

Persistence of Indentation with Bioabsorbable Poly-L/D-Lactide vs. Silicone Sponge Scleral Buckling Implants

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Purpose

To measure the amount and duration of indentation depth achieved with biodegradable poly-L/D-lactide 96/4 (PLA96) and silicone sponge implants.

Methods

Thirty rabbits underwent a scleral buckling procedure. A PLA96 buckling implant was used in 15 and a silicone sponge buckling implant in 15 rabbits. A circumferential scleral buckling implant was sutured episclerally on the left eye of each rabbit, just temporal to the superior rectus muscle and 7 mm posterior to the limbus. CT scanning was performed at one week, and three and five months postoperatively.

Results

The PLA96 buckling implant (implant diameter 3–3.5 mm) used in this study created lower indentation than the silicone sponge implant (implant diameter 4 mm), possibly as a result of the surgical technique. The indentation created by the PLA96 implant decreased over time compared with the silicone implant. There were no complications related to either kind of implant.

Conclusion

Both silicone sponge implants and PLA96 implants caused indentation that decreased in a comparable manner over the follow-up period (5 months).

Key words

Bioabsorbable, experimental, polylactide, retinal detachment, scleral buckling

Brief summary statement

An experimental study: bioabsorbable implants made of poly-(L/D)-lactide 96/4 were sutured episclerally in 15 rabbits; in the control group silicone sponge implants were used. The indentation achieved decreased in both groups in a comparable manner over the follow-up period of 5 months. There were no

complications related to either kind of material.