complicated by haemorrhagic shock, who underwent emergency polymyomectomy.

CASE PRESENTATION

Patient aged 35 years, weighing 75 kg, height: 1.74 m, Body mass index: 24.7 kg/m², second pregnancy and primiparous, known to have a

polymyomatous uterus; admitted to the gynecological emergency department for a state of hemorrhagic shock following menometrorrhagia evolving for three weeks. The examination on admission found an obnubilated, polypneic, pale patient, with sweating, discolored conjunctiva and tachycardia at 130 bpm. blood pressure: 70/45mmhg. A supple abdomen with an abdominal-pelvic mass extending beyond the umbilicus; the gynecological examination showed moderate bleeding of endo-uterine origin and a very enlarged uterus. The patient benefited from emergency resuscitation measures: 2 peripheral venous lines: 14 G; Urine catheterization to measure diuresis per hour; infusion of 500 ml saline solution in flash and 500ml of plasmion, several bolus of ephedrine (30 mg in total), slow intravenous tranexamic acid: 1125 mg in 30 min, the biological check-up showed a blood group: O+; hemoglobin level: 4.8 g/dl, prothrombin level: 40%, and platelets: 130,000 elements/ mm³. An abdomino-pelvic ultrasound showed a polymyomatous uterus, the largest of which measured 11 cm in long axis, without any other anomaly. The evolution marked by the persistence of the hemodynamic instability, from where the introduction of noradrenaline: 3,75 µg / min in electric syringe pump, then an intubation by induction in fast sequence was realised by etomidate: 30mg, rocuronium: 75 mg, orotracheal intubation by tube number 7,

followed by fentanyl : 250µg , then the patient was sent to the operating room , she received cefazolin: 2g as antibiotic prophylaxis then we realized urgently a polymyomectomy by laparotomy. Transfusion by 6 red blood cells, 6 fresh frozen plasma and 6 platelet cells, tranexamic acid: 75mg in electric syringe pump to be infused in 6 hours. The operation lasted 2 hours and allowed the removal of 23 uterine myomas, the largest of which was 12 *10 cm (Figure 1). The patient was admitted to the intensive care unit for progressive weaning of noradrenaline until she stopped after stabilization of her hemodynamic state. The postoperative surgical follow-up was without particularities with a normal check-up, she was extubated the next day and then transferred to the gynecology department. The anatomopathological examination confirmed the histological nature of the masses (Figure 2), and she stayed in the hospital for 3 days then discharged on the 4th day.



Figure 1: Image showing the 23 uterine myomas resected by polymyomectomy

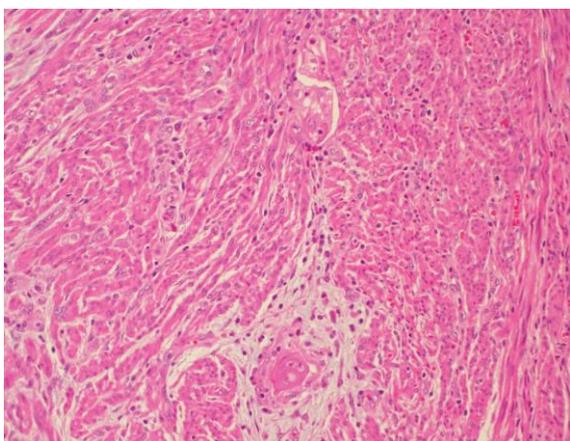


Figure 2: Diffuse and homogeneous tumour cell proliferation, without cytonuclear atypia and mitosis, confirmed the histological nature of the masses

DISCUSSION

Uterine fibroids are benign tumours of women of childbearing age whose evolution is accompanied by certain complications of varying severity, the most serious of which is haemorrhage. hemorrhage is most

often insidious, chronic, with menstrual rhythm, but rarely responsible for hemorrhagic shock.

In our case our patient had no gynecological follow-up and had been bleeding for 3 weeks before consulting us, which explains her hemorrhagic shock.

Bleeding is essentially venous, favoured by pelvic congestion (menstruation, pregnancy) and abdominal hyperpressure (defecation, physical effort), trauma (direct, violent sexual act), rapid growth of fibroids [11-12].

In addition to the classical resuscitation measures used to ensure hemodynamic stability, tranexamic acid (TA) was used to reduce preoperative, peroperative and postoperative bleeding.

Laura and al published A Systematic Review and Meta-analysis on the Effectiveness of TA at Reducing Blood Loss and Transfusion Requirement for Women Undergoing Myomectomy [13], they concluded that TA was effective at reducing perioperative blood loss compared with no treatment or placebo, but non-significant trends were observed for reduction in need for blood transfusion. the choice of technique to be used to treat a polymyomatous uterus complicated by hemorrhagic shock is not easy.

Various therapeutic proposals have been formulated:, either surgical (surgical myomectomy, hysteroscopic resection, hysterectomy) or by uterine artery embolisation (UAE).

Myomectomy is the ideal solution to preserve fertility. Hysterectomy is not discussed in the case of multiple leiomyomas and in the absence of a desire for pregnancy.

In our case, despite her severe condition and polymyomatous uterus, a polymyomectomy was performed instead of a hysterectomy because the patient still wanted to get pregnant.

In the literature few cases of hemorrhagic shock have been reported. M. Fontarensky published 2 cases of hemorrhagic shock secondary to a polymyomatous uterus treated by definitive arterioembolization of the uterine arteries in the first instance and then subsequently scheduled for hysterectomy (unwilling to become pregnant) [14].

However, Joshua Cornman-Homonoff and al illustrated in the case of a woman with a pedunculated broad-based uterine fibroid managed via combination UAE and immediate hysteroscopic resection, whose benefit was Immediate pre-resection UAE devascularizes the lesion, reducing blood loss during the subsequent resection [15].

CONCLUSION

Severe Haemorrhagic rupture of leiomyomas is a rare but serious complication requiring urgent and appropriate management which ideally allows the uterus to be preserved in young women. The UAE is indicated as an emergency procedure to stop the bleeding, allowing a myomectomy to be planned in a second phase if the woman wishes to become pregnant or a hysterectomy if the uterus is polomyomatous and there is no desire to become pregnant.

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