Cryo- Extraction

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Cryo-extraction of the lens by Krwawicz's method depends on the freezing of the lens on to a cooled probe. Using this method and the iris retractor designed by speaker, rupture of the capsule should become a thing of the past.

Discussion

Hoppenbrouwers: In the Royal Dutch Eye Hospital in Utrecht, we use for cryoextractions the instrument brought on to the market by Trigitromes, Inc., Bridgeport; its working is based upon the Peltier effect.

This instrument has great advantages over other instruments in which a metal probe is cooled with carbon dioxide snow.

The advantages of this instrument are: (1) the probe can be kept at a controlled temperature for an unlimited length of time; (2) this temperature is $\pm -30^{\circ}\text{C}$, which is low enough but not too low; (3) the probe can be thawed rapidly; (4) it is possible to insert the probe before beginning the freezing process.

In spite of this ideal instrument, we consider that cryo-extraction should not become a routine practice, but has special indications.

The disadvantages are: (1) a wide pupil is desirable; (2) very good assistance is needed to keep the eye open; (3) damage to the endothelium may easily result from keeping the eye wide open, and retraction of the iris with a hook always results in much loss of pigment; (4) the firm grip on the lens often causes the pull to be too hard and uncontrolled; (5) an increased tendency to use chymotrypsin, which is certainly not desirable unless specially indicated; (6) the difficulty of learning to use this rather clumsy instrument accurately enough.

I should suggest the following indications for a cryo-extraction: (1) if one wishes to be certain of an intra-capsular lens extraction when the capsule is thin or taut; (2) extraction of a dislocated or partially dislocated lens; (3) extraction of a cataract in which the lens capsule is only slightly ruptured; (4) in complicated lens extractions, e.g. inferior extraction.

In short, cryo-extraction is certainly an asset, but should not be regarded as replacing the old method.

Keiner asks: Is the use of Flieringa's ring essential?

Worst replies: It is not essential, but it is safer, especially in connection with the teaching of surgery.