Conventional surgical management of ectopic pregnancy in remote areas

Gupta Vineeta, Goel Geetika, Gupta Rajni, Bansal Savita, Chaturvedi Jaya

Department of Obstetrics and Gynecology, Himalayan Institute of medical sciences, Dehradun - 248140.

OBJECTIVE(S) : To study the variable clinical presentations and outcome of treatment of ectopic pregnancy by conventional surgery..

METHOD(S) : Fifty-six patients with ectopic pregnancy managed over a period of 6 years by conventional surgical treatment were included in the study. The clinical presentation, diagnostic modalities, and outcome of treatment were recorded and analyzed.

RESULTS : Out of the 56 patients, 3 (5.4%) had unruptured tubal pregnancy, 27 (48%) had ruptured ectopic pregnancy and 26 (46.3%) had chronic ectopic pregnancy. At laparotomy, salpingectomy was done in 21 (37.4%) patients, salpingo-oopherectomy in 26 (46.3%), excision of rudimentary uterine horn in 4 (7.1%), resection and end-to-end anastomosis in 1 (1.8%), and total abdominal hysterectomy in 4 (7.1%). There was no maternal mortality.

CONCLUSION(S) : In spite of the various recent advances in the management of ectopic pregnancy, conventional surgical treatment by laparotomy is still the most widely used modality of treatment in our institution. With appropriate and prompt management, maternal mortality due to ectopic pregnancy can be prevented.

Key words: ectopic pregnancy, conventional surgical management, maternal mortality

Introduction

Although maternal mortality associated with ectopic pregnancy has declined, it still accounts for substantial mortality and morbidity. With the advent of transvaginal sonography and various alternative treatment options, the diagnosis and management of patients with ectopic pregnancy has improved significantly. But these patients are just the tip of the iceberg. Majority of the patients still report to the hospital very late when these modalities are no longer useful. Our hospital is a tertiary level hospital catering to remote hilly areas. We still receive a large number of patients of ectopic pregnancy in poor general health. The present analysis was done to look into the variable clinical presentations and outcome of management of ectopic pregnancy by conventional surgery at our hospital.

Methods

Fifty-six patients of ectopic pregnancy managed over a period of 6 years by conventional surgical treatment were analyzed. All had presented either with massive hemoperitoneum or as chronic ectopic pregnancy. We did not have any patient in whom laparoscopic treatment was feasible. The clinical presentation, diagnostic modalities and outcome of treatment was recorded and analyzed.

Results

Out of the 56 patients, majority (89%) belonged to the age group of 21 to 40 years. Three (5.4%) patients each belonged to less than 20 years and more than 41 years. There were
two unmarried patients. Three patients (5.4%) had unruptured tubal pregnancy, 27 (48%) had ruptured ectopic pregnancy while 26 (46.3%) had chronic ectopic pregnancy. The patients with unruptured tubal pregnancy had presented with tubal abortion and gross hemoperitoneum. Table 1 shows the variable clinical presentations. Ten (17.8%) patients had rare or unusual presentations. There was no ovarian or cervical pregnancy in our series. One interesting observation was that there was history of dilatation and curettage or medical termination of pregnancy recently or in the past in 21 (37.4%) patients. Out of these, eight patients had undergone dilatation and curettage or voluntary termination of pregnancy (MTP) recently for suspected intrauterine pregnancy. In two patients medical abortion was tried without ruling out ectopic pregnancy. There was previous history of ectopic pregnancy in 3 (5.4%) patients. In another 3 (5.4%) patients, there was history of tubal ligation. Six (10.7%) patients had undergone treatment for infertility. There was history of having taken antitubercular treatment for Koch’s abdomen in 3 (5.4%) patients. To confirm the diagnosis, sonography was done in 30 (53.7%) patients, urine pregnancy test in 11 (19.6%) and paracentesis or culdocentesis in nine (16%). In some patients, more than one investigation was done. In 10 (17.8%), no investigation was carried out and the patients were directly taken for laparotomy without wasting precious time.

Table 1. Variable clinical presentations (n=56)

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Number</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Tubal pregnancy</td>
<td>46</td>
<td>82.1</td>
</tr>
<tr>
<td>Interstitial pregnancy</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>Rudimentary horn pregnancy</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td>Cornual pregnancy</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>Heterotopic pregnancy</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Isthmic rupture and broad ligament hematoma</td>
<td>1</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Table 2. Definitive surgery done (n=56).

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salpingectomy</td>
<td>21</td>
<td>37.5</td>
</tr>
<tr>
<td>Salpingo-oopherectomy</td>
<td>26</td>
<td>46.3</td>
</tr>
<tr>
<td>Excision of rudimentary horn</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td>Resection and end-to-end anastomosis</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Total abdominal hysterectomy</td>
<td>4</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Appropriate supportive care and blood transfusion were given to all patients as per their requirement. Various definitive surgical treatments carried out at laparotomy were given in Table 2. The patient who underwent resection and end-to-end anastomosis subsequently conceived and had two full term normal deliveries. Total hysterectomy was done in one patient each with cornual pregnancy, ruptured rudimentary horn, isthmic rupture with broad ligament hematoma, and ruptured ectopic pregnancy with severe endometriosis. There was no maternal mortality. Six (10.7%) patients had major or minor complications. One patient had burst abdomen, which was successfully repaired. One patient had intestinal obstruction and she had to undergo a repeat laparotomy. Four (7.1%) patients had minor wound infection. All the patients were discharged in satisfactory condition with a hemoglobin level of more than 9 g/dL.

Discussion

There has been a significant rise in the incidence of ectopic pregnancy from 3-4 per 1000 reported earlier to almost 16 per 1000 pregnancies 1. This could be because of better diagnostic modalities currently available. Serum hCG measurements and transvaginal ultrasonography have been found to be the best techniques in the diagnosis of ectopic pregnancy and in the prediction of the status of the ectopic pregnancy 2. But even transvaginal sonographic diagnosis of ectopic pregnancy is not without pitfalls. Parvey and Maklad3 reported that out of 40 patients, difficulties were encountered with the accurate demonstration of ectopic pregnancy in 21 (52.5%). Recently, there has been a major shift in the management of ectopic pregnancy from radical towards conservative treatment, be it surgical or medical. In fact, laparoscopic treatment of ectopic pregnancy reported for the first time was conservative 4. It was later on that Dubuisson et al 5 proposed salpingectomy via laparoscopy. It was still later that medical treatment for ectopic pregnancy proved that conservative treatment was possible without surgery 6. Conservative laparoscopic treatment of ectopic pregnancy is considered to be the gold standard treatment by many and a strong movement to bring back salpingectomy seems irrational to them. But conservative medical treatment and laparoscopic treatment have their own limitations and drawbacks, and are not feasible nor very popular in patients from remote areas belonging to lower socio-economic status. The main concerns are the operability, risk of failure, desire for pregnancy, and the risk of a recurrence of ectopic pregnancy 4. Laparoscopic and conservative treatment cannot be carried out in cases of severe hemorrhage with shock, large hematoceles difficult to evacuate, presence of dense adhesions, gross obesity, and cornual pregnancy 7. Our patients did not fulfill the criteria of laparoscopic or conservative medical management. Conservative treatment
by laparoscopy fails more often and despite precautions the failure rate has not dropped significantly. If there is no desire for pregnancy, then conservative treatment hardly has any role and radical treatment by salpingectomy along with contralateral sterilization is indicated. Salpingo-oopherectomy was done in 26 (46.3%) patients in our series. This is because we had a large number of patients with chronic ectopic pregnancy with dense adhesions.

The main argument in favour of radical treatment is to limit the risk of recurrence of ectopic pregnancy. Secondly, time and resources are not wasted in subsequent follow-up as is required after conservative management. Moreover, there may be two major problems arising during conservative surgery: bleeding from the implantation site and bleeding at the salpingostomy incision site. Another potentially serious complication of conservative management of ectopic pregnancy is persistent trophoblastic disease. Patients with persistent trophoblastic disease incur a risk of tubal rupture and hemorrhage similar to untreated patients. The incidence of persistent trophoblastic disease after conservative laparoscopic management of ectopic pregnancy is 3-21%. Persistent ectopic pregnancy is more likely after laparoscopic salpingostomy than after salpingostomy at laparotomy for intact ampullary ectopic pregnancy. Hemorrhage may also complicate patients undergoing conservative medical treatment of unruptured ectopic pregnancy. Abbot and Abbot reported a case of hypotension caused by hemorrhage in a patient receiving systemic methotrexate to treat a known ectopic pregnancy. Ideally this treatment should be carried out in hospitalized patients.

In our series, we had 48% patients with ruptured ectopic pregnancy, 46.3% had chronic ectopic pregnancy and in only 5.4% unruptured ectopic pregnancy was seen. In India even in the best of centers with highly aware population, we can not hope to match the results of Cacciatore who reported that of the 120 proven tubal ectopic pregnancies, 114 (95%) were unruptured and 6 (5%) were ruptured.

Conclusion

Conventional radical surgical management by laparotomy is the treatment of choice and need of the hour in remote areas where facilities for and awareness of early diagnosis are lacking, and the population is poor and illiterate.

References