Non-traumatic iris retractor

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For round-pupil lens extraction using cryo-techniques, the iris needs to be retracted to expose the upper pole of the lens and also to keep the iris away from the cryo-pencil, to avoid accidental freezing of the iris.

Many types of metallic and plastic iris retractors have been devised (see Bibliography). These have a hook which may be slid under the pupillary margin to draw out the iris, but the disadvantage is that they may rupture the anterior lens capsule. Such retractors are the chief cause of accidental capsule rupture during cryoextraction of the lens.

Rupture may, however, be avoided by using a soft iris retractor. Cellulose sponge, used extensively in eye surgery as an absorbant, serves the purpose (Figure). A dry piece of sponge is compressed and one end is cut to conform to the shape of the pupil. The other end may be held in a mosquito forceps. When applied, this not only retracts the iris, keeping it away from the cryo-pencil, but also keeps the anterior lens surface dry. It thus prevents the pooling of aqueous and secondary adhesions through the crystallized aqueous between the cryo-pencil and the iris.

FIGURE Length of cellulose sponge swab.
Scale in millimetres

The cellulose sponge is non-traumatic, absorbent, disposable, inexpensive, and easily sterilized by autoclaving. Its one disadvantage is that, if it is not compressed firmly enough, it may be bulky, so that it is difficult to apply the cryo-pencil without touching the cornea.

Summary

The use is described of cellulose sponge for non-traumatic iris retraction in cryoextraction of the lens.

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