Background: Removal of endometrial polyps and submucosal fibroids by blind avulsion or excision with resectoscope is associated with risks such as fluid imbalance and uterine perforation. This review describes our centre’s experience with the intrauterine Bigatti shaver (IBS), a new method for resecting these lesions. Methods: All procedures performed between August 2015 and June 2016 were included. Patient demographics and operation details (set-up time, resection time, operative findings and complications) were collected at time of surgery using a standardised form. Results: 21 cases were performed between August 2015 and June 2016 by two senior gynaecologists. The majority (18, 85%) were performed for polyps associated with menstrual abnormalities or subfertility. Mean operating time was 9.6 minutes (range 3-25), average fluid input 1390mls (range 700-3000) and average fluid deficit 145mls (range 50-300). There were no cases of infection, perforation or fluid overload. The IBS blade was bent after resection of an anterior wall polyp in an anteverted uterus. A 3mm grade 1 submucosal fibroid could not be resected as it was too hard in consistency. Conclusions: The constant clear visualisation provided by the continuous flow of fluid enabled fast and complete resection of sizeable polyps with minimal fluid deficit. No serious complications occurred despite this being the initial series performed by both surgeons. Bending of the blade may be avoided by rotating the camera such that the operating channel is situated just next to the lesion. A drainage sock was fashioned out of ribbon gauze and attached to the end of the suction tubing for collection of small polyp fragments. The IBS is a valuable addition to current methods for resection of endometrial polyps. Further study is required to determine its utility for submucosal fibroids, particularly those with a hard consistency.