One Step Hysteroscopic resection of large submucosal fibroid using hysteroscopic intrauterine morcellation (IUM) technique

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Introduction
Conventional resectoscope and loop resection is the mainstay treatment of menstrual disorder secondary to submucosal fibroid. However, resection of larger fibroids is associated with longer operation time and excessive fluid overload which may cause life threatening conditions. Between 18.2 to 42.9% of cases need a 2nd operation for complete resection (2-steps procedure) (1, 2, 3) to avoid excessive fluid absorption. Hysteroscopic intrauterine morcellator (IUM) is a newer and safer alternative. It is associated with lower operative time and reduced complications from excessive hypotonic fluid absorption as saline is used as distending media instead of glycine (4, 5, 6). According to the American Association Gynecological Laparoscopists (7), procedure should be abandoned when 2500ml of saline deficit is reached while the limit for glycine is 1000ml. Given the shorter operative time and greater fluid deficit allowance, hysteroscopic resection of large fibroid in a one step operation should be more feasible with this technique.

Objectives
We present 3 cases of complete morcellation of a large submucosal fibroid in one step using the IUM technique (MyoSure) under general anaesthetics.

Methodology
Case 1: A 46 year-old lady suffered from menorrhagia due to a 5cm submucosal fibroid with 70% protrusion into the uterine cavity who failed medical treatment. The 5cm fibroid was completely resected by the MyoSure morcellator. Complete morcellation duration was 12 minutes and the entire procedure lasted 40 minutes. Total saline deficit was 556ml. At 3 months follow-up, patient had 2 regular periods.

Case 2 A 40 year-old lady suffered from menorrhagia secondary to a 6cm submucosal fibroid with 70% protrusion into the uterine cavity who failed medical treatment. Using the MyoSure device, completely morcellation duration was 25 minutes and operation
lasted 72 minutes. Saline deficit of 2500ml was reached. At 3 months follow-up, ultrasound showed no residual fibroid and patient had 2 light periods. Case 3 A 64 year-old lady suffers from persistent post-menopausal bleeding due to a large 6cm submucosal fibroid with 70% protrusion. As patient refused hysterectomy, the 6cm fibroid was completely morcellated by the MyoSure IUM technique in 28 minutes and total operation time of 66 minutes. Total saline deficit was 1200ml. At 2 months follow-up, post-menopausal bleeding subsided completely.

**Result**
This case series demonstrated the efficiency and feasibility of the IUM technique for resection of large submucosal fibroid as a one step process.