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F & S \_\_\_\_ style revision

## **Using pneumovaginoscopy to perform the removal of a vaginal fibroid**

### **Running Title: Pneumovaginoscopy for vaginal fibroid**

Maud Allary<sup>1</sup>, Aubert Agostini, M.D.<sup>1</sup>, Lisa Calderon, M.D.<sup>2</sup>, Laura Miquel, M.D.<sup>1</sup>, Patrice Crochet, Ph.D.<sup>1</sup>, Antoine Netter, M.D.<sup>1,3</sup>

<sup>1</sup> *Department of Obstetrics and Gynecology, Assistance Publique Hôpitaux de Marseille, La Conception Hospital, 13005 Marseille, Aix Marseille University, France.*

<sup>2</sup> *Department of Medical Imaging, Assistance Publique Hôpitaux de Marseille, La Timone Hospital, 13005 Marseille, Aix Marseille University, France.*

<sup>3</sup> *Institut Méditerranéen de Biodiversité et d'Écologie marine et continentale (IMBE), Aix Marseille University, CNRS, IRD, Avignon University, Marseille, France.*

### **\*Corresponding author: Antoine Netter, MD**

Department of Gynecology and Obstetrics

AP-HM La Conception

147 bd Baille, 13005 Marseille, France

Tel: +33 6 65 50 16 02

antoine.netter@gmail.com

**Capsule:** Pneumovaginoscopy is a novel technique that can be performed for vaginal pathologies with the same device used for vNOTES. We described the technique and assessed its feasibility.

## **Abstract**

### **Objective**

To describe and assess the feasibility of a novel surgical technique (pneumovaginoscopy) to perform vaginal surgery.

### **Design**

Video of a single surgical procedure.

### **Setting**

A university hospital.

### **Patient(s)**

A forty-two-year-old woman, gravida 2 para 2, presenting with chronic pelvic pain. The vaginal examination revealed a 4-centimeter spherical mass bulging through the posterior vaginal wall. The MRI identified this mass as being either a subserosal pedunculated uterine fibroid (type 7 according to the FIGO classification) or an ectopic fibroid of the posterior vaginal wall (type 8).

### **Intervention(s)**

The whole procedure was performed using pneumovaginoscopy. The GelPOINT V-Path (Applied Medical, Rancho Santa Margarita, California, USA) which is the most often used device to perform transvaginal natural orifice transluminal endoscopic surgery (vNOTES) procedures was introduced into the vagina to create a pneumovagina. Monopolar scissors were used to perform an incision through the posterior vaginal wall in order to reach the fibroid. The myomectomy was performed using traction movements of the fibroid associated with the dissection of the capsule. The absence of a uterine pedicle at the end of the myomectomy was in favor of an ectopic fibroid of the vagina (type 8 of the FIGO classification). The vaginal defect was closed with interrupted sutures using the access points on the Gelpoint.

**Main outcome measure(s)**

The procedure was easily and efficiently performed using the pneumovaginoscopy technique and lasted less than an hour. The patient was discharged on day one and had no post-operative complications. She was symptom-free at her two-month post-operative visit.

**Result(s)**

In comparison to the classical vaginal approach, pneumovaginoscopy improves visualization through targeted lighting and close-up vision. This technique is particularly interesting when the vaginal opening is narrow and for lesions of the upper half of the vagina. Because of the unusual expansion of the vagina, increased caution is needed to avoid bladder or rectal injuries.

**Conclusion(s)**

Pneumovaginoscopy is a novel technique that can be performed for vaginal pathologies with the same device used for vNOTES. We described the technique and assessed its feasibility.

**Keywords**

Vaginal fibroid, vNOTES, vaginal surgery

## Suggested Reading

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