Calcium Deposit on Essure® Implants. A rare finding of unknown clinical impact

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Inform consent was obtained to publish this case. The IRB was consulted and deemed the work exempt.

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Essure® was the first hysteroscopic permanent sterilization method approved by the Food and Drug Administration (FDA). Since its approval in 2002, over 1 million devices had been placed. (1) Multiple studies had been published evaluating the effectiveness and safety of the implants (2, 3) as well as the clinical course after removal. (4, 5) Lately, women frequently present with the request for removal of the devices, in some cases due to current complaints and other with the desire to prevent possible future complications.

We present a rare case of a 41 year old para 2 healthy woman who presented to the office requesting Essure® implants removal. Patient had uneventful Essure® insertion, followed by bilateral tubal occlusion confirmation with hysterosalpingogram performed three months after insertion, 4 years ago. She was asymptomatic, other than reporting occasional spotting, but she was advised by a friend that due to possible increased risk of complications with Essure® she should have the implants removed. On diagnostic hysteroscopy, performed because the

complaint of spotting and to evaluate the amount of device located inside the uterine cavity, calcium deposits were noted on bilateral Essure® implants that were visualized at the level of both tubal ostium. (Figures 1-3) Patient requested a different modality of permanent sterilization and underwent uneventful laparoscopic bilateral salpingectomy with Essure® removal. At laparoscopy, both fallopian tubes were of normal appearance, no peritoneal adhesive disease was found.

The clinical significance of calcium deposits on Essure® device has not been established. Maassen et al reported a case of deposits on Essure® that on chemical analysis resulted Calcite. (Calcium Carbonate, CaCO3).(6) Metal corrosion and inflammation had been reported as the possible cause of crystal formation on cupper IUD's. It is unclear if the formation of calcite deposits is the result of a corrosion process in the nitrinol outer coil of Essure®. Further research is required to determine its clinical impact.

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Figure 1
Appreciate the calcium deposit on the Essure® coils on the right fallopian tube

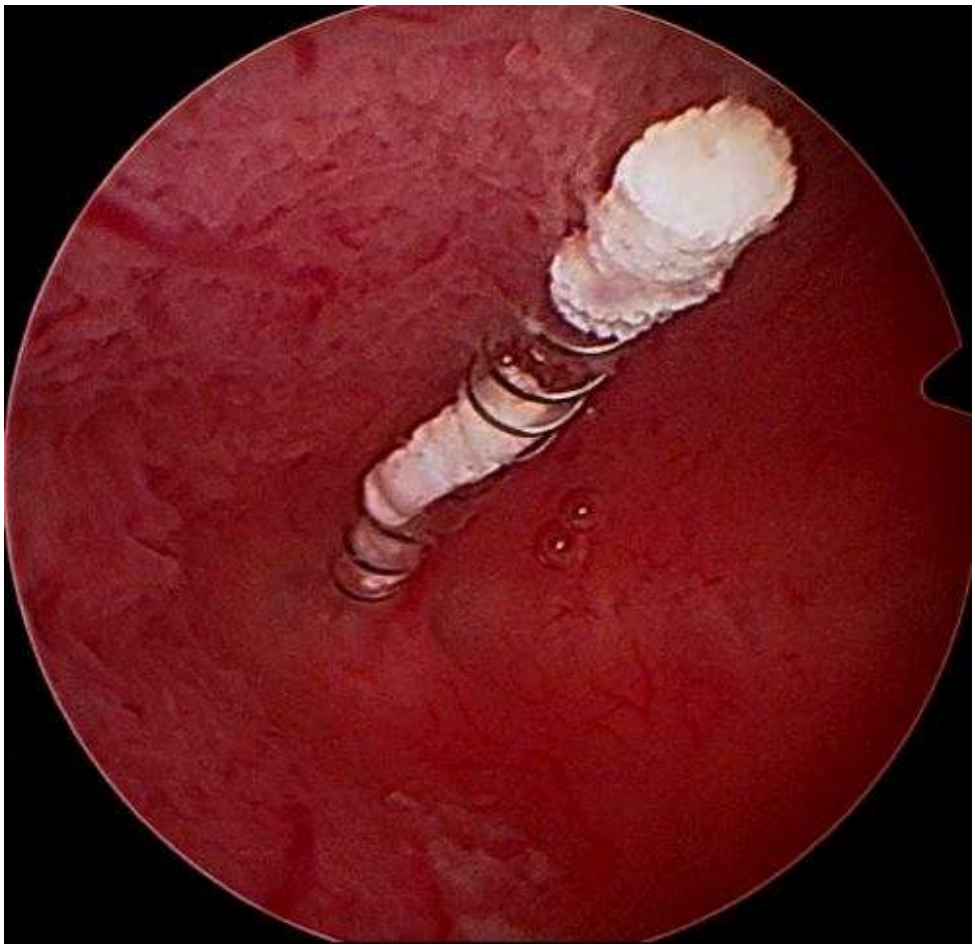

Figure 2 Left fallopian tube Essure® device filled with calcium deposits.

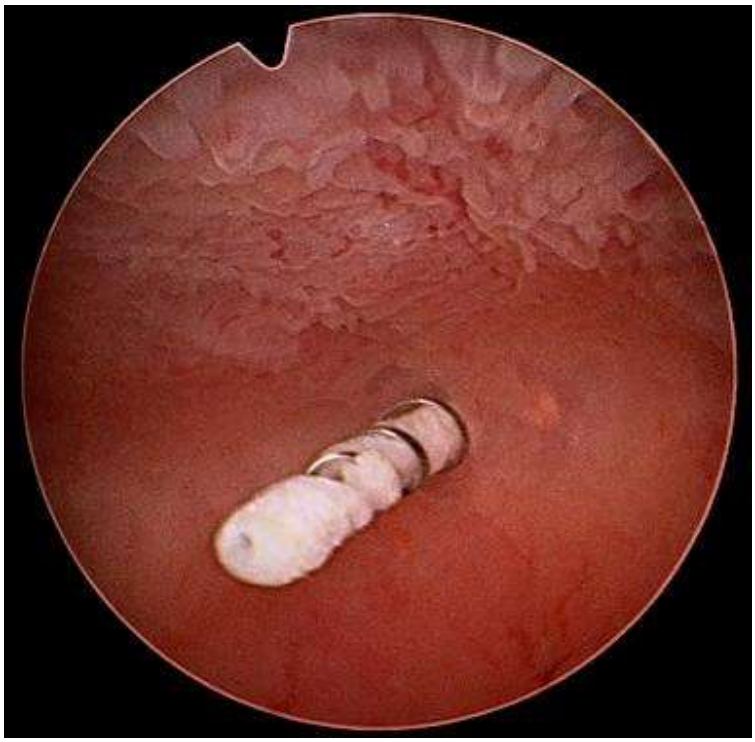

Figure 3
Appreciate the calcium deposits up the entrance of the tubal ostium