Clinical Summary:

**Fertility Outcomes After Hysteroscopic Morcellation of Intrauterine Leiomyomas and Polyps**

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*Drs. Chen and Scheiber have previously received remuneration for speaking engagements from Hologic.

**Objectives:** To assess fertility outcomes in infertile women after hysteroscopic morcellation of intrauterine lesions.

**Methods**

**Study Type:** retrospective case series from two US fertility clinics

**Patients – 62 women:**
- Underwent hysteroscopic removal of intrauterine pathology with the MyoSure system

**History of infertility or recurrent pregnancy loss defined as:**
- ≥6 mos infertility <35 yo
- ≥12 mos ≥35
- ≥2 clinical pregnancy losses

**Reasons for infertility:**
- Uterine factor only (8%)
- Male factor (31%)
- Tubal factor (15%)
- History of recurrent abortion (7%)
- Ovarian dysfunction (55%)
- Endometriosis (16%)
- Other (11%)

**Primary outcome:**
- Pregnancies and subsequent live births during follow-up

**Secondary outcome:**
- Mean time to pregnancy
- Age at pregnancy
- Size and number of pathology
- Percent of pathology removed

All morcellation procedures were performed using the MyoSure hysteroscopic tissue removal system (classic device used for all procedures)

This study was funded by Hologic Inc.
Results

- No intra-operative complications occurred

Demographic and baseline clinical info on the 62 women included in the study
- Average age 37.1 y/o
- Reasons for infertility were multivariate: ovarian dysfunction (59%), male factor (31%), endometriosis (16%), uterine factor only (8%)
- 7% with recurrent pregnancy loss.

Pregnancy
- Achieved by 44/62 (71%) of women
- Delivery of healthy infant – 89% of women who became pregnant
- Mean treatment-to-pregnancy interval was 8.4 months

Tissue removed
- 67 intrauterine lesions identified in the 44 women who became pregnant
- Fibroids – 21%; (Type 0 – 74%; Type 1 – 26%)
- Polyps – 70%
- Other (synechiae, RPOCs) - 9%

Mean amount of tissue removed
- Fibroids – 95.8%
- Polyps – 100%

Pregnancy Outcomes

- 71% of women studied became pregnant (44/62)
- 89% delivery of healthy infant in woman studied who became pregnant
Discussion /Talking Points

- Women with infertility often have intrauterine pathology (polyps and fibroids) in addition to other causes such as ovarian dysfunction, endometriosis, etc.

- Removal of intrauterine pathology before assisted reproductive technologies (ART) can improve pregnancy rates and live births.

- MyoSure can be used safely for the purpose of resecting intrauterine pathology and normalizing the cavity prior to ART.

- Pregnancy rates after MyoSure tissue removal in this patient population is consistent with other studies demonstrating intrauterine tissue removal in subfertile patients undergoing ART.

Post-procedure intrauterine adhesions (IUA) can occur which can impair fertility:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Incidence of IUA</th>
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<tbody>
<tr>
<td>Monopolar resecting loop</td>
<td>31%</td>
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<tr>
<td>Bipolar resecting device</td>
<td>7.5%</td>
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<tr>
<td>Cold loop (no energy)</td>
<td>4% “a value closer to what we might expect with hysteroscopic morcellation”</td>
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</tbody>
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Conclusion

In women with infertility or recurrent pregnancy loss with intrauterine pathology, MyoSure hysteroscopic tissue removal for normalization of the cavity supports subsequent conception and live birth.
### Similar Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Results</th>
</tr>
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</table>
| Pérez-Medina T, et al.  
| Varasteh N, et al.  
| Taskin O, et al.  
Role of endometrial suppression on the frequency of intrauterine adhesions after resectoscopic surgery. | Monopolar electrosurgical resection of intrauterine fibroids was 31% at second look hysteroscopy and was 45% in women with multiple fibroids |
| Touboul C, et al.  
Uterine synechiae after bipolar hysteroscopic resection of submucosal myomas in patients with infertility. Fertil Steril 2009; 92:1690-3. | The incidence of intrauterine adhesions after bipolar hysteroscopic resection of fibroids was 7.5%. |
| Mazzon I, et al.  
Does cold loop hysteroscopic myomectomy reduce intrauterine adhesions? A retrospective study. Fertil Steril 2014:294-8. | The incidence of intrauterine adhesions after cold loop hysteroscopic myomectomy was 4.2% |