

Hysteroscopic Endometrial Resection : A Case Report

Tanit Habanananda MB., BS, FRCOG,
Yaowaluk Rapeepattana MD.

Department of Obstetrics and Gynaecology, Samitivej Hospital, Bangkok 10110, Thailand.

Abstract : *Dysfunctional uterine bleeding is a gynaecological problem. In cases which are refractory to hormonal therapy, hysterectomy is often performed. However, there are instances when hysterectomy is contraindicated either medically or culturally or patients have no desire to undergo major surgery. For those women, endometrial resection offers an alternative treatment with less trauma, a short recovery phase and reduced uterine bleeding or even amenorrhoea. In this report a case of dysfunctional uterine bleeding was treated by hysteroscopic endometrial resection. Glycine 1.5 % was used as the distention medium and uterine pressure was controlled by Hysteromat (Storz). A valleylab Force 2 was used with a blend of 100 watts cutting current. The patient was discharged twenty four hours following the procedure. There was no complication and the result was satisfactory. (Thai J Obstet Gynaecol 1994; 6: 101-105.)*

Key Words : hysteroscopy, endometrial resection, resectoscope, dysfunctional uterine bleeding

The management of dysfunctional uterine bleeding that is satisfactory to both the patient and gynaecologist has always been a constant challenge. In cases which are refractory to hormonal therapy, hysterectomy is often performed. However, there are instances when hysterectomy is contraindicated or is undesirable to the patient. Currently hysteroscopy has an important role in these cases both as a diagnostic and therapeutic instrument. We reported a patient who failed to respond to hormonal treatment and did not want

a hysterectomy. Endometrial resection was performed in such a case.

Case report :

A 38 years old, para 1, Thai woman presented with a history of abnormal uterine bleeding. In December 1986 she suffered from a ruptured endometriotic cyst of the right ovary. A laparotomy with right and left ovarian cystectomy were performed. Since 1987 she has also been a known case of breast cancer stage 2. Treatment was a modified

radical mastectomy and a complete course of tamoxifen therapy in July 1990.

The patient has complained of metromenorrhagia since June 1992. Curettage of the uterine cavity was performed in November 1992. The pathological report revealed secretory endometrium. She received a treatment with Provera (medroxyprogesterone acetate) for 7 months. However this medication failed to control the bleeding satisfactorily.

The patient was offered a hysteroscopic endometrial resection treatment and a counselling regarding the advantages and disadvantages of the operation including the operative procedure. Hysteroscopic endometrial resection was planned for March 22nd 1993. She received danazol 200 mg twice daily for two months preoperatively.

Technique of hysteroscopic endometrial resection

In the operating room the patient was placed in lithotomy position. General anesthesia, induced by Fentanyl, Droperidol and Dormicum, with Diprivan (total 600 mg) was administered in titrating dosage. One gram Rocephin was given intravenously at the start of the operation. The hysteroscope, with attached resectoscope, size 24 Fr with roller-ball (instead of cutting loop) was inserted into the uterine cavity after sounding and dilatation of the cervix up to Hegar No. 10. The hysteroscope

was connected to a television monitor and video tape recorder. Glycine 1.5% was used as a distension medium. Intrauterine pressure was set at 100 mmHg. and the suction pump at 100 mmHg, controlling automatically by Hysteromat. The electrosurgical unit (Valleylab, Force 2) was set with a cutting current of 100 watts on blend 1, and a coagulating current of 50 watts.

The endometrial cavity was first inspected and the cornual openings were identified. Destruction of the cornu was performed with the use of the roller-ball, this was extended across the fundus to the opposite cornu (intra ostial area). The roller-ball coagulation device was then changed to the backward cutting angle loop resector device and resection started at the 9 o'clock position, working anti-clockwisely around the cavity. The resected pieces of the endometrium were pushed up to the fundus. It is important to apply a steady pressure with a slow movement of the loop to ensure adequate removal of the endometrium and good hemostasis. The endometrium was resected down to the level just above the internal os. The pieces of endometrium were removed from the cavity with the use of the flushing curette. The resectoscope was re-inserted and the bleeding points were coagulated with the roller-ball. In this case, the duration of the procedure was 2 hours, glycine inflow was 7,200 ml, and the outflow was 6,000 ml. The patient was observed for 24

hours, serum electrolytes were checked two hours following the procedure and were found to be normal. Paracetamol was given to relieve abdominal discomfort. There was no complication. The histological report on the specimen, in aggregate, showed thin and degenerated endometrium and superficial myometrium with adenomyosis.

Results

The patient was followed up at three month and six month intervals. During the first three months the patient had normal menstruation. During the last three months there was very little bleeding (2 pads/day) with a duration of 2 days and a 28 days cycle.

Discussion

For the past one hundred years in the development of hysteroscopy, progressive improvement in light sources, optical systems, distension devices, medium and elaborate electronic equipment have resulted in a wide variety of indications and benefits for its use in clinical gynaecology, including the management of dysfunctional uterine bleeding (DUB). According to a recent study by the New York State Department of Health, about 650,000 hysterectomies are performed in the United States annually. Of these numbers approximately 8-10% are due to abnormal uterine bleeding.⁽¹⁾

Currently abnormal uterine bleeding constitutes the most common indication for conventional hysterectomy, accounting for 22.1-81% of all hysterectomies. The resectoscope is probably the most useful of the last generation of hystero-surgical instruments. It permits major uterine surgery and is rendering obsolete many hysterectomies.⁽²⁾

Nowaday endometrial resection is more effective than curettage, less traumatic than hysterectomy and more rapid. It is less expensive and carrying a lower morbidity than that of laser ablation. Curettage remove only part of the functioning endometrium, but endometrial resection can destroy both the endometrium and the first few millimeters of the myometrium, thereby inhibiting endometrial reformation.

Endometrial resection is recommended for women who are multiparous, who have no desire for further pregnancy and have failed to respond to medical therapy. Pre-operative investigations should be done to fully evaluate hormonal and haematological status.

Pre-operatively the patients should be treated with hormones, either GnRH agonist or danazol for at least 4-6 weeks prior to the operation.⁽³⁾ This is to render the endometrium less vascular and therefore reduce the amount of tissue debris and bleeding that would obscure the view during the procedure. In this case the patient was treated pre operatively with danazol 200 mg twice daily for eight

weeks, as the timing for the operation was postpone according to the patient desire.

The resectoscope, in this case, used high frequency current at a power of 100 watts blended 1 and 50 watts coagulation for endometrial resection. This resulted in effective haemostasis without carbonization, therefore rendering the procedure relatively bloodless.

It is unlikely that all of the endometrium can be resected, especially at the cornual region. Magos had used a forward angled loop for cornual and intra-ostial resection. In this case the roller ball was used instead of the forward angled loop as it was not available. For complete amenorrhoea, the resection should be taken to the upper half of the endo-cervical canal.⁽⁴⁾

Complications from endometrial resection are infrequent. These can include uterine perforation, haemorrhage, dilutional hyponatraemia, infection and subsequent pregnancy. Injury to the adjacent bowel has occurred in a few patients. post-operative haematometra may occur after weeks, months or even years.⁽⁵⁾

The risk of perforation and haemorrhage is likely to occur if the resection is not performed as a step by step procedure with a uniform depth of resection of the myometrium of 2-3 mm. as the optimum. The most likely area for perforation is the cornu as it is relatively thin. It is also important to maintain the correct scopecamera orientation.

Intravasation of the distention fluid medium is one of the major risks ; therefore, to minimize this, the depth of the myometrium resected should not be more than 5-6 mm. Also a prolonged surgical procedure can lead to intravasation of the medium resulting in fluid overload. In this case Glycine 1.5% was used as the distension medium. The amount of outflow fluid was less than the inflow by approximately 1,200 ml. This included leakage and absorption. It is important to record the amount of inflow and outflow fluid. The amount of fluid that leaked from the uterine cavity is difficult to measure. Once the difference reaches 1,000 ml. the operation should be concluded as soon as possible. At over 2,000 ml. the operation must be halted, the electrolytes and urea levels are to be checked and the patient should be observed for signs of pulmonary oedema. Use of Hysteromat appeared to help to reduce the amount of fluid absorbed.

The side effect of increased fluid absorption is pulmonary oedema. Diuretic drugs should be given to reduce intravascular volume and also infusion of hypertonic saline to correct hyponatraemia.

The patient can be discharged on the same day or twenty four hours following the procedure. Post operative analgesia is not usually required.

The results, in terms of satisfactory of reduced uterine bleeding are 90% of cases, with amenorrhoea in 30% and mark reduced bleeding in

40%. A return of dysfunctional bleeding occurs in about 10% of cases. This often happens when the uterus is enlarged (over 10 weeks size) or in case of adenomyosis.^(6,7)

In this case the result was satisfactory. During the first three months the patient experienced normal uterine bleeding and in the following three months the bleeding was reduced to hypomenorrhoea (1-2 days) and the patient was happy with her menstruation.

Summary

We reported a case of a 38 year old Thai woman with dysfunctional uterine bleeding, who failed to respond to hormonal treatment and who was therefore treated by hysteroscopic endometrial resection. There was no complication and the result was satisfactory.

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