Essure® migrated into endometrial cavity: an unusual ultrasound finding

Migração de Essure® para a cavidade endometrial: um achado ecográfico incomum

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Abstract

The Essure® (Bayer) system was introduced in 2002, as a hysteroscopic sterilization technique, however, serious long-term adverse events raised concern about its use and lead to the discontinuation of the device in 2017. The authors present a report of intrauterine migration from one of the microinsert components in a woman with abnormal uterine bleeding. Transvaginal ultrasound was the key to the diagnosis, finding in the endometrial cavity a hyperechogenic structure with a coiled shape. The hysteroscopic removal of the migrated component conducted to the resolution of the clinical complaints.

Keywords: Hysteroscopic sterilization; Transvaginal ultrasound; Abnormal uterine bleeding.

A 34-years-old woman, gravida 2, para 2, underwent Essure® (Bayer) hysteroscopic sterilization in 2009. The patient had dyslipidemia and venous insufficiency of the lower limbs. In childhood she had surgical history of ventriculoperitoneal shunt due to hydrocephalus. Her menstrual cycles were regular. She reported a normal and uneventful gynecological follow up.

After eleven years, at 45-years-old, she started abnormal uterine bleeding, intermenstrual and heavy menstrual, with no other relevant symptoms. Gynecological examination showed a cervical ectropion; bimanual exam was painless and pelvic masses were not found. Human Papilloma Virus testing was negative for high-risk genotypes.

Transvaginal ultrasound was performed and revealed the presence of a hyperechogenic structure, with a coiled shape, into the endometrial cavity. There was a similar structure in the right uterine horn, but it was absent in the left side (Figure 1). These findings suggested intrauterine migration of the left Essure® microinsert.

Office hysteroscopy was undertaken to remove the intracavitary microinsert component. The procedure was successful despite the limited visualization caused by uterine bleeding (Figure 2), with minimal patient discomfort.

At the 3-month follow-up she was asymptomatic and reported regular menstrual cycles.

Hysteroscopic sterilization with Essure® was performed in Portugal from 2002 to 2017. The system consisted of double nitinol coils, a component of polyethylene terephthalate and stainless steel which were placed in each fallopian tube, by hysteroscopy[1]. The device promoted a local inflammatory response culminating in the development of fibrosis and tubal occlusion through foreign body reaction[2]. Essure® was an effective sterilization method with the advantage of being easily inserted in an office setting, not requiring general anesthesia neither abdominal incisions. It was specially counselled in women with significant comorbidities when other contraceptive methods were contraindicated[1].

Over the years of Essure® use several serious long-term complications have been described, such as, de-

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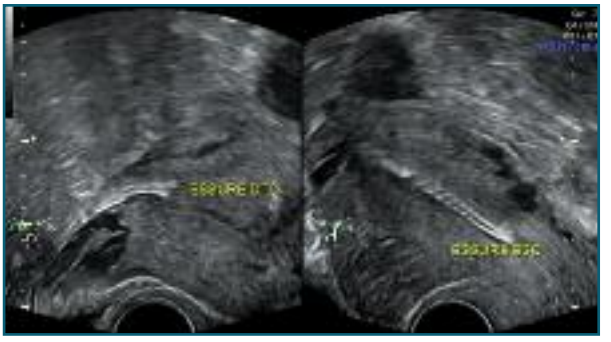

FIGURE 1. Transvaginal ultrasound – right Essure® well positioned (transverse plane of the uterus); Left Essure® in intracavitary position (longitudinal plane of the uterus).

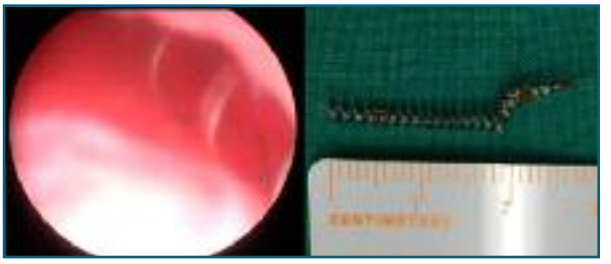

FIGURE 2. Hysteroscopy – Left Essure® in intracavitary position (limited visualization due to uterine hemorrhage). Observe spiral shape.

velopment of nickel allergy (in susceptible individuals due to chronic antigen exposure)[3], migration to the abdominal cavity (after perforation), migration to the uterine cavity and malposition or expulsion[2]. Abdominal pain, pelvic inflammatory disease and abnormal uterine bleeding due to malposition and chronic inflammation are other reported adverse events[3]. Moreover, these occurences are almost always indications for removal of the device[4]. Depending on complications and associated injuries removal of Essure® can be performed by hysteroscopy or laparoscopy[5]. If the first route is feasible, there is still controversy in removing simultaneously the well positioned component of the device. When laparoscopy is an option, two types of procedures are suggested, salpingostomy with removal of the devices or salpingectomy and cornuectomy. In case of failure of less invasive procedures, hysterectomy with bilateral salpingectomy, could be an option[4].

With this report, the authors intent to draw attention to long-term complications of a device still carried by a significant number of women and show the importance of knowing the ultrasound imaging in its normal and abnormal placement.

For the clinical case report patient informed consent was obtained.

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