Unsuccessful hysteroscopic removal of a large calcified submucous myoma
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Abstract
A thirty-five-year-old infertile woman underwent two trials of hysteroscopic resection of a large calcified submucous myoma. During the first surgery, a resectoscope and an orthopedic rongeru forceps were used. Fifty-one grams of myoma were removed. During the second operation, a pneumatic urological lithotripter (Swiss LithoClast) was used. Only fourteen grams of myoma were removed. Because the remaining myoma was still large and there were no signs of improvement of menorrhagia, the patient went and received an abdominal myomectomy at another hospital. We conclude that a hysteroscopic surgery is unfit for treating a large calcified submucous myoma.

Key Words: hysteroscopy, submucous myoma, calcified myoma

Introduction
While hysteroscopic myomectomy is considered the standard procedure to treat symptomatic submucous myoma\textsuperscript{11}, to our knowledge there has been no report in the English literature of a hysteroscopic removal of a calcified submucous myoma. Calcification with bone formation is a degenerative form of uterine myoma. Here, we report on a woman who underwent hysteroscopic myomectomy of a large calcified submucous myoma twice, but without success.

Case Report
A thirty-five-year-old infertile woman, gravida 1 para 1, was seen for her heavy periods. Her sonographic examination (Figure 1) revealed a 62 x 50 x 52 mm calcified submucous myoma. Subsequent hysteroscopic examination was performed, and a myoma with a 50% protrusion into the uterine cavity was observed. We then scheduled the patient for a resectoscopic myomectomy.

Figure 1 Ultrasound view in transverse section shows a large 62 x 50 x 52 mm calcified myoma in the middle of the uterus.

A piece of laminaria tent (Nippon Laminaria Co., Gifu, Japan) was inserted into the cervical canal the night before the operation to soften and dilate the cervix. Under general anesthesia, hysteroscopic myomectomy was performed with a 27-French resectoscope (Olympus Optical Co., Tokyo, Japan). The 3-liter distending media (3% sorbitol solution; Baxter Co. Singapore) was delivered to the uterine cavity by simple gravity flow from about 100 cm above the patient. To
ensure the patient’s safety, concomitant ultrasonographic monitoring was carried out during the entire procedure. After a part of the myoma was removed, the myoma could not be shaved again. The cutting loop broke when the cutting was forced. Four new cutting loops were used, but all broke as well. We found that the consistency of the myoma was like that of a stone. Even with our Lin myoma grasper (Atom Medical Co., Tokyo, Japan), the myoma could not be destroyed. An orthopedic rongeur forceps (Mizuho Co., Tokyo, Japan), which is used for cutting bones, was then used to tear the myoma directly through the cervix. Only a small amount of myoma could be removed. We finally had to cease the operation because our efforts were futile and the remaining myoma was still very large. The removed submucous myoma weighed 51 grams. The operation lasted 85 minutes, and a fluid deficit of 100 ml was recorded.

After the operation, the patient suffered persisted uterine bleeding. A 22-French Foley balloon catheter (Norta, Beiersdorf, Germany) was introduced into the uterine cavity, and 8 ml of normal saline was injected to provide compression for the bleeding vessels. However, because the bleeding persisted, the external cervical orifice was then closed using a thread suture (Polysorb; United States Surgical Corp., Norwalk, CT), resulting in a satisfactory hemostasis. The intrauterine balloon catheter and the cervical suture were removed the next day. The pathologic diagnosis revealed Leiomyoma with calcification and bone formation with bone marrow.

Six month later, under the patient’s request, the hysteroscopic operation was performed again. Before the operation, a plain KUB that revealed a large calcified myoma (figure 2) was taken. This time we tried to use a pneumatic urological lithotriptor (Swiss LithoClast: Boston Scientific Corporation, Japan)\textsuperscript{3} which can generate shockwaves to destroy the urinary stone. The procedures were the same as those in the previous operation. During the operation, the size of the myoma was 58x52x50 mm measured through an ultrasound. The pneumatic lithotriptor was used to drill the calcified myoma. But this also proved in vain due to the large size of the myoma. Only 14 grams of specimen were removed. No further open surgery was done because of the patient’s request. The operation lasted 55 minutes, and the fluid deficit was 300 ml.

Six month later, the patient underwent abdominal myomectomy at another hospital.

**Discussion**

Submucous myoma frequently cause menorrhagia, metrorrhagia, and sometimes infertility. If the submucous myoma cannot be removed hysteroscopically, it is a good option to perform a laparoscopic operation or laparotomy at the same time. However, our patient refused to receive the subsequent operation that we could not solve her problem.

There are three factors that significantly determine the feasibility of hysteroscopic myomectomy: degree of myoma protrusion into uterine cavity, size, and consistency of the myoma. Using our dissecting technique\textsuperscript{3}, even a submucous myoma with low intrauterine protrusion can be removed completely in one procedure.

It is time consuming if the myoma had to be removed piece by piece because of its hard consistency. In cases of a large myoma, if the consistency is soft, the myoma often can be destroyed and removed by myoma graspers quickly. Because the time for using resectoscopes is shortened, the used amount of irrigation fluid would decrease. As a result, complications of fluid...
overload or hyponatremia can be prevented.

GnRH agonist is used to shrink the myoma before the surgery. However, we feel that the myoma consistency can be increased after this treatment.

Although we knew this was a case of calcified submucous myoma before the first surgery, we still proceeded with the surgery, but to no avail. The lesson we learned is that in the case of a calcified submucous myoma found through ultrasound and hysteroscopy, the next step is to take a plain abdominal X-ray to determine whether the patient should receive hysteroscopic surgery. Also, subsequent examination with MRI (magnetic resonance imaging), which we did not do, is recommended.

A pneumatic urological lithotripter can destroy urinary stone with its shockwaves. We believe that the size of the calcified myoma should be limited to 2cm or smaller.

From our experience, we conclude that conventional hysteroscopic surgery is unfit for treating a large calcified submucous myoma.

References


