A technique for the evaluation of failed fallopian tube ligation with metal clips

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Abstract
The evaluation of fallopian tubes after failed tubal ligation can be difficult because conventional histopathological techniques are unable to section the metal clips when in situ. Once the clips have been removed, any evidence of tube patency is lost. This report describes a technique of embedding and sectioning that enables sections to be made while the metal clips are still in situ. This is a modification of a method first described to embed mineralised bone and involves the use of plastic embedding and a diamond saw. Using this technique, a permanent record is made of the tube location and patency.

Keywords: sterilisation failure; fallopian tubes; contraception

The failure rate for laparoscopic sterilisation using metal clips varies below than 1% and 4.5%. Therefore, the pathologist will occasionally be faced with the problem of evaluating a fallopian tube ligation that has failed and resulted in a pregnancy. The usual procedure is to send both fallopian tubes, often removed at caesarian section, for analysis with the clips still in situ. It is impossible to examine the portions of the tubes within the clips by standard histological methods and, once the clips have been removed, the evidence is largely destroyed.

We describe a technique that enables the clip to be sectioned when still around the tube, thus enabling comment to be made about the exact location and state of the tube lumen. We describe the case of a 31 year old woman sterilised one year previously using Filchie clips. She became pregnant the following year. Both fallopian tubes were removed at caesarian section, for analysis with the portions of the tubes within the clips by standard histological methods and, once the clips have been removed, the evidence is largely destroyed.

Figure 1 shows the right fallopian tube with a Filchie clip around most of the tissue. Unfortunately, an abnormally small tube is located outside the clip. A patent lumen can clearly be seen. The use of plastic embedding has clearly shown the cause of the sterilisation failure.

Conclusions
The use of plastic embedding enables the analysis of the tubes with the metal clip in situ. Comment can be made about the exact location of the tube and the state of its lumen.