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Intracesarean removal of two huge fibroids occupying the whole uterine fundus: a case report

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SUMMARY: **Intracesarean removal of two huge fibroids occupying the whole uterine fundus: a case report.**

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Uterine fibroid is an estrogen-dependent mass growing during pregnancy. Caesarean myomectomy (CM) is a controversial procedure. A 35-year-old obese (106 Kg) patient gravida 2 para1 (caesarean section), undergoing caesarean section, had two myomas occupying the whole uterine fundus (104.2 mm and 50 mm respectively). Intracesarean myomectomy was carried out after extraction foetus (Apgar score: 9/10). Postoperative course was uneventful and patient was discharged after four days.

KEY WORDS: Cesarean myomectomy - Cesarean section - Uterine fibroid - Intramural leiomyoma.

Introduction

The most common benign gynaecological tumour is uterine fibroid (leiomyoma, myoma). Its incidence increases with age (>40% by the age of 35 years) (1). Uterine fibroid is an estrogen-dependent mass growing during pregnancy. Its prevalence during first trimester is 10.7%. Among all kinds of fibroids (subserous, intramural and submucous), the intramural ones are more frequent ranging from 33 (1) to 35% (2). Fibroids can be symptomatic, causing pain when they overtake 5 cm (1); obstetric complications such as bleeding, placental abruption and preterm labor are reported (3).

Surgical treatment during caesarean section (CS) is controversial: a balancing between either maintaining or removing uterine fibroids must be done according to the choice of patient and a correct evaluation of both advantages and disadvantages of this further surgery. Complications as blood loss, risk of hysterectomy and postoperative morbidity can arise in either options (4). Intracaesarean myomectomy gives the benefit of avoiding another surgery preventing uterine hypotony in presence of huge mass. Literature review showed caesarean myomectomy (CM) is a challenging operation and when correctly carried out with expertise is safe and useful (5).

Case report

A 35-year-old patient, gravida 2 para 1 (CS) at 37 weeks + 4 days of amenorrhea was admitted to Catania "Santo Bambino" University Hospital. At the ultrasound examination a monofoetal pregnancy in cephalic presentation and two intramural myomas of the uterine fundus were found, one of 104.2 mm and one smaller than about 50 mm. The fibroids were adjacent each other. She refers suffering from dysmenorrhea and hypermenorrhea; moreover, Poly-Cystic-Ovary-Syndrome (PCOS) with obesity (Body Mass Index 36) and two fibroids (sizes 3 e 4

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cm respectively) were detected a year before pregnancy. Patient delayed surgery. After arising pregnancy, during the first trimester, she was hospitalized twice owing to abortion threat. Pregnant woman developed hypertension treated with alfamethyldopa (500 mg twice a day). Given the previous CS, hypertension and uterine fibroids, CS was carried out, in agreement with patient who asked myomectomy.

After anaesthetic evaluation, under spinal anaesthesia, a CS was performed by means of a suprapubic transversal laparotomy according to Pfannestiel with lower incision of uterine segment. Extraction of a male infant weighing 2,540 g with 9/10 Apgar index was done.

After placental removal, lower uterine segment was sutured with double layer and oxytocin was administered.

An ellipsoid incision was performed on the uterine surface through myometrium down both fibroids. Allis clamps were applied to one edge of the incision. Both forefinger and hemostatic forceps were used to sweep the myometrium off the fibroid tumor. A tooth clamp was used to grasp the fibroid tumor; strong traction and counter traction were done to elevate the mass out. Tissue was severed with electrocautery and wall hemorrhagic sites stapled with Kocher. Uterine cavity under fibroid was not open. Uterus was sutured in two layers: the former with musculo-muscular juxtaposition, the latter with musculo-serous introflectent stitches (Figure 1).

Before surgery, haemoglobin level was 12.5 g/dl. The procedure lasted 2 hours. After CS haemoglobin was 9.6 g/dL, 250 cc blood unit and 200 cc plasma expander were administered.

The histological exam confirmed diagnosis of fibroids.

Post-operative course was uneventful and following four days, puerpera was discharged.

Discussion

This report shows how multiple myomectomy during a CS can be a valid solution and a challenging operation in some cases.

Fibroids prevail in pregnant women overtaking 35 years old (4, 6).

Other than age, dysmenorrhea, weight gain, and hypertension during pregnancy have to be taken in consideration for myomectomy (7).

Most of myomas are intramural and located in the uterine body, while a small percentage in the isthmus or in the cervix (6).

The size of the tumor in several studies was directly correlated with the amount of blood loss, in particular over 5 cm (1, 8). Moreover obese patients need more additional utero tonics (8).

Another higher risk associated with uterine fibroids is the increased post-partum bleeding, probably by decreasing strength and coordination of uterine contractions (7).

Figure 1 - Left: myomectomy during surgery; right: uterus after suturing.

Myomectomy during CS has numerous advantages. Incisions on the uterus are generally larger but they became smaller after uterine retraction. Identification of cleavage plane is easier during CS, but surgery is more haemorrhaging (9).

The results of the various studies are conflicting on blood transfusions, even if in some cases blood administration is necessary (4, 8).

Women with multiple fibroids give birth to a significantly earlier gestational age compared to either without fibroids (37.5 ± 3 weeks *versus* 39.3 ± 1.5 weeks) or with a single fibroid ones (6).

In addition, multiple fibroids are associated with preterm labour threat (7).

Uterine fibroids might decrease uterine contractions, or cause mechanical obstruction that restricts space, limiting fetal movement. Some Authors report an increased risk of CS owing to uterine leiomyoma, particularly when they are huge (6, 10).

Several Authors highlight the increase of surgical time when CS is associated with removal of several fibroids (4, 5, 8).

Regarding neonatal outcome, there is no statistically significant difference in birth weight and rate of admission at Neonatal Intensive Care Units (NICU), but newborns of woman with uterine fibroids are more hospitalized, probably because of prematurity (1, 6, 7).

A myoma larger than 10 cm has been correlated with fetal mechanical malformations, due to compression, among them limb reduction, caudal dysplasia, head deformation and congenital torticollis (11, 12).

In our report the newborn had an Apgar score of 9/10 and no malformations were found.

Removal of large fibroid did not result an increased maternal morbidity compared with woman who did not carry out CM (5).

Although many gynecological diseases including myomectomy are nowadays carried out laparoscopically, in this case the laparotomic incision for CM and other ancillary interventions is obvious (13-34).

The possible long-term benefits of CM include symptom and quality of life improvement, risk and cost elimination of repeated surgery and anaesthesia (5, 9).

Conclusions

The published case offers to consider the following points:

1. Fibroid site
2. Gestational age
3. Risks and benefits of this additional procedure.

Concerning fibroid site, we may observe that peduncled fibroids can have torsion and give acute abdomen; furthermore myomectomy isn't risky. The subserous is easy to be removed for their outer localization, whereas the intramural and submucous ones offer a more difficult surgery and, when uterine cavity is opened, increase the jeopardy of infection.

With the age, during fertile phase of life, uterine fibroids tend to arise. In addition, they gain size for hormonal stimulation during pregnancy, reaching their climax at term. The larger they get, the riskier the postoperative course becomes owing to hypocontractility, when fibroids are left in site.

Finally, intracesarean myomectomy gives both psychological and physical advantages. Regarding psychological aspects, patient is satisfied because also another pathologic condition has been removed. As for as clinical aspects, because myomectomy causes a reduction of uterine volume, it allows valid post-cesarean contractions that are useful for avoiding metrorrhagia. Anyway, CM remains a challenging procedure.

Blood loss due to the additive operation is not to be underevaluated. A balance between risks and benefits must be done previously and it is the right key of a successful surgery.

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