Resolution of chronic pelvic pain and abnormal uterine bleeding after Essure® surgical removal and laparoscopic sterilization: A case report

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ABSTRACT

Hysteroscopic sterilization with Essure® microinsert is a method of female permanent contraception. Complications of the procedure are malpositioning, unintended pregnancy, abnormal uterine bleeding, and chronic pelvic pain. We report the case of a 44-year-old patient presented to our hospital for chronic pelvic pain and abnormal uterine bleeding. She had 5 years before a hysteroscopic placement of an Essure® device. At hysteroscopy, both devices were removed and a laparoscopic bilateral salpingectomy was performed. The patient reported resolution of chronic pelvic pain and of abnormal uterine bleeding following surgical procedures. Pelvic pain is the main symptom described after Essure® insertion with an incidence of 4.2% regarding persistent pain. The patients should be informed about the risks and benefits of hysteroscopic and laparoscopic sterilization procedures.

Key words: *Essure®, Hysteroscopy, Pain, Contraception*

Hysteroscopic sterilization with Essure® microinsert (Bayer Healthcare Pharmaceuticals, Leverkusen, Germany) is a method of female permanent contraception approved by the United States Food and Drug Association (FDA) in 2002 [1]. It consists of expanding microinsert to place into the corneal section of salpinx during hysteroscopy [2]. Imaging tests are performed after 3 months to assess the correct location of the device [3]. The rate of successful placement ranges from 92 to 96% and the pregnancy rates are near 0.2% [4].

Complications of the procedure are malpositioning, unintended pregnancy, abnormal uterine bleeding, infections, chronic pelvic pain, and some patients subsequently choose to remove the tubal inserts for perceived side effects [5]. We present a case of complete resolution of symptoms after the Essure® surgical removal.

CASE REPORT

A 44-year-old female patient G2P2002 presented to our hospital for chronic pelvic pain and abnormal uterine bleeding for 3 months. In particular, she had persistent and non-cyclic pain in the abdominal hypogastric region, intermenstrual bleeding, and heavy menstrual flow. She was a non-smoker and she had a body mass index (BMI) of 25 kg/m^2. She denied drinking alcohol or using drugs. In the past, she had an appendectomy and the right ovarian cyst removal. She had no medical pathologies. The patient had a hysteroscopic placement of the Essure® device for sterilization in another hospital 5 years before and she tolerated the procedure well. She did not have any history of chlamydia or gonorrhea infection or any history of pelvic inflammatory disease (PID). After 3 months, hysterosalpingogram follow-up in the same hospital confirmed successful tubal occlusion.

Five years after the procedure, the patient presented with lower abdominal pain that began gradually 3 months before hospital access and abnormal uterine bleeding started in the same period. She had no constipation and she had a normal urinary frequency. At the clinical assessment, the patient indicated a visual analog scale (VAS) of 4. Her blood pressure was 130/80 mmHg, pulse was 67/min, respiratory rate was 18/min, body temperature was 36.8°C, and oxygen saturation was 98% on the air. At light and deep palpation of the abdomen, there were no muscular resistance or masses.

Gynecological examination showed no abnormalities, a normal uterus and bilateral ovaries with no free fluid were identified with ultrasound examination. The patient underwent a computed tomography (CT) scan of the abdomen and pelvis and it demonstrated a correct Essure® right device placement but endometrial left device misplacement. Diagnostic hysteroscopy confirmed the radiological images [Figure 1].

After counseling, the patient requested the removal of the Essure® device and tubal sterilization. At hysteroscopy, both Essure® devices were removed and endometrial biopsy was performed. At subsequent laparoscopy, the uterus, fallopian tubes, and ovaries showed no abnormalities and there was no evidence of endometriosis or adhesions. Bilateral salpingectomy was performed. The patient reported complete resolution of chronic pelvic pain and of abnormal uterine bleeding following surgical procedures. The histological examination showed secretory

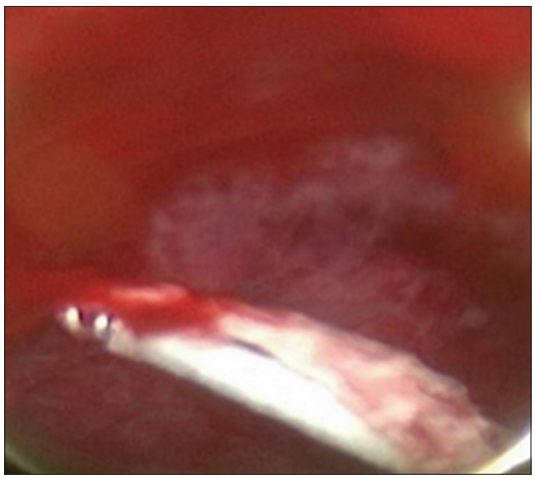

Figure 1: Left device misplacement

endometrium and normal fallopian tubes. At the 3 months post-operative visit, the patient had no more symptoms.

DISCUSSION

Essure® is a minimally invasive option for permanent contraception with high reported rates of patient satisfaction [5]. Some women subsequently choose to have inserts removed for perceived side effects. The most common symptoms are pelvic pain, irregular menstruation, dyspareunia, and spotting [6]. The debut of symptoms varies from immediately after the device insertion to 12 years [7]. Pelvic pain is the main symptom described. This potential side effect has been reported in the literature and can be due to the misplacement of the device [5]. Yunker reported an incidence of 8.1% regarding acute pelvic pain after hysteroscopic sterilization and an incidence of 4.2% regarding persistent pain 3 months or greater after hysteroscopic sterilization [4].

Pain, before the insertion, and a history of fibromyalgia were found the most predictive factors for long-term pain complaints [7]. For this reason, it is necessary to have a complete clinical history of the patient to exclude other potential causes of pain. Perkins demonstrated that the pain rates after Essure® procedure were lower compared with laparoscopic tubal ligation [8]. Regarding alterations in a menstrual pattern following Essure® procedure, Bradley described that 5 years after insertion, the most common complaints were irregular menstruation (14.8%), intermenstrual bleeding (18.8%), heavy menstrual flow (37.5%), and low menstrual flow (23.3%) [9]. In a recent study, most of the alterations in the bleeding pattern improved after device withdrawal, although abnormal bleeding continued to be reported by 23.72% of all cases [7].

For these reasons, some patients after Essure® placement require removal of the device. The removal can be classified into two categories: Hysteroscopic removal and laparoscopic extraction. In our case, we performed hysteroscopic removal and laparoscopic bilateral salpingectomy. Essure® device removal in symptomatic women usually correlates with a resolution of symptoms. Castelo-Branco described that 85.10% of patients had an improvement in symptoms after the removal [7], as in our case, but some studies have stated that a small percentage of patients may still experience pain after removal [10-12]. This consideration can require further investigations in the future.

CONCLUSION

An adequate patient selection and an appropriate pre-operative assessment are required before the insertion of the Essure® device and patients should be informed about the risks and benefits of hysteroscopic and laparoscopic sterilization procedures.

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