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Case Report

Disappearance of a myoma after pregnancy in a 38 years old patient, treated by ulipristal acetate without success before getting pregnant

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ABSTRACT

Uterine fibroids are the most common form of benign gynaecological tumors in women of childbearing age Piecak et al. (2017) [1]. These uterine fibroids can be responsible for abnormal uterine bleeding, pelvic pain, pelvic pressure and infertility Pritts et al. (2009), Ali and Al-Hendy (2017) [2,3]. Their treatment can be carried out according to several methods: medical treatment, uterine artery embolization or surgery (myomectomy or hysterectomy). Although surgery is the main option, there are medical treatments to reduce their size and decrease and control their symptoms. Ulipristal acetate (UPA) has been the first selective progesterone-receptor modulator approved for the preoperative and long-term treatment for uterine fibroids Ferrero et al. (2018) [4].

Here we present the case of a 38-years-old patient whose large fibroma (initially treated with UPA) totally disappeared after pregnancy.

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UPA is a synthetic steroid derived from 19-norprogesterone, and has tissue-specific effects. It is a selective progesterone receptor modulator that mightily modulates progesterone activity and has an antiproliferative and proapoptotic effect on fibroid cells without suppressing E₂ to non-physiological levels [5]. Currently, it is prescribed up to three months in preoperative and management of moderate to severe symptoms in patients of childbearing age. In that case, the UPA is taken as 5 mg once a day during three months. It is also prescribed in sequential treatment of moderate to severe symptoms of uterine fibroids, in women of childbearing age not eligible for surgical treatment. In that case, UPA is taken as 5 mg once a day for three months with two months between courses [6]. In May 2018, the European Medicines Agency (EMA) published recommendations about UPA treatment. Because of its rare but serious liver injury, UPA should be used for more than one treatment course only in women not eligible for surgery, and all patients treated should undergo liver function tests [7].

As shown in two randomized clinical trials [8,9], UPA is effective to control excessive bleeding and reduce the size of both fibroids and uterine volume in patients with symptomatic uterine

fibromas. These two studies have also shown that the size reduction is maintained for at least 6 months in patients not undergoing surgery [8,9]. Luyckx and al. published a case report in 2016 about a woman whose fibroids had mostly disappeared after treatment with UPA and pregnancy [10].

Uterine fibroids have a negative impact on female fertility: they are present in 5–10% of woman with infertility [3].

As there was no data on fertility or pregnancy after UPA available from the literature, Luyckx and al. published in 2014 an article on the first series of 18 pregnancies after UPA treatment for uterine fibroid [5]. In their study, 52 patients were treated by UPA, and among these patients, 21 wished to conceive after it. Of these 21 patients, 19 (90.5%) underwent myomectomy at the end of the therapy. Fifteen women (71%) became pregnant, resulting in 18 pregnancies (12 deliveries of 13 babies and 6 first trimester miscarriages), and among these patients, 13 (86.7%) underwent surgery after UPA treatment. This article has shown that a pregnancy after UPA treatment is possible, but it must be emphasized that most patients also benefited from additional surgery. None of these patients had any increase in size of her fibroid during pregnancy, although it is known that pregnancy increases the size of uterine fibroids. A literature review from 2018 found that uterine fibroids seem to be subject to a non-linear trend of modifications during pregnancy [11]: a systematic enlargement during the first trimester, and inconsistent evidence about the changes during second and third trimesters. Our case is about a patient that was treated by UPA, never had surgery, and got

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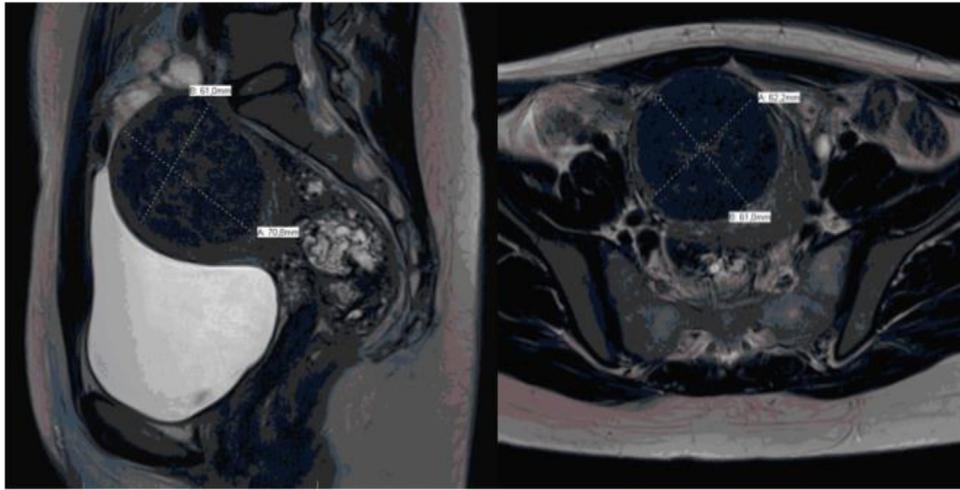


Fig. 1. MRI (2015/08) realised before pregnancy. Myoma measures 61 × 70 × 62 mm.

pregnant. Furthermore, her uterine fibroid totally disappeared after delivery.

Our patient was 38 years old and was initially treated for a uterine fibroid measuring 7 cm in its larger dimension. The uterine fibroid was diagnosed in 2014, because of abdominal pain and excessive uterine bleeding.

In 2015, after a first treatment by UPA from March to June 2015, the myoma was measured 6,5 cm on sonography. The patient realized a MRI (in august 2015, Fig. 1). A type III FIGO myoma, located in the fundus, was described, measuring 6,4 cm in its larger dimension. Another myoma was described, type IV, measured 9 mm in its larger dimension and located on the uterus posterior wall.

In November 2015, while the patient was treated by a second cure of UPA in order to potentiate the effects of the first treatment, she was in amenorrhea but was still having an abdominal pain. A study of Donnez and al. from 2015 found that repeated use of UPA resulted in a continuation of the decrease in size of the myomas. Indeed, after the second treatment course, median reductions from their baseline in fibroid volume were 54 and 58% for the patients receiving 5 and 10 mg of UPA, respectively [12]. Our patient had a desire of pregnancy.

In February 2016, after the second cure of UPA, the patient was having menorrhagia again, but was reporting a decrease of pain symptoms. On MRI control, the myoma's dimensions were the same, and the uterine cavity was deformed. Then, a surgery (consisting in a laparoscopic myomectomy) was scheduled, but the patient announced that she was pregnant before surgery. This was a spontaneous pregnancy. The myoma was checked when

obstetrical sonographies were done, and its dimensions were the same that the ones on the exams performed before the pregnancy (Fig. 2). During pregnancy the patient only presented an episode of aseptic necrobiosis, which is frequent during pregnancies [13]. In April 2017, the patient gave birth by vaginal delivery to a girl weighted 2980 g, at term.

In October 2017, a new sonography was performed in order to check the myoma. The patient was not complaining for any symptom. The myoma was no longer visualized. There was only a hyperechoic range visualized in the right corner region (12 × 11 mm), interpreted as probably residual. An MRI, realised in April 2018, confirmed that the myoma has disappeared (Fig. 3).

As shown in Luyckx and al. series, pregnancy after treatment by UPA is possible, but most of these patients undergone surgery after the treatment. Thought, in his article, Luyckx mentioned that the fibroids sizes were stable during pregnancies [5]. In the literature, there is no article about uterine myoma spontaneous disappearance. Only one article was found about a pregnancy obtained after disappearance of a uterine fibroid due to GnRH treatment, in 1991 [14]. There is neither such myoma disappearance describes after aseptic necrobiosis. Otherwise UPA causes apoptosis [15], and that is why we may think that it is the reason why there is no increase in the size of myomas during pregnancies. We may also think that mechanism is responsible of the disappearance of the fibroma in our patient.

This case opens two debates: the first one on a possible systematic prescription of UPA before the project of a pregnancy, and the second on the prescription of repeated courses of UPA for women with project of pregnancy: can the desire for pregnancy be



Fig. 2. Sonography realised during pregnancy (2016/11). Myoma measures 91 × 75 × 102 mm.

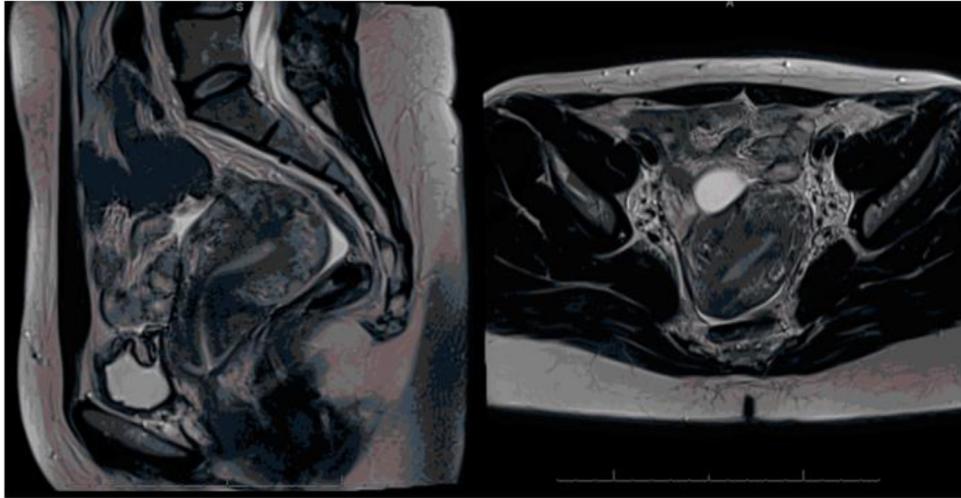


Fig. 3. MRI (2018/04) realised to control the myoma. There is no more myoma observed.

considered as a contraindication to surgery? In both cases, studies are necessary to evaluate the benefits of a treatment by UPA to become pregnant in patients suffering of fibromas.

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