

Clinical Analysis

The Clinical Analysis of 9 Cases of Persistent Ectopic Pregnancy after Laparoscopic Salpingectomy

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Abstract

Aim: To investigate the prevention and treatment of persistent ectopic pregnancy (PEP) after the laparoscopic salpingectomy.

Methods: A retrospective analysis was conducted on 2012 cases that were treated by laparoscopic salpingectomy for ectopic pregnancy in our hospital between January 2005 and January 2015. Nine cases had PEP, accounting for 0.44%.

Results: The level of preoperative serum beta human chorionic gonadotropin (β -hCG) generally was relatively high in them, the villi tissue of them was typical, the abortion type was relatively common in PEP patients. They usually had a history of pelvic adhesions or related.

Conclusions: PEP may still occur in patients after salpingectomy. Postoperative follow-up should be given attention. For patients with high-risk factors need more attention. Expectation treatment is feasible for some patients.

Keywords: Persistent Ectopic Pregnancy; Clinical Analysis

Introduction

Tubal pregnancy is one of the most common gynecologic acute abdominal pain. The doctor make a decision to surgery or not needs according to patients' fertility circumstance, vital signs, self-conscious symptom, size of accessory mass, serum β -hCG levels, amount of intraperitoneal hemorrhage. Laparoscopic surgery is the gold standard for the diagnosis of ectopic preg-

nancy. Along with conservative surgery of ectopic pregnancy is extensively developed, as its complications PEP is also increased. But the PEP risk is uncommon in patients after salpingectomy, so often ignored by patients and clinicians.

In this paper, the clinical data of 9 cases of PEP patients after laparoscopic salpingectomy was retrospective analyzed, in order to discuss its causes and prevention methods.

Materials and Methods

Study object

2012 cases were treated by laparoscopic salpingectomy for ectopic pregnancy in our hospital between January 2005 and January 2015. Nine cases had PEP, accounting for 0.44% (9/2012). 2003 cases did not happen. All cases were diagnosed according to the postoperative pathologic diagnosis. The clinical data of 9 patients were detailed analyzed.

Patients were in the age of 23 to 38 years old, the average age was 28, there were 7 cases had a history of uterine cavity operation, a history of abdominal surgery in 3 patients, a history of infertility in 1 patient, a history of pelvic inflammatory disease, pelvic adhesion in 5 cases were confirmed intraoperative, serum β -hCG preoperative 24 hours was 2380-10204 mIU/ml; the mean was 5836 mIU/ml, there were 7 cases more than 3000 mIU/ml. 5 cases of tubal abortion type, 1 case of rupture type. 2 cases of spondylolysis pregnancy, 1 case of interstitial pregnancy. In 6 patients with typical villi tissue, but two cases of villi dispersion was fragile. First review of the serum β -hCG was postoperation 3 days, drop rate was 83.16-93.95%, the mean 90.11%. Four patients was diagnosed of PEP in postoperative 4 weeks, 3 cases was 5 weeks after operation, 1 case was six weeks. 1 case had lost to follow-up postoperative and was diagnosed after three weeks because severe abdominal cavity hemorrhage and abdominal pain.

Operation method

All cases adopted television laparoscopic system, CO₂ abdominal pressure setting was 11 mmHg, general anesthesia, operator was attending physician or above, fallopian tube was coagulated and cut by a bipolar (PK knife) near the esosalpinx, the fallopian tube was taken out by fetch spoon through 10 mm Trocar. When interstitial pregnancy, fallopian tube was coagulated and cut till root, then purse string suture the base of pregnancy bag piece, linear cut cornual mass and to capture contents and then coagulated local wound, injected MTX 20 mg, suture wounds of the uterus with 1-0 absorption line, Clean up hemoperitoneum. Rinsed repeatedly by 5% glucose until water was clean.

Postoperative monitoring method

Review serum β -hCG on the third day after operation, if it fell by less than 50% compared with the preoperative serum β -hCG within 24 hours, once every 3 days to check; if more than 50%, once a week to review. If it didn't fall or rise for consecutive, PEP was diagnosed. The diagnosis standard of PEP [1]: serum β -hCG does not drop after salpingectomy, drops less than 20% or recurrence of abdominal cavity hemorrhage. In this article 9 cases of PEP, the reduction of serum β -hCG was greater than 50% of it operation.

Results

After clear diagnosis in above 9 patients, 1 patient with abdominal cavity hemorrhage, severe abdominal pain had laparoscopic surgical exploration again, but not found lesions intraoperative, abdominal pelvic was adequate cleaned and aspirated and intramuscular injection MTX at the same time and cured at last. 6 patients were healed through rest, hemostatic, intramuscular injection MTX (50 mg/m²). 2 patients with less than 100 mIU/ml of serum β -HCG value were given expectation and cured.

Discuss

PEP is often occur after conservative surgery in the tubal pregnancy, incidence rate is as high as 20% [2-3]. The remaining trophoblastic cells continue to grow and result in clinical symptoms. Its clinical manifestations includes postoperative abdominal pain, vaginal bleeding, abdominal cavity bleeding again, pelvic mass, stagnation of serum β -hCG drops or rise after falling. It happened 1 to 4 weeks after surgery in general [4]. The removal of pregnancy lesions and fallopian tube when tubal excision is equivalent to tubal radical surgery, the risk of PEP is easy to be ignored by clinical doctors or patients. PEP was diagnosed in the majority of patients until they had the abdominal pain or vaginal bleeding due to no regular monitoring of drop situation of postoperative serum β -hCG, without very good guidance for patients. Clinical reports have increased [5-8]. Research suggests that the routine surveillance of change of serum β -hCG after salpingectomy is contribute to early diagnosis of PEP. Because of the pregnancy tissue completely or mostly removed, in the early postoperative serum β -hCG will decline rapidly in general, it is mainly affected by the level of preoperative serum β -hCG, don't represent activity of sertoli cell. 3 days after operation, the drop of serum β -hCG was more than 50% in 9 cases of patients in this article, so the advanced β -hCG level has a guiding significance for the forecast of PEP. But this article does not agree with the literature reported⁷. It may need further long-term and large sample of clinical observation.

In this article 9 patients had different degrees of abdominal cavity hemorrhage associated with abdominal pain. One case with intraperitoneal hemorrhage more than 500 ml had reoperation. Causes of 9 cases PEP were retrospectively analyzed, among them 7 patients with a history of abortion, case with a history of infertility, 5 patients with pelvic adhesions, 8 cases with greater than 3000 mIU/ml in preoperative blood β -hCG, pregnancy location of 4 cases was close to the uterus, 2 cases with a history of pelvic infection disease, 6 cases tubal pregnancy abortion or rupture, the reason of the PEP may as follows:

1. Embryonic activity is stronger, it is easy to grow again after villi tissue residues.

2. All kinds of causes of pelvic adhesions increase the risk that the falling nap is not completely cleared.

3. When implantation sites closed to the uterus lift and clamp tubal may cause pregnancy tissue to transfer into corner of the uterus, the villus tissue of interstitial pregnancy may be partly remained in local muscle layer.

4. Operator has insufficient clinical experience.

5. When tubal pregnancy abortion or rupture occurred, a small amount of villi tissue may grow with blood flow out.

6. If pregnancy organization is not typical, intramuscular injection MTX must be taken into account intraoperative and postoperative.

7. Avoiding trocar tip accidentally back into the subcutaneous, resulted villi planting into subcutaneous tissue.

8. Blood β -hCG should review as early as possible post-operation, if you found it slow down, stop, rebound on high, you should alert to PEP, take positive measures to treat it.

Because of its minimally invasive, shorter operation time and quicker recovery of general situation, laparoscopic surgery almost replaced the laparotomy in the treatment of ectopic pregnancy. but if it is used improperly, the occurrence of PEP will increase. How to avoid, we can try to take into account the following aspects:

1. Entering the abdomen, don't hurry to adjust patient to trendelenburg, instead of quickly removing most of the pelvic hemorrhage and then readjust position in order to avoid the residual trophoblast cells flowing into the upper abdomen with blood and planted.
2. Clamping fallopian tube mesosalpinx or umbrella should try to avoid squeezing pregnancy lesions, causing displacement of trophoblast cells. During clamping pregnancy samples, it is necessary to track the camera in order to avoid villi tissue falling off abdominal cavity, if the organization falled off and must be removed in time. Every time the fetch pliers through the trocar, operator should pay attention to whether there is organization falling off. The trocar valves above lacuna part shall be checked, avoid the residual tissue entering the abdominal cavity again.
3. For patients with pelvic adhesion to release the conglutination is necessary, especially need to pay attention to thoroughly clean up the hemorrhage located within the adhesive belt and pelvic coagulate blood clots. Because it may contain pregnancy tissue and not easy to be absorbed.
4. For interstitial pregnancy, cutting palace angle part can remove tissue after suction, flushing, electric coagulation local pregnancy parts. When necessary, cornual may local injection of MTX.
5. For the typical fluff, but fragile and easily dispersed, it is easy to fall off, surgeon must pay attention to suck out off the fluff in a timely manner. Applying fetch bag may be another choice.

PEP once diagnosed, most literatures adopt MTX treatment [5-8]. Because of its β -hCG value is relatively low in general, early diagnosis will be done if the routine surveillance will be done, Without an obvious internal bleeding, and the patient may be given MTX. We should careful to choose to surgery for the patients with obvious hemorrhage, because intraoperative bleeding part may hard to determine occasionally and increase operation difficulty. The only surgery case in this article, intraoperative bleeding place was not found, but fortunately it was healed after washing and drainage, the reason may be remnants of pregnancy apart from implantation site and lost activity after washed and other processing or sucked out, at last patient had to rely on their own blood coagulation mechanism and hemostasis. Also in this paper, expectation treatment was applied to the two cases PEP with lower blood β -hCG, the result was satisfactory. It give us confidence to cure the PEP patients with lower blood β -hCG by expectation treatment.

In a word, the PEP is seen mostly when fallopian tube was retained, for those cases of resection of fallopian tube, the blood β -hCG should be regular monitored, especially for those high-risk patients, it is necessary to appropriately increase frequency of review, the cutting and coagulation of fallopian tube cannot be perfectly synchronized with the removing of specimens in laparoscopic surgery, we should pay attention to the risk of specimens residual in the process. For the PEP patients who need surgery, which we can't find lesions should be foreseed. So if the condition allows, conservative treatment is preferred. expectation treatment can be applied to those with lower β -hCG and without other obvious discomfort.

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