

The evaluation of myomectomies performed during cesarean section in our clinic

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ABSTRACT

Background: We evaluated the data of patients who had applied myomectomy during cesarean section operation in our clinic between April, 2008 and December, 2010. Objective: In this period, 3689 cesarean sections were done in our clinic, we analyzed their data retrospectively and determined 27 myomectomy cases during cesarean section operation. The age of the patients, the numbers of pregnancy, parities, the rates of abortus, indications of cesarean, pregnancy weeks, residential areas of myoms detected during the cesarean and their size, were recorded. Furthermore, pre-operative and post-operative hemoglobin (Hb) values, differences between hemoglobin values, whether there was bleeding or not, the need of blood transfusion if it occurred, the duration of operation and hospitalization and the pathological diagnoses of myomectomy materials, were examined. **Materials and Methods:** Retrospective study of myomectomies. **Results:** The mean age of patients was 29.6±5.9 (19-42) and mean gestational age was 39.2±1.0(37-42) weeks. The mean size of the fibroids was 5.94±6.29 cm³ (0.96-26.50 cm³). Subserous myoms were the most frequently seen ones (24 of 27 patients=89%) with fundal, corporal localizations in most of the instances. The pre-operative and post-operative values of Hb were 11.8±1.52 (8.6-10.5) and 10.3±2.6 (6.9-13.3) g/dl respectively and the difference was statistically significant ($P<0.001$). Blood transfusion was not necessary in any patient. The mean duration of the operation was found to be 40.7±13.9 (13-60) minutes. **Conclusion:** Myomectomies can be performed safely during cesarean section by experienced obstetricians and gynecologists, and myomectomy performed for fibroids in appropriate localizations does not increase post-operative bleeding or maternal morbidity or mortality.

Key words: Cesarean section, myomectomy, pregnancy

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INTRODUCTION

Leiomyomas are one of the most common benign tumors, 20-30% of the women in reproduction period have these kinds of tumors which causes vaginal bleeding, pelvic pain and infertility. Their risk of transforming to malignant is less than 0.5%. Hysterectomy the most common gynecologic major operation is mostly applied to myomas.¹ Myomas are seen at the rate of 0.05% to 5% during the pregnancy.² Myomas are generally asymptomatic in pregnancy, abortus, early delivery, early membranous rupture, the abnormality of the presentation

and the abnormality of the adhesion of placenta can be seen often in relation with the going of pregnancy.³

MATERIALS AND METHODS

This research contains the cases which occurred in the years between April, 2008 and December, 2010. In these cases, the data of 27 patients who were sent to cesarean due to various indications and who had myomectomy during the cesarean, were examined retrospectively.

The age of the patients, the numbers of pregnancy, parities, the rates of abortus, indications of cesarean, pregnancy weeks, residential areas of myoms detected during the cesarean and their size, were recorded.

Furthermore, pre-operative and post-operative hemoglobin (Hb) values, differences between Hb values, whether there was bleeding or not, the need of blood transfusion if it occurred, the duration of operation and hospitalization and the pathological diagnoses of myomectomy materials, were examined.

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This research was performed retrospectively. Statistical evaluation of the results has been performed by statistical package program (SPSS for Windows version 13.0). Pre-operative and post-operative Hb values have been compared by using Paired *t*-test. The results have been presented as mean ± SD and percentage values.

The Hb levels were measured on ABX-PENTRA-120 autoanalyzer.

Method of myomectomy

In the types of subserosal myoma and intramural myom, a linear insione was done on myom with the help of bisturi or electrocoter and then myom was removed from its capsule by being peeled. The holes left after the peeling myom and its serosa were closed by being sewed with 2/0 or 1/0 numbered absorbable suture materials. In the type of myom with peduncle, they were removed by being cutting off bisturi or electrocoter and after that, the peeling myom and its serosa were closed by being sewed with 2/0 or 1/0 numbered absorbable sutures materials. After the operation, the antibiotic therapy was applied for proflaksia.

RESULTS

Our research contained 27 patients. The demographic features of the patients were shown in Table 1. The average age of the patients was 29.6±5.9 years (19-42). The average week of pregnancy was 39.2±1.0 weeks (37- 42). Gravida rate of the patients was 2.0±0.9 (1-4). Parite rate of the patients was 0.8±0.8 (0-3). Abortus rate of the patients was 0.1±0.3 (0-1).

The most common cause of the cesarean indications was recurrent cesarean with nine patients (33.3%) and acute fetal distres with five patients (18.5%), ongoing travay with five patients (18.5%), narrow pelvis with four patients (14.8%), the abnormal fetus presentation with two patients (7.4%) and elective cesarean with two patients (7.4%). The

cesarean indications of the patients are stated in Table 2.

In our research, the most observed type of myoma was subseroous in 24 of 27 patients (89%) who had myomectomy during the cesarean section, and according to the placement, 70% of the cases were fundus placement, 22.2% of the cases were corpus -placement and 7% of the cases were fundo-corporale placement. When we examined with respect to diameter of the myoma, myoms between 3-8 cm³ were in majority. The placement of myomas, types of the myoma and the sizes of the myoma are shown in Table 3.

The preoperative Hb level was 11.8±1.52 g/dl and post operative Hb level was 10.3±2.6 g/dl and the difference between these two Hb levels were statistically meaningful (*P*<0.001). The average duration of the operation was 40.7±13.9 (min-max: 13-60) minutes. In only one case, the blood transfusion needed because of the fact that the pre operation Hb level was very low (8.64 g/dl). The pre-operative and post-operative Hb levels, the difference of these levels, the need of blood transfusion, whether there is post-operative high temperature or not, the duration of operation and the duration of the hospitalization are stated in Table 4.

In our study, to compare operating time of normal cesaerean section cases, the operation times were meaningfully prolonged for 15-20 minutes in myomectomy during the cesaerean section. To compare estimated blood loss; blood loss is meaningfully increased to 10-15% according to the normal cesaerean section operation. Only in one case blood transfusion was needed because of the pre operative low blood level.

Blood transfusion is needed for the patient which is because of operated myomectomies during the cesaerean. There was no complication seen because of the myomectomies added during the cesaerean section operation, fibroids were not located in the cervical area or on the broad ligament, so we can not say anything about this kind of cases, our cases mostly appropriate placed fundus and

Table 1: The demographic characteristics of the patients

| | |
|---|------------------|
| The age of patient (year)(mean±SD)(min-max) | 29.6±5.9 (19-42) |
| Weeks of pregnancy (week)(mean±SD)(min-max) | 39.2±1.0 (37-42) |
| Number of gravida (mean±SD)(min-max) | 2.0±0.9 (1-4) |
| Number of parite (mean±SD)(min-max) | 0.8±0.8 (0-3) |
| Number of abortus (mean±SD)(min-max) | 0.1±0.3 (0-1) |

Table 2: The indications of cesarean

| Indications of cesarean | Number | Ratio (%) |
|-------------------------|--------|-----------|
| Reccuren cesarean | 9 | 33.3 |
| Akut fetal distres | 5 | 18.5 |
| Ongoing travay | 5 | 18.5 |
| Abnormal pelvic anatomy | 4 | 14.8 |
| Incoming abnormalities | 2 | 7.4 |
| Elective cesarean | 2 | 7.4 |

Table 3: Specialty of myoms

| The type of myoma (%) | The placement of myoms (%) | The measurement of myoms (cm ³) (mean±SD) (min-max) |
|-----------------------|----------------------------|---|
| Fundus 70 | Subseröz 89 | 5.94±6.29 (0.96-26.50) |
| Corpus 23 | Intramural 11 | |
| Fundus+Corpus 7 | | |

Table 4: Hemoglobin values

| | |
|--|---------------------|
| Preoperative Hb (mean±SD) (min-max) | 11.8±1.52 (8.6-1.5) |
| Postoperative Hb (mean±SD) (min-max) | 10.3±2.6 (6.9-13.3) |
| Diference between Hb values (<i>P</i> values) * | 0.008 |
| (<i>P</i> <0.01) | |
| Necessity of blood transfusion | 0.3% |
| Duration of operation (minute) | 40.7±13.9 (13-60) |
| Duration of hospitalization (hour) | 51.5±17.2 (24-96) |

fundo-corporal area in the uterus. We can mostly say that it is appropriate to remove subserosal fibroids that are close to the fundus.

The pathological results of 27 patients were all reported as "leiomyoma" and precancerous or cancerous report was not determined.

DISCUSSION

The most important risk of performing myomectomy during the cesarean section is bleeding. A large number of obstetrician avoid carrying out myomectomy during the cesarean section in view of unstoppable bleeding and the necessity of the hysterectomy.⁴ However, from our point of view, if there is a proper selection of the patients, myomectomy can safely be performed during cesarean section operation.⁵

In the investigation of Burton *et al.* 13 patients were performed myomectomy during the cesarean section, there was only one bleeding patient during the operation.⁶ As for in the research Ortaç *et al.* 22 patients who had myomectomy (the measurement of myoma is above 5 cm) during the cesarean section, bleeding during the operation was not seen and the blood transfusion was not necessary.⁷ In the research of Kaymak *et al.* in which there were 40 cases with myomectomy made during the cesarean section, intra operative-bleeding was witnessed in five patients. But, when they compared their research with control group including 80 patients; with respect to bleeding, preoperative and postoperative Hb levels changed and the necessity of blood transfusion, there was no statistical difference.^{8,9}

Contrary to what was mentioned above, there are more studies which show myomectomy performed during the cesarean section, that lead to serious-unstoppable bleeding which may be ended with hysterectomy.^{10,11} On the other hand, in this study, there was neither any bleeding at all, nor there was any hysterectomy case. In our research, duration of the operation was 40.7±13.9 (13-60) minutes. This duration naturally prolonged because of the fact that myomectomy was performed during the cesarean section.

We found in our research that the duration of the hospitalization was 51.5±17.2 (24-92) hours. This duration was in accordance with the duration of cesarean operation,

at which point performing myomectomy had no increasing effect on the duration of hospitalization.

In our working group, any increasing rate of morbidity and mortality was not detected. However, according to our experiences, the duration of the operation increased generally. Atypia and necrosis was not followed in any of the myomectomy materials.

CONCLUSION

When we evaluated the results of our investigation and the literature knowledge, performing myomectomy during the cesarean operation can be carried out safely by the well-experienced obstetrician and gynecologist. We believe that carrying out myomectomy (in well-placed myomes) during the cesarean operation does not cause rise of serious maternal morbidity and mortality.

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