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HYSTEROSCOPIC SEPTUM RESECTION MECHANICAL VERSES BIPOLAR CUTTING MODE

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ABSTRACT:

The use of bipolar resectoscope for hysteroscopic myomectomy is associated with lesser risk of hyponatremia compared to unipolar resectoscope. Bipolar resectoscopic myomectomy is found to be an effective and safer alternative to unipolar resectoscopy with similar reproductive outcome.

Keywords: fibroids, hysteroscopic myomectomy, hyponatremia

INTRODUCTION:

Submucous fibroids constitute 5–10% of all uterine fibroids. Submucous fibroids are associated with poor reproductive outcomes such as recurrent abortions and preterm births. Infertility has also been linked to submucous myomas. Significantly lower rates of pregnancy were found in patients with submucous fibroids as compared to their infertile counterparts without fibroids.

Prior to the introduction of hysteroscopic resection of myomas by Neuwirth in the 1970s, the methods used to remove submucous myomas were either abdominal myomectomy, vaginal myomectomy, or hysterectomy. These major gynecological procedures are associated with high morbidity. In addition, these procedures may lead to the development of pelvic adhesions and subsequent reduction in fertility, thus challenging the prime indication of the procedure. With the advent of endoscopic surgery during the last two decades, transcervical hysteroscopic resection of intracavitary fibroids is now the treatment of choice for submucous fibroids. Hysteroscopic myomectomy is a brief and easy to perform outpatient endoscopic daycare procedure that offers many advantages such as reduced hospital stay, decreased intraoperative and postoperative morbidity, and increased rate of vaginal delivery.¹

The submucous myoma can be resected out by endoscopic resectoscope with electric loop (unipolar and bipolar) or laser, with no obvious advantage of any one technique over the other. Conventionally, unipolar energy delivered through operating hysteroscopes has been used for these procedures. Excessive absorption of nonphysiological fluids such as glycine, which is used in unipolar systems as distending media, can cause hyponatremia, subsequent cerebral edema, hyperammonemia, hyponatremic

encephalopathy, and rarely death. With the advent of bipolar resectoscope, hysteroscopic procedures have become much safer. Bipolar system uses normal saline as the distension medium, which reduces the risk of the harmful effects related to electrolyte imbalance and fluid overload. Moreover, bipolar electrosurgery system exerts a precise tissue effect, and it has been suggested that electrical injury and intrauterine synechiae formation may be minimized with its use.²

Few studies were conducted comparing unipolar and bipolar resectoscopes for myomectomy in terms of the efficacy and the harmful outcomes related to the procedure. One study showed bipolar resectoscope to improve the fertility outcome after myomectomy. However, to our knowledge, ours may be the first study to compare the two methods in terms of the effect on fertility along with the assessment of their efficacy, safety profile, and postoperative complications in infertile women with submucous myoma.

Uterine septum resection improves obstetrical outcomes. After surgery, the infertility rate was significantly higher in patients with complete uterine septum than in those with a large partial uterine septum, and the pregnancy rate in patients with complete uterine septum was lower than that in the patients with a small partial uterine septum.³

Septate uterus is a congenital anomaly characterized by the persistence of the partition resulting from a defect of fusion of paramesonephric ducts during embryogenesis. Many studies have reported that abnormalities of the uterine septum are associated with reproductive failures, such as miscarriage, recurrent pregnancy loss, and obstetric complications, including recurrent abortions of the first and second trimester, intrauterine growth retardation, and abnormal fetal presentation.⁴

CONCLUSION:

In hysteroscopic polypectomy, the mechanical tissue removal system was significantly faster, achieved a greater success rate for complete polypectomy, and required a shorter learning curve from staff being trained in the management of endometrial polyps when compared with bipolar electrical resection.

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