

RECONSTRUCTIVE-PLASTIC OPERATIONS ON UTERUS WITHIN THE FERTILITY RECOVERY PROBLEM

The paper deals with the problem of recovery of fertility with young women with hysteromyoma. For choosing the method of conservative myomectomy, it is justified the reasonability of division of patients into groups, according to the degree of surgical complexity for carrying out an operation and the possibility of subsequent pregnancy: low, medium and high. The prospective research was done with 83 patients of high complexity with sterility and noncarrying of pregnancy caused with semeiotic hysteromyoma, who had conservative myomectomy done in the traditional open way. As a result of the carried out operation, the fertility has been recovered with 35 (42.2%) females out of 83, by now. At that, 25 pregnant females were able to bear at full term. 4 females aborted at terms of gestation of 8-26 weeks, while the rest of 6 fell out of monitoring. Recurrent tumor has been noted in 2 (2.4%) cases, among those in 1 case (1.2%) it was established the rapid growth of multiple myomatous nodes.

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Introduction

Hysteromyoma (HM) is the most common kind of tumor in the female genital sphere requiring operative intervention. Many researchers point to a considerable increase of the share of young females among the patients with hysteromyoma (e.g., Burlev and Pavlovich, 2004; Vikhlyeva, 2004; Broder and Bovone, 2002). While it is universally recognized that HM is the cause of approximately 2-3% of cases of sterility, the mechanisms underlying the impairment of reproductive function including miscarriages at early pregnancy are still little investigated (Khaund and Lumsden, 2008). That way, Klatsky et al. (2008) do not treat intramural myoma as the factor that causes sterility, but consider that the myoma with such localization is the cause of the higher rate of miscarriages.

The trigger mechanisms initiating the growth of the myomatous nodes are still unknown, but the role of steroid regulation is not disputed. The conception, however, of mainly estrogenic regulation of dependence of the hysteromyoma's growth is revised at present. Not only estrogens, but also progesterone as well as receptors of steroid hormones play a certain role in the regulation of the hysteromyoma's growth (Shimomura et al., 1998). According to the level of their proliferative activity, the myomatous nodes are divided into simple and proliferous (Sidorova et al., 2002). It has been established the differences in accumulation of the factors of growth in the normal miometrium, also in simple and proliferous myoma (Sidorova et al., 2004). As the process of the myoma's growth includes a number of factors of growth, they are supposed to have relation to the pathogenesis of the myoma; in particular, a significant role is given to the vascular endothelial factor, one of most important angiogenic factors of growth, that conditions the growth and differentiation of the cells induced with sex steroids (Chang et al., 2010).

Many researchers find connection between the high rate of HM and the low level of reproduction in this or that population. However, the Republic of Uzbekistan being situated in the region with high birthrate, the rate of HM is still increasing in the country. According to the report by our department (for the period of 2001-2011), the rate of medical aid appealability with myoma at the age less than 35 has increased for 11%, and by

females having no children by 6%. At that, half of the patients were at real risk of hysterectomy due to the nature of their pathology. Obviously, with such an outcome, a young woman is getting all the probable consequences conditioned with the hysterectomy syndrome, let alone the lost possibility of childbearing.

The modern treatment strategy for this younger category of patients is purposed for preservation of the genitals (Demina, 2001; Matera et al., 2002), while the surgical way of realization of this direction is becoming more popular. Conservative myomectomy (CM), allowing the possibility of procreation to remain, has gone a complex evolution from being under a ban to getting revived nowadays. For various reasons including those related to administrative bans, introduction of this kind of operation into common practice has been going on very slowly. In the middle of the 20th century, "CM was performed in large hospitals, by single surgeons, and it was not welcomed in either administrative level" (Kulakov and Shmakov, 2001).

The low share of this kind of operation (from 2,2 to 9,8%) is explained again nowadays with the high risk of intra- and postoperative complications, comparing it to the radical surgery (Matera et al., 2002). Some authors suggest 3 major factors restraining the development of CM - that is about the risk of recurrent myoma, multiple small-node myoma, its combination with apparent adenomyosis. According to a number of authors (e.g., Botvin et al., 1997; Vikhlyaeva, 2004) the recurrent tumor occurs in 20-45% of cases. Besides, there is a reasonable opinion (Roux et al., 2011) that nulliparae older than 38 seldom develop pregnancy after CM. Another point is that CM is mostly done to the females with non-realized generative ambitions and it is much more seldom that this kind of intervention is used with young females having children (Kulakov and Shmakov, 2001).

Most experts are of opinion that CM must be based on strict indications and be carried out in highly qualified institutions with a good experience of taking such an operation.

Of course, it comes about the intra-organ hysterosmyoma that causes the essence of the problem. The surface-located, isolated and single subserous myomas have never been a real surgical issue and have not been subject to special discussions. The risk of recurrence, however, stands regardless of myoma's localization. At the same time, there is insufficient information as to what influences more the recurrence: localization of the nodes, their size, number, histotype, combination with diseases of endometrium etc. Another factor restraining the rate of carrying out of CM has to deal with the danger of this kind of intervention, in case of acute trophopathy of myomatous nodes.

At present, the organ-preserving methods are classified as invasive (ultrasonic myolysis, laparoscopic myomectomy, hysteroscopic myomectomy, traditional CM), low-invasive (selective embolization of uterine arteries) and non-invasive (medicamental) (Sidorova et al., 2002). As it is difficult to cover all the aspects of the treatment of HM in one paper, we only can express our negative attitude towards the use of embolization of the uterine arteries and ultrasonic myolysis with younger nulliparae. This statement is not related to any lack of equipment or medicines in our country, but it is based on the wide experience of working as well as comprehensive and critical analysis of the international medical literature dealing with the problem in question.

It has been discussed lately the question of choosing the method for carrying out CM: traditional intervention versus laparoscopic myomectomy. The adherents of both approaches have quite a many arguments in favor of their own position (Jin et al., 2009). However, the analysis of modern sources tells for a greater risk of unreasonable loss of blood during laparoscopic CM, also for the increased danger of hysterorrhexis with further pregnancy in case of CM carried out that way. In neither source available for us have we been able to find any classification or division of the patients needing CM, as to the level of surgical complexity for operation. And such a thing, in our opinion, could lead to more adequate choice of the way of surgical treatment - open or laparoscopic - and help avoiding the significant rate of hysterorrhexis with subsequent pregnancy, which is mentioned by various authors. At the same time, further research is required for final conclusions to be made about comparative effectiveness of various methods of treatment,

as in some works with comparative analysis of laparoscopy and laparotomy (Malzoni et al., 2010) it has been shown the advantage of the former over the open approach: less quantity of blood loss, shorter terms of hospitalization and better fertility figures, while the level of intra- and postoperative complications seems to be same. Jin et al., (2009) and Agdi and Tulandi (2010) are of same opinion, on condition that laparoscopic myomectomy is done by qualified specialists; however, the duration of operation is longer with laparoscopy. Interestingly, the authors mention the stricter requirements for suturing with laparoscopic myomectomy.

Faivre et al. (2010) in the review of the results of hysteroscopic myomectomy points to the lack of information on the effectiveness of the method in the long-run perspective, postoperative commissural processes, wholeness of the cicatrix, and the posterior reproductive function. The authors believe that this method brings the increased risk of pelvic infection in the postoperative period. Nevertheless, they consider it as an alternative to laparotomy or laparoscopy. At the same time, there are data telling that the volume of blood loss, duration of stay in hospital and the rate of complications do not differ significantly, comparing it to hysteroscopic and laparoscopic myomectomy (Yi et al., 2011).

Thus it is obvious that, despite quite a big number of researches done, the relation of myomas to sterility, noncarrying of pregnancy, also the question of effectiveness of the correction through myomectomy needs a deeper study. In this work we have attempted to contribute to advocacy for the position of CM for those cases where the criteria of surgical complexity of the substratum of pathology (the size and number of myomatous nodes, the depth of intramural localization, presence of concomitant adenomyosis, the high risk of massive blood loss and forced hysterectomy) come up to a critical level. This position has no relation to any lack of endoscopic equipment or experience of applying it, and if it is related to the well-known statement that “there is no and will not be a better manipulator than the human’s hand” this is about what has already been mentioned above - the critical level of surgical complexity of pathology and the high risk of the forced hysterectomy with the younger females. If this publication has any other reasons of suitability, this is about our absolute certitude that a treatment of HM must be carefully chosen for each particular patient, with consideration given to the basic factors (age and reproductive function) instead of using this or that method for its own sake.

Material and methods

Over the period of 2001 - 2008, 864 females with HM have been operated at RRCEMA. The national composition of this group reflects roughly the existing ethnic proportion in Uzbekistan: Uzbeks 692 (80.1%), Tatars - 85 (9.8%), Koreans - 51 (5.9%), Russians, Greeks, Kazakhs - 36 (4.2%). The ages of patients ranged between 26-69 (average age of 41.5 ± 2.2). Most common indications for operation were: big size of the myoma - 692 patients (80.1%), intensive menstruations with anemization - 680 (78.7%), rapid growth of the tumor - 217 (25.1%), trophopathy of myoma - 106 (12.3%), dysfunction of adjacent organs - 63 (7.3%).

It has been carried out 570 (65.9%) supravaginal amputations, 211 (24.4%) uterectomies, also 83 (9.6%) CMs. The latter group of females, besides the above mentioned complaints, suffered from infertility and noncarrying of pregnancy caused with hysteromyoma. Those patients made for the main sample for the research done.

The ages ranged from 26-42 (average age being 31.8 ± 2.3). The criteria for selection to this sample for traditional open CM were as to follow: big-node myoma (the diameter of myomatous node more than 6.0 sm), presence of multiple myomatous nodes (two and more), deep localization of myomatous nodes (intramural-subserous, intramural, intramural-submucous), concomitant adenomyosis (diagnosed with ultrasonic scanning), patient’s refusal of taking the hormone releasing agonists, absence of pregnancy in the anamnesis or noncarrying of pregnancy with undetermined other reasons, except hysteromyoma, and concomitant endometriosis. The symptom of bleeding was noted with

45 patients (54.2%); the symptom was of cyclical nature with all patients, while the rhythm of menses was not affected. The symptom of pain was noted with 41 females (49.4%) and only with 12 of that number it was not related to menses coming, while it was caused with the effects of trophopathy of myomatous nodes. The rapid growth of myoma (the increase of the uterus for 5 and more weeks during one year) was noted with 6 patients (7.2%). The ischemia of the nodes (trophopathy), verified with histological study, was established with 12 females (14.5%). Duration of the disease (starting from the moment of diagnosing the myoma) came up to: 2 years with 31 patients (37.3%), 5 years with 32 (38.6%), 8 years with 20 (24.1%).

Almost all the females (70 out of 83) had been using hormonal treatment (Dufaston, Janin, Narkolut) before the operation, without evident effect. Treatment with releasing hormone agonists before the operation had been used by only 5 patients out of 83, the rest of females refused this kind of treatment for various reasons: serious side effects, according to the patient's opinion, economic reasons. Primary sterility was noted with 34 patients (40.9%), secondary sterility with 14 (25.3%), noncarrying of pregnancy with 35 (42.2%) out of 83 patients.

Before the operation, with the purpose of specifying the nature of pathology the scanning had been done with the use of ultrasonic multifunctional scanner B&M Sonolayn Adara equipped with convection transducer with a frequency of 3.5 MHz. The following measurements were performed: size and number of myomatous nodes, level of intramural localization of nodes, definition of the uterus area with nodes, specification of visual signs of adenomyosis. In case of discovering any other pathology in the internal genital organs (except HM and endometriosis) influencing the fertility, this patient was excluded from the sample in question.

For all the 83 patients it was important to have a possibility for childbearing in the future, while the nature of pathology (see Research outcomes) was requiring, in our opinion, to use the open traditional CM. With 22 (26.5%) patients it had been detected the risk of massive blood loss (big nodes, multiple-nodes myoma, concomitant adenomyosis) for the coming operation. Among those patients, with the purpose of reducing the intraoperative bleeding the method of ligation of ascending trunks of the uterus artery on both sides was used for 7 (8.4%) females, while transfusion of autoblood in a volume of 400 ml, which had been prepared 3-4 days before the planned CM, was applied for 15 (18.0 %) patients.

Our working hypothesis and choosing the method of open CM was based on: a) urgent need for achievement of the positive outcome (great desire by the female to have a child); b) high level of surgical complexity for CM; c) great importance of the correct uterus reconstruction (without deformation of the uterine cavity, maximal preservation of the healthy miometrium, avoiding of major coagulatory tissue damage, endometrium in particular) for a favorable prognosis of pregnancy and bearing at full term. Division of the patients with HM needing CM to be done is not accidental. We have introduced those categories into our practice for the reasons of safety, reduction of the rate of complications and achievement of better results in terms of fertility after CM done. In our practice we use 3 categories: low, medium and high. The criteria for such a division were given above. The patients with low and medium level of surgical complexity have laparoscopic CM done, but this topic is for a separate consideration.

Research results

All the 83 patients were done transversal suprapubic laparotomy, conservative myomectomy. General size of the affected uterus ranged from 7-8 weeks till 24th week of pregnancy. Particularities of myomatous growth are presented in Table 1.

In 53 (63.8%) cases hysteromyoma was combined with adenomyosis (40 out of 53), external genital endometriosis of II-IV degree (13 out of 53). With external endometriosis it was done coagulation of endometrioid heterotopia, decollement, enucleation of endometrioid cysts. Only in 2 cases out of 13 it was noted homolateral obstruction of the

Fallopian tube in the ampullar part and the correction was done. In postoperative period, this category of patients took Danaval in a dose of 400 mg a day during next 6 months.

TABLE 1. LEVEL OF POSITION AND THE SIZE OF MYOMATOUS NODES WITH CARRYING OUT OF CONSERVATIVE MYOMECTOMY

Level of position and the size of myomatous nodes	Number of myomatous nodes			Total number of patients(n=83)
	Single (n=51)	2-4 nodes (n=26)	From 4 to 14 nodes (n=6)	
Subserous (pedicle)	4	-	-	4
Intramural	19	9	-	28
Intramural submucous	7	8	5	20
Intramural subserous	11	6	1	18
Intraligamental	6	2	-	13
Isthmus	4	1	-	5
	51	26	6	83
Maximal sizes of myomatous node (cm):				
4-5	9	8	-	17
6-9	16	11	5	32
10-18	26	7	1	34

In 12 (14.5%) cases patients were operated for trophopathy of myomatous nodes. At that, in all cases the histological study had shown presence of ischemia signs and irreversible changes in the myoma's tissues. In 8 cases it was about intramural submucous nodes of a size from 3-6 cm, in 4 cases it was about intraligamentous nodes up to 10-12 cm in diameter. During operation, in 3 cases the perimetrium in the field of external pole was characterized with inflammatory changes and it was covered with a thin fibrin film. The perimetrium of the rest of 9 patients was cyanotic, but without fibrin film, and one could see apparent foci of softening, hemorrhage areas, edema of the myomatous node (pic.1). Neither of 10 cases had suppurative complications of trophopathy of myomatous nodes. Before operation, in all cases noted was a moderate leukocytosis up to 11.0×10^9 ml, also significant shift in leukocytic formula, subfibrillity, irregularity of echo density to echonegative foci in myomatous nodes with ultrasonic study.

Conservative myomectomy was done through transversal section of myometrium with an electrocauter in the projection of greater convexity of the tumor. At that, not only miometrium was cleft, but also the surface part of the tumor that was seized with bullet forceps for external tractions. Carefully, bluntly and sharply, it was done intracapsular enucleation of myomatous nodes with the use of bipolar coagulation hemostasis (pic.2). The formed niche was tried to suture in one layer, only using the interrupted co-opting stitches by Piterburgsky and also with our own method (pic.3), depending on the depth of the niche and of the character of appearing in some cases "excesses" of miometrium's tissue. Resection of those "excesses" was never done. It was used a continuously resolving suture material (vicryl, dexon) on atraumatic needles. At the initial stages of operation all the patients were given intravenously 1.0 g of Ceftriaxon which was also prescribed for postoperative period.

The level of intraoperative blood loss depended on the mass of the removed myomatous nodes and the depth of their localization, it ranged from 150.0 to 700.0 ml, with the average of 340.0 ± 25.0 ml. In 7 (8.4%) cases, with the apparent risk of great intraoperative blood loss, it was applied a double-sided ligation of the ascending branches of the uterine arteries (pic.4). In those cases the average blood loss came up to 200 ml. Plasma transfusion was done with 12 (14.5%) patients out of 83; hemotransfusion

of donor's blood was not used. With 15 patients out of 83 it was used transfusion of autoblood prepared 3-4 days before the planned intervention in the volume 400.0 ml, without any complications.

Early postoperative bleeding was noted in 4 (4.8%) cases, in 1 (1.2%) of them it was necessary to apply relaparotomy, hysterectomy. Besides, it was necessary to do one more hysterectomy as a result of developed intraoperational bleeding. The forced hysterectomy in both cases was conditioned with an apparent large-focus adenomyosis and non-effectiveness of the surgical hemostasis.

There were not noted any pyoinflammatory complications. There were no lethality cases.

Duration of postoperational observation of patients was 1-8 years. Planning of pregnancy was allowed after a 6-month rehabilitation period. Out of 83 operated patients, 11 (13.2%) are on the rehabilitation period at the moment. Among the rest of 71 patients 35 (47.9%) females became pregnant. Among that number, 25 (65%) were able to bear at full term, while with the rest of 10 the pregnancy terminated at early period. All those who had brought at full term were done cesarean section without perinatal complications.

In 2 (2.4%) cases, over the period mentioned, there has been recurrence of myoma that required hysterectomy, and at that 1 female was noted a rapid growth of multiple myomatous nodes.

As mentioned above, the rhythm of menses before operation was not affected with either of 83 patients, despite the fact that 53 (63.8%) females were diagnosed the concomitant for HM endometrioid disease. At that, with 41 females out of 53 the previous out-patient examination had shown the presence of refractory anovulation. After the surgical correction and 6-month treatment with Donoval, the ovulatory cycle, detected with ultrasonic scanning (folliculometry) and basal thermometry (during 2-6 cycles), was seen with 30 patients out of 41.

Discussion

According to most authors, myomectomy brings the necessity of observance of the following conditions when carrying out the operation: 1) selection of a rational incision on the uterus; 2) selection of the suturing material which must be solid, minimally allergenic, and able to align a regular scar; 3) selection of the way of suturing of the formed niche, depending on the depth of localization and the size of the myomatous node (Kulakov and Shmakov, 2001). In our opinion, suturing the formed niche in one layer seems preferable, as this creates a less degree of suture-compression ischemia (comparing it to a multi-layer reconstruction) influencing the forming of a quality cicatrix on the uterus. At that, the level of hemostasis does not get affected. Such a principle of recovery also influences in a less degree on the deformation of the uterine cavity that plays an important role in appearance of pregnancy and its course after CM. At the same time, the practice proves appearance of most various conditions with the restoration of the niche after CM. Therefore, the one-layer restoration must not be an end in itself, and in some cases a multi-layer reconstruction might be the only thing possible.

Opinions differ regarding the safety of carrying out of CM with trophopathy of myomatous node (Landekhovskiy and Strijakov, 1989; Landekhovskiy, 2002; Sidorova, 2003). Some believe that the risk of hemorrhagic, inflammatory, thromboembolic complications goes beyond all the acceptable limits and so it is more reasonable to go for hysterectomy. No author, however, has presented any statistical data on the rate and nature of complications after CM carried out on the background of ischemia of myomatous nodes. Probably, this can be explained with a relatively small number of such interventions, and this fact is noted by most researchers. Undoubtedly, the risk of complications is higher when CM is carried out against the background of ischemia of myomatous nodes, and this risk increases with the degree and duration of ischemia, while it seems to be no place for discussion when it comes about apparent pyoinflammatory changes. In our opinion, the task of specialists is to define the limits of reasonable risk for

this model of pathology. But that would be impossible to do without real surgical work with this category of patients, only restricting oneself to theoretical reasoning. Our experience (even not very large) of carrying out of CM against the background of ischemia of myomatous nodes enables us to look with optimism onto the perspective of this category of patients.

When carrying out CM, we tried to remove a maximal number of nodes from one incision on the uterus. This allows reducing the blood loss and the number of scars on the uterus, also avoiding a significant deformation of the organ (the uterine cavity, in particular).

For a number of known reasons, the question of opening of the cavity of uterus while carrying out CM has always been treated with a particular prejudice. It is obviously better to avoid the opening, but in case it happens, there is no big problem. In this case, the technique of suturing must be submucous, avoiding too big number of sutures, as this enables the accumulated blood to flow off postoperatively to outside through the cavity of uterus. In such a case, hematometra appears very seldom, and the daily ultrasound monitoring enables to handle it timely (in case it comes to appear).

The affirmation about inexpediency of resection of the excesses of miometrium, appearing with removal of large myomatous nodes, came to life long ago when a number of authors (after removal of excesses of the niche's wall) noticed the diminution of uterus after CM, in a long-term period (Botvin et al., 1997). This affirmation got proved in the light of recent fundamental research of morphology of miometrium. At the same time, when wide, with thick walls, flaps of resting myometrium appear, the immersion method of recovery of the niche may deform significantly the cavity of uterus. So we offered and realized in our practice an overlapping method of its recovery. In this technique one part of the excessive flap goes into the cavity of the niche, while the other goes above it. Both flaps are sutured to subjacent tissues independently for better fixation, hemostasis and reparation. Comprehensions related to the fact that one of flap's part comes to lie on the perimetrium of counterlateral flap, turned out to be wrong, as the subsequent observations over the course of pregnancy, also carrying out of cesarean section showed quite a normal retraction of the myometrium layers and reparation of the organ without significant deformation of the uterine wall.

The rate of pregnancies after myomectomy varies from 27% to 73%. In our opinion, this figure is significantly influenced by endometrioid disease that often accompanies HM. We have registered 53 (63.8%) cases of combination of HM and external-internal endometriosis (verified visually and with a histological method). In terms of postoperative therapy, we prefer releasing hormone agonists, and Donoval. Similar course of treatment we prescribed when an apparent adenomyosis was clearly seen with ultrasonic scanning. A number of authors believe that with general volume of the tumor over 600 ml (independently of presence or absence of adenomyosis) it is necessary to use preoperational prescription of releasing hormone agonists, as this decreases the myoma's mass and creates favorable conditions for carrying out of CM (Fujii, 1992). In our opinion, prescription of preparations of this line during postoperational period can be justified also in cases when there is the risk or suspicion of presence of small myomatous nodes that might have been remained unnoticed intraoperatively.

The high rate of endometrioid disease accompanying HM, established by us and by other researchers, brings some changes into our understanding of HM as the cause of infertility. A number of authors also point to that (e.g., Khaund and Lumsden, 2008). Probably because of that, one should agree that HM not accompanied with endometriosis does not condition the infertility in a significant way. In our view, the only exception here is submucous myomas that appear much more seldom than other ways of localization of nodes. At the same time, our research makes us join the opinion by Klatsky et al., (2008) saying that intramural HMs influence significantly the miscarrying of pregnancy.

The rate of myoma recurrence, according to some authors, comes up to 45% (Vikhlyeva, 2004). The high rate, noted by many researchers, was one of reasons for quitting this kind of operation. The study of the process of recurrence, its dependence on various factors,

working out of ways of postoperational treatment, intended for reduction of this figure, is an urgent question at the moment. With an average duration of observance of 4 years, we have seen the recurrence of HM in 2 (2.4%) patients. At that, the originally removed myomatous nodes were of proliferous histotype. As there have been too small number of observations done by today, we only can suppose that this factor might appear to be a prognostic marker of the recurrent HM.

Refusal by the majority of patients to take releasing hormone antagonists preoperationally (despite obvious reasonability of their use) has been one of restricting factors in our research. We are sure that this situation won't stand long and the proper explanatory work among the population will convince many patients that probable absence of menses against the background of the course of treatment is of a temporarily nature. Besides, 6 out of 35 pregnant females fell out of monitoring.

Summary and conclusion

The analysis of near- and long-term outcomes of our research points to the reasonability of division of the patients, needing to have CM done, according to the level of surgical complexity for carrying out an operation. In our view, this allows forming operative notes in a more precise way and avoiding unnecessary traumatization and complications. It seems that in case of forthcoming high surgical complexity it is necessary to go for traditional open CM and not laparoscopic myomectomy. This allows avoiding: a) longer time of operation; b) greater blood loss; c) conversion; d) extensive coagulation necrosis of the uterine tissue; e) probable extensive coagulation injury of endometrium. Besides, it is easier to provide for more reliable adequate sutural reconstruction and the required hemostasis, which are very important factors in aligning a good scar and preventing of hysterorrhexis in consequent pregnancy. All the above can scarcely be thrown into the scale when comparing the advantages of laparoscopic CM for the young females striving for having a child.

Giving up CM for the reasons of high rate of complications (even in most complicated cases including extensive-stage episodes of acute ischemia of myomatous nodes) and probable recurrence of HM, seems to be not well grounded, as it is very seldom that the HM recurrence rate exceeds the time given for realization of fertility, which allows a woman to have at least one child.

Probably, it should be admitted that infertility with the dominant clinical picture of HM is caused to a greater degree by concomitant endometriosis. So when dealing with the question of realization of fertility, this factor should be given a special attention.

We see it that with a proliferous histotype of HM, the time given for postoperative rehabilitation (usually 6 months) should be used for taking the releasing hormone antagonists. For lack of sufficient number of observations, we cannot affirm that this factor (proliferous HM) is of great importance within the mechanism of recurrent HM; however, there exist quite a number of premises for such a presupposition, which might be a good reason for further investigation of the causes of recurrent HM.

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