

”Use of the Perfect Capsule with different substances in the 4-week-old rabbit eye”

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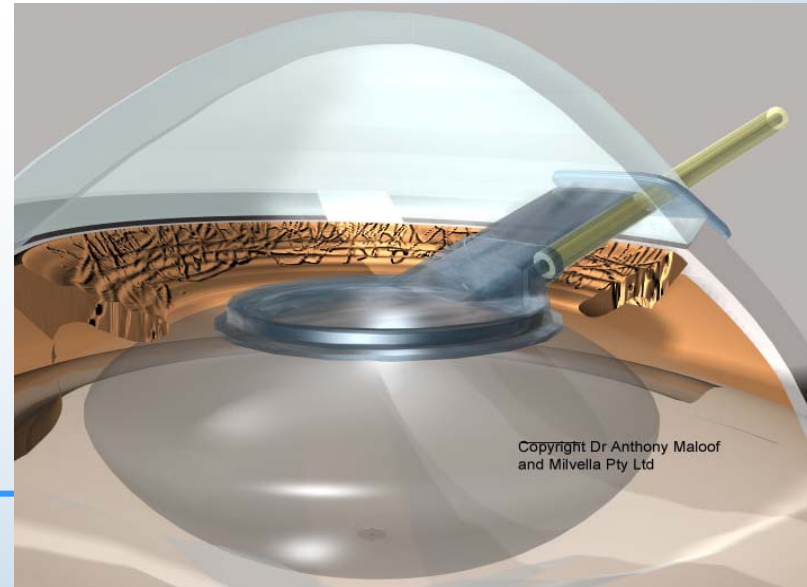
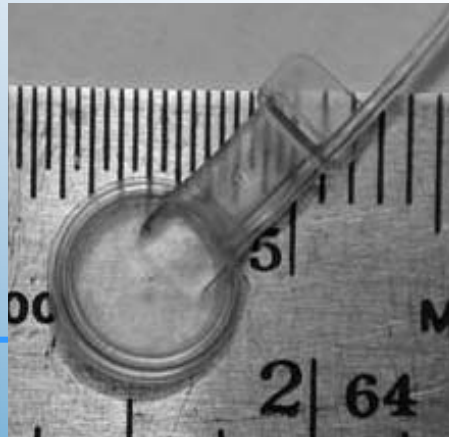
St. Erik’s Eye Hospital

Stockholm, Sweden



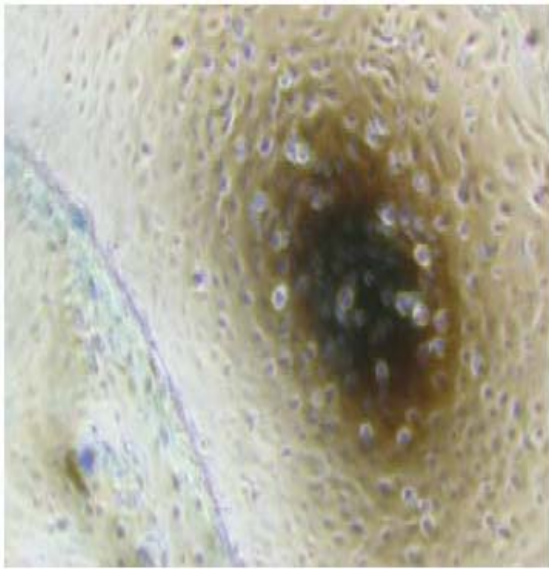
Perfect Capsule

- Silicone device
 - Applied on the anterior capsulorhexis
 - Vacuum
 - Irrigation through a channel
- ➔ Sealed system

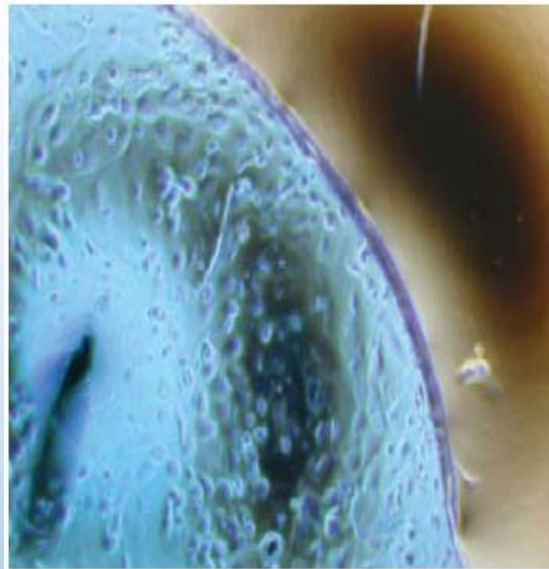


Water → Cell lysis

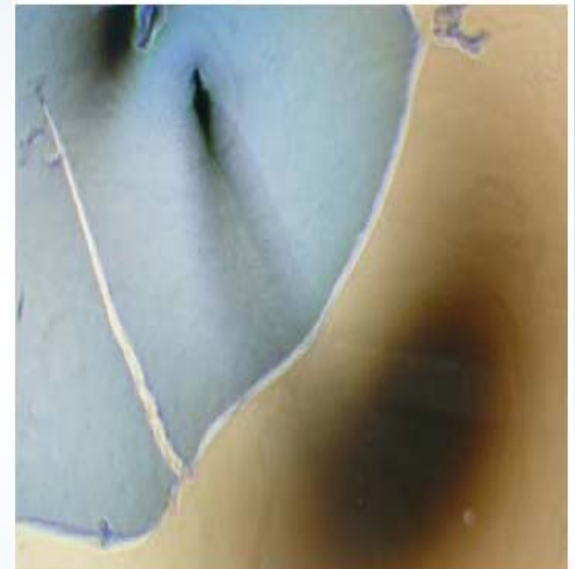
- Deionized distilled water → osmotic lysis because of hypotoni (Crowston et al JCRS 2004)



Control



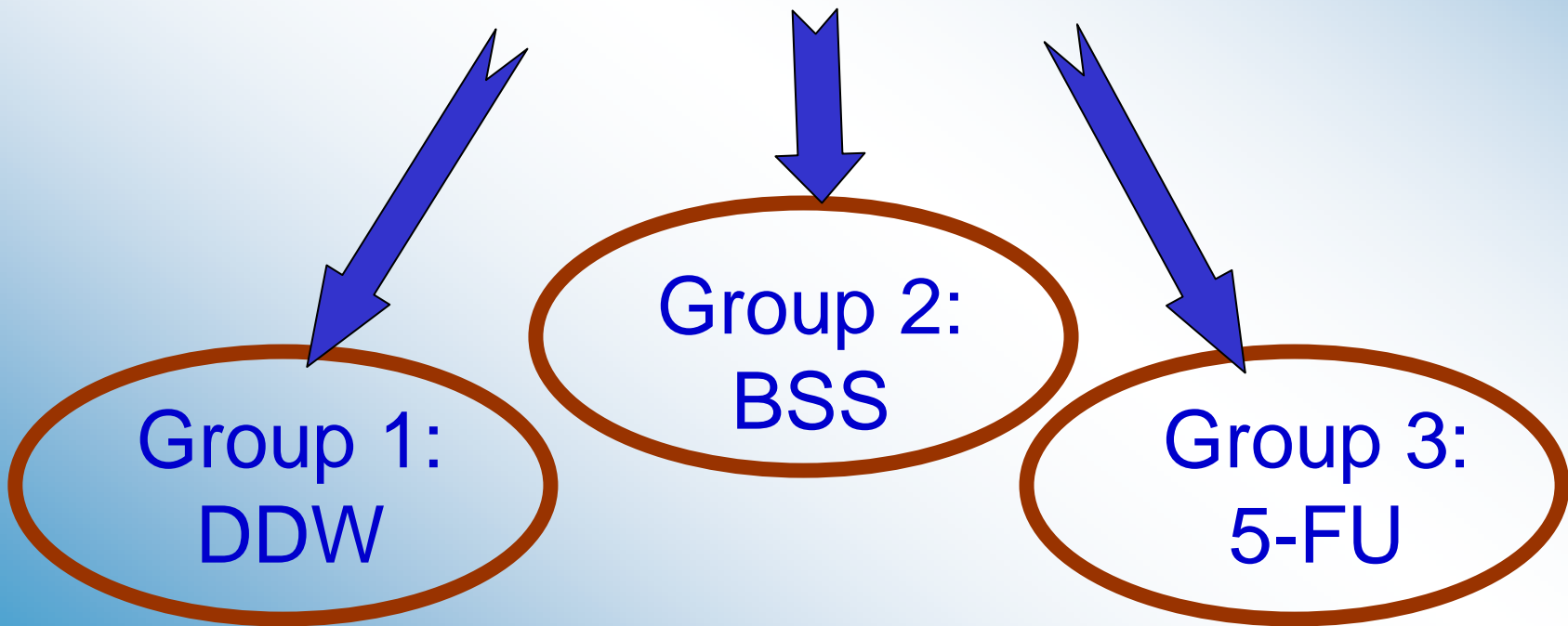
Water 1 min



Water 2 mins

Methods

- 30 four-week-old rabbits

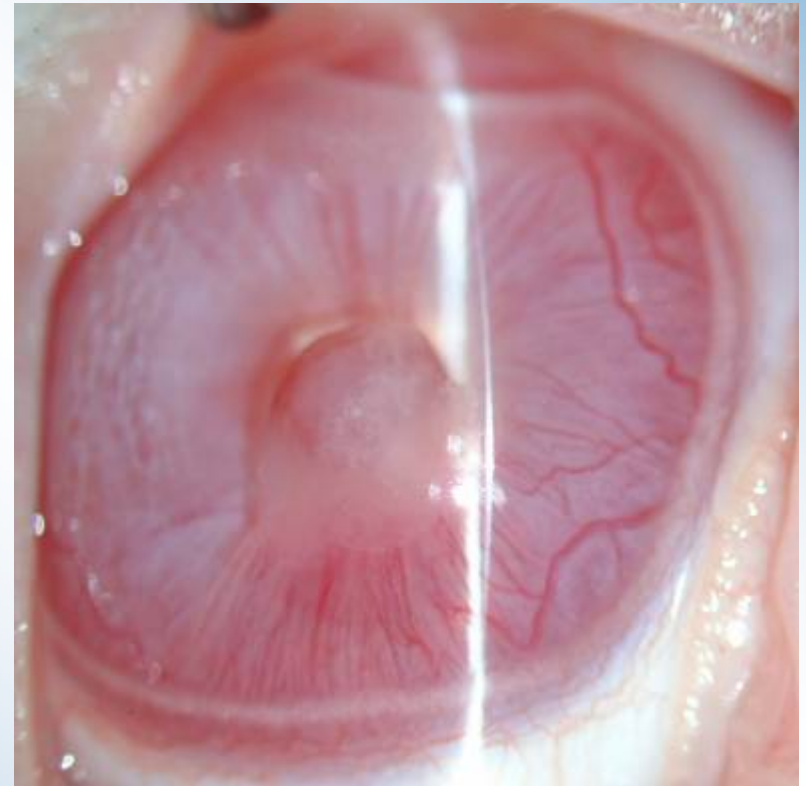


No difference between eyes H₂O

With perfect capsule – H₂O

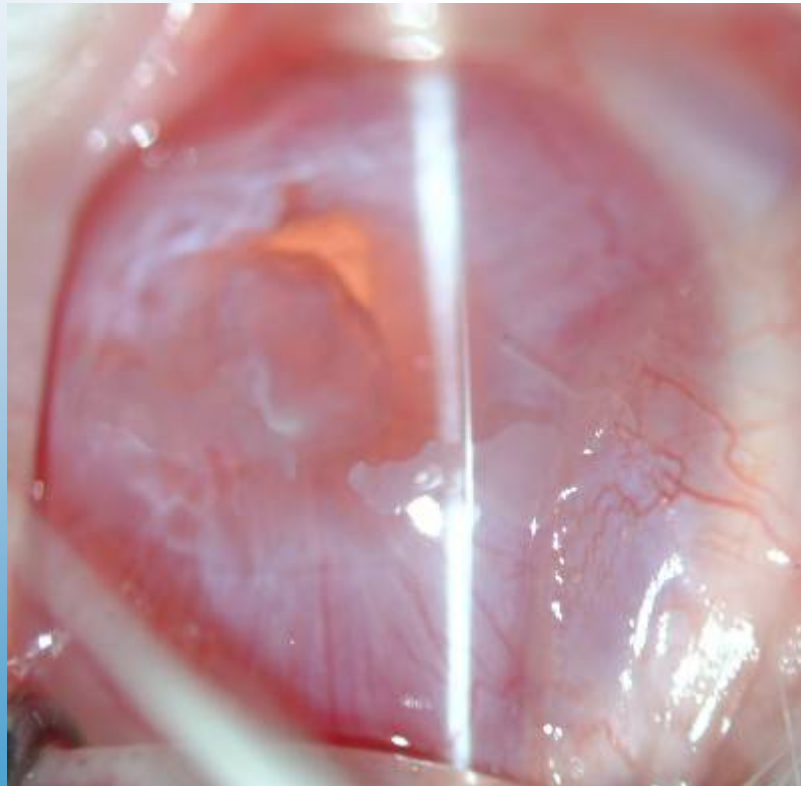


Without perfect capsule

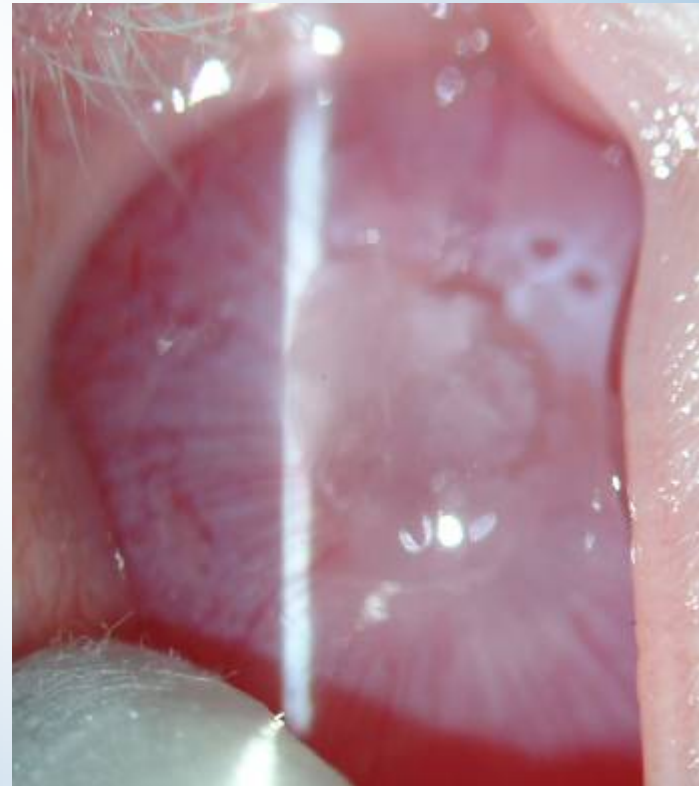


No difference between eyes BSS

With perfect capsule - BSS



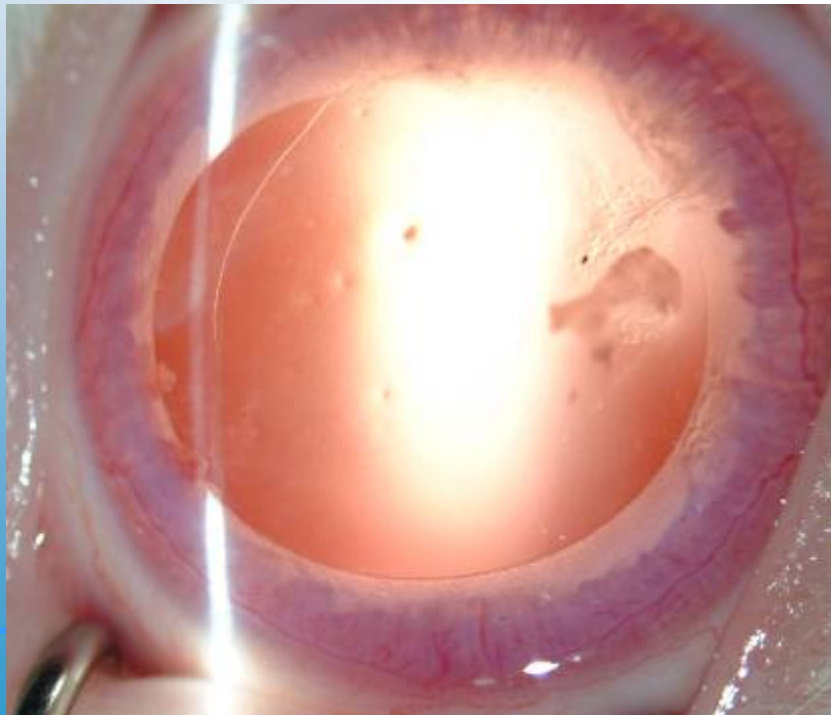
Without perfect capsule



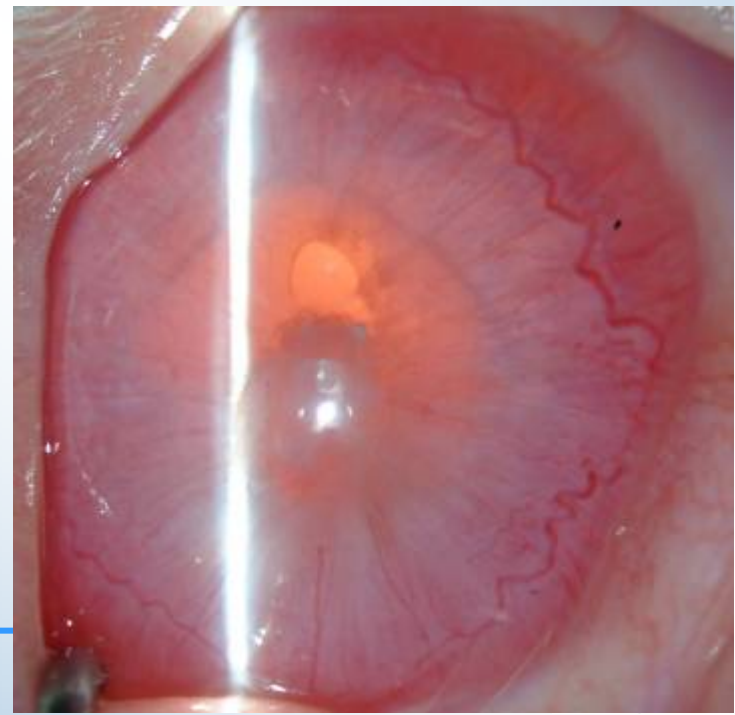
Difference between eyes 5-FU

- Significant difference between the eyes in the 5-FU-group

With perfect capsule – 5-FU



Without perfect capsule



Conclusions

- Perfect Capsule was applied in all the 30 eyes, vacuum was tight, the system sealed in all eyes
- Deionized water did not prevent after-cataract
- 5-FU prevented after-cataract

Future

- Safety studies
- Damage to other tissues?
 - Probably not – sealed system

