

# Evolución de los Trasplantes de Córnea

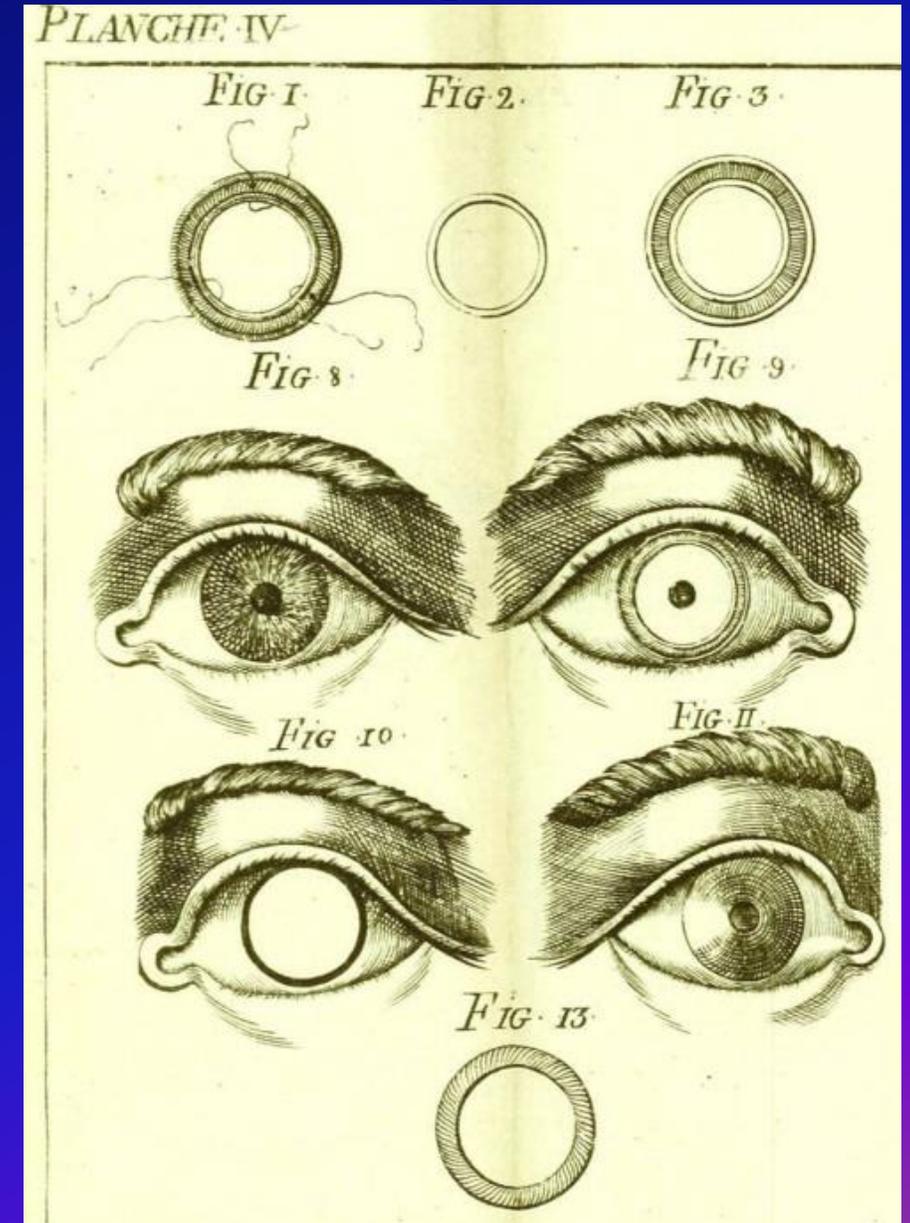
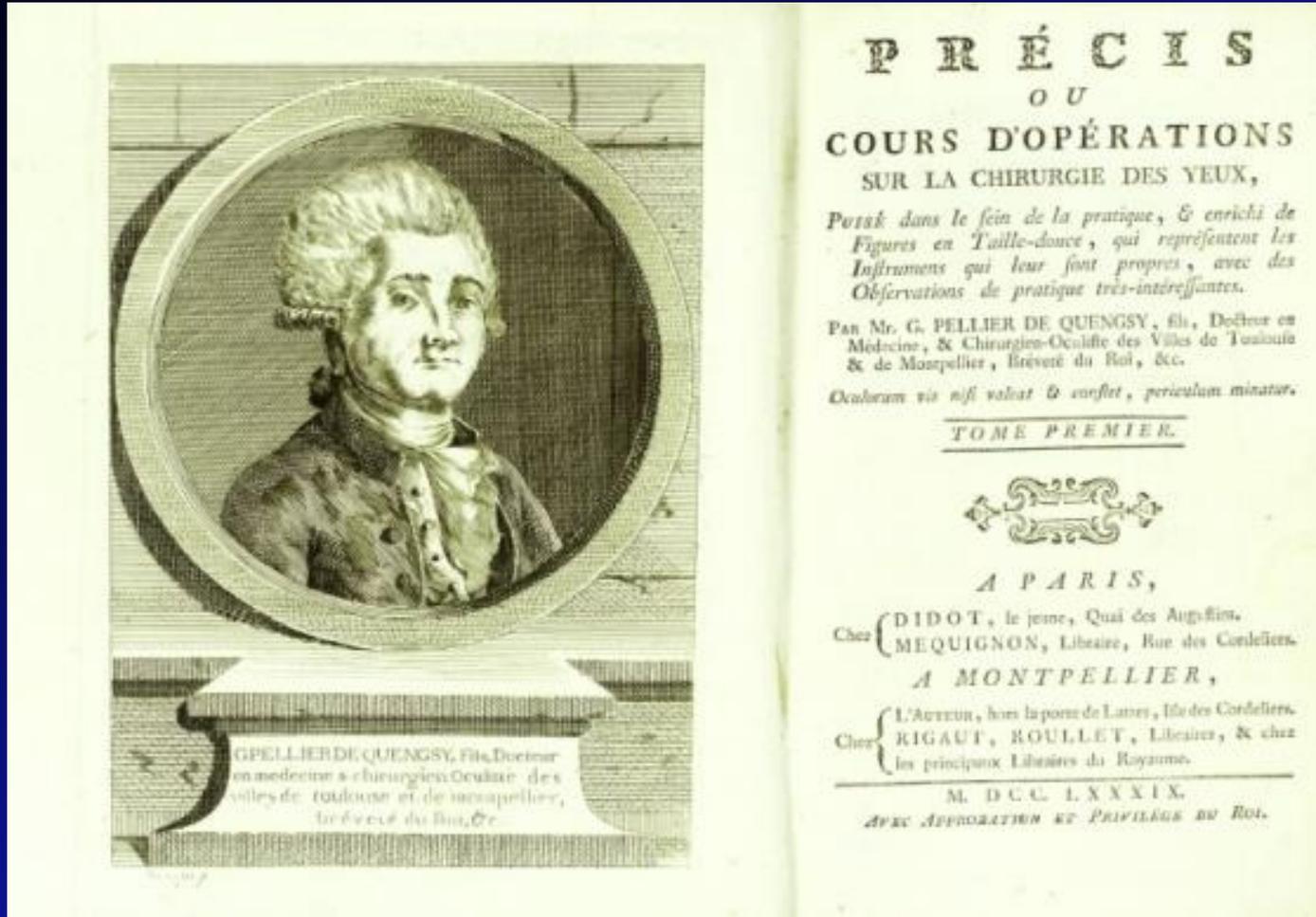
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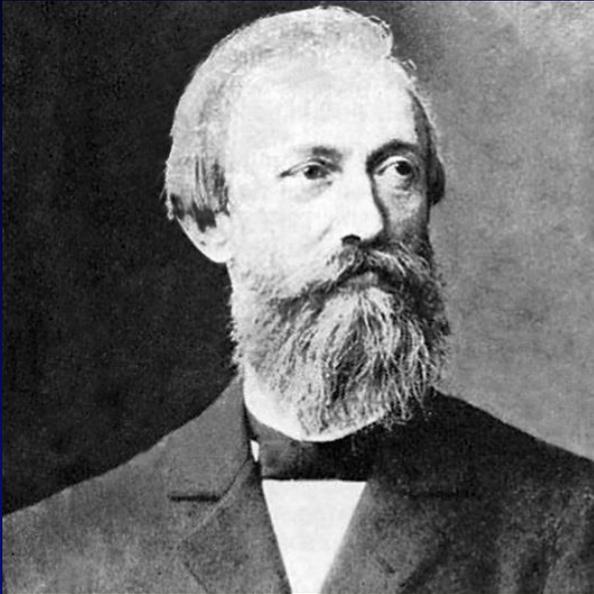
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# Cambiar la córnea, una idea antiga



Pellier de Quengsy (1789) (córnea de cristal)

# El Siglo XIX: Primeros trasplantes de córnea en humanos

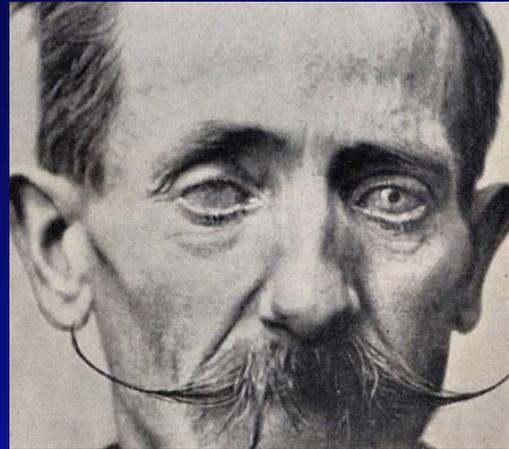


## Arthur von Hippel

- ▶ Queratoplastia laminar
- ▶ Donante conejo
- ▶ Trépano de relojería
- ▶ Cabezales intercambiables



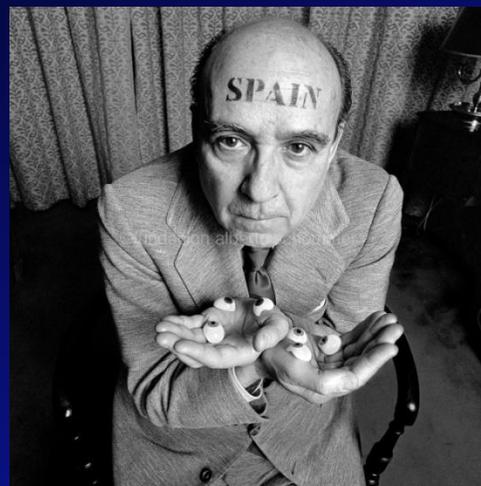
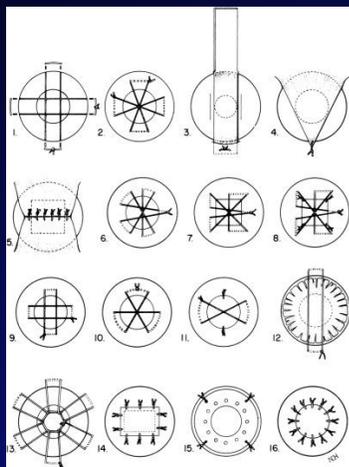
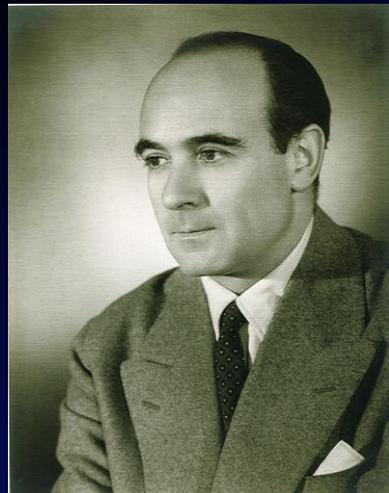
# El primer éxito de la queratoplastia penetrante



**Eduard Zirm, 1905** (Olomuc, Moravia)

- ▶ Oftalmólogo vienés
- ▶ Q.P. en ambos ojos de un paciente causticado con cal viva (Alois Glogar).
- ▶ Donante vivo (niño de 11 años ciego por traumatismo con cristales).
- ▶ Ol: “éxito” (AV= 0,17)

# Ramón Castroviejo y la queratoplastia cuadrada



## Ramón Castroviejo (1904-1987)

- ▶ Fellow Clínica Mayo 1931: técnicas QP
- ▶ QP cuadrada (NY, 1941)
- ▶ 1 córnea → 2 injertos
- ▶ Suturas superpuestas
- ▶ Colaboración con el 1er Banco de Ojos (Richard T. Paton)
- ▶ Invención de electroqueratomo (*keratoplastotome*)

# El triunfo de la microcirugía

- **Ignacio Barraquer** (1884-1965)

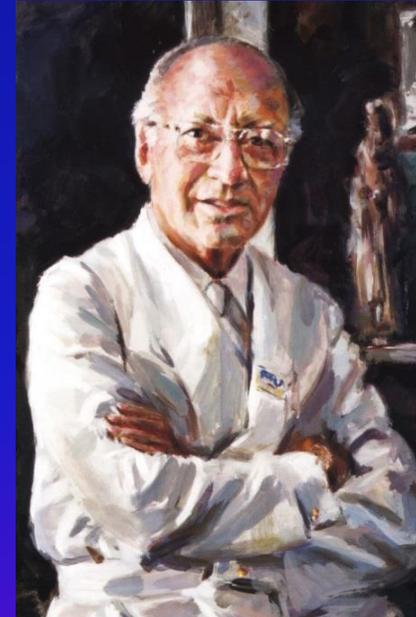
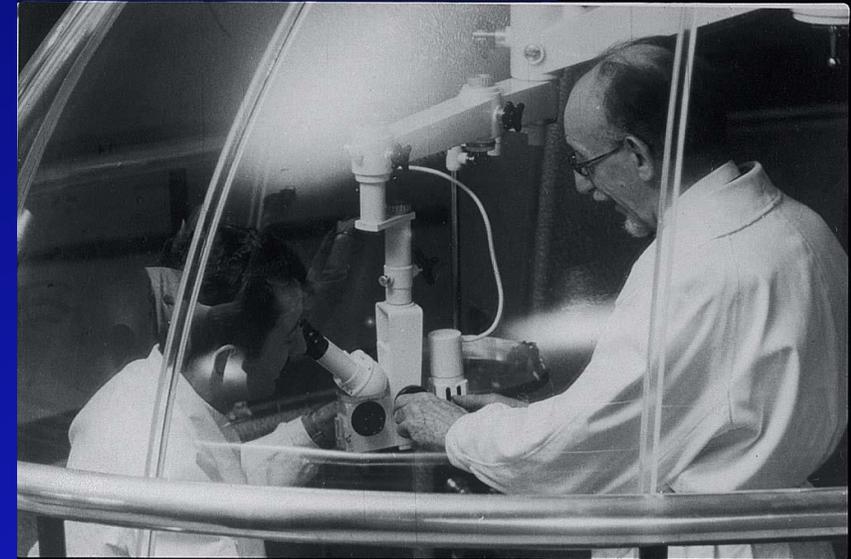
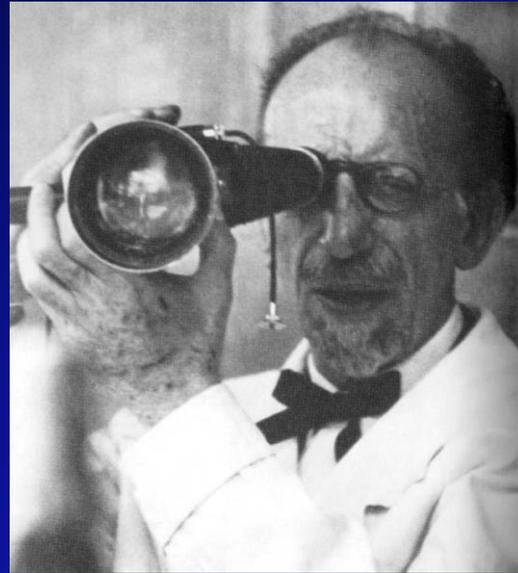
- ▶ 1ª QP en España (1940)

- **José I. Barraquer** (1916-1998)

- ▶ Queratoplastia refractiva (concepto, 1949)
- ▶ QP en “seta” y en “sombbrero de copa”
- ▶ Tallado laminar por congelación (*keratorheusis*)

- **Joaquín Barraquer** (1927-2016)

- ▶ Suturas “borde a borde”
- ▶ Sutura continua
- ▶ 1er Banco de Ojos continental (1962)



Dos ulls per a més d'una vida

Banc d'Ulls per a Tractaments de la Ceguesa



Dos ojos para más de una vida

Banco de Ojos para Tratamientos de la Ceguera



BARRAQUER

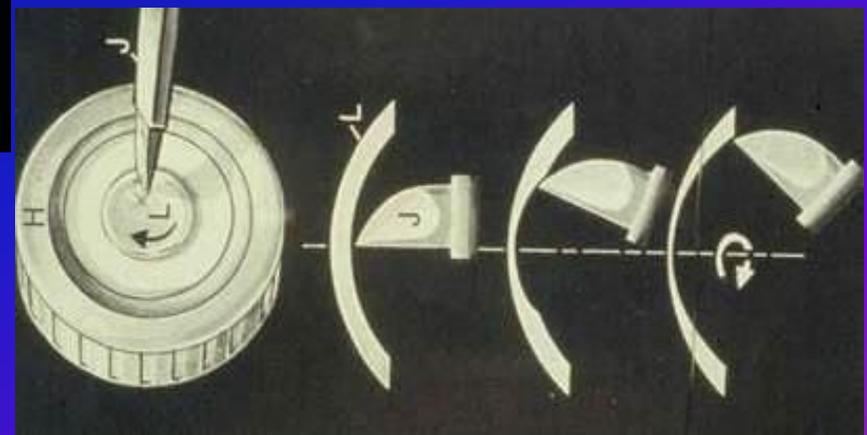
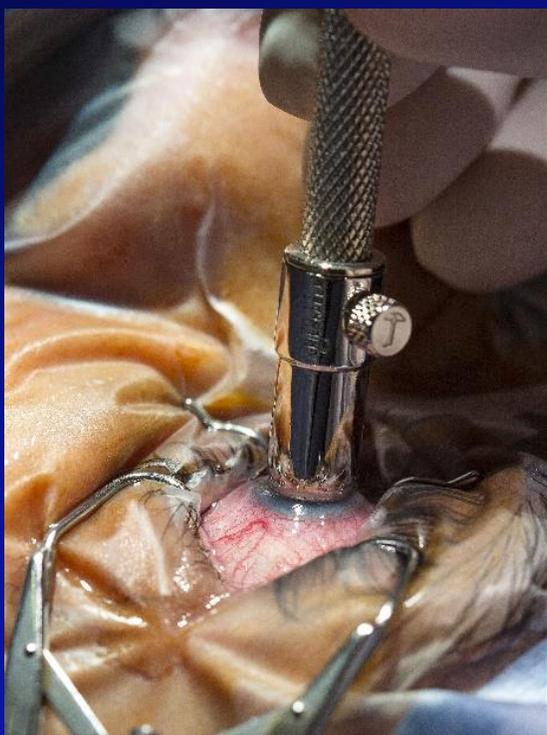


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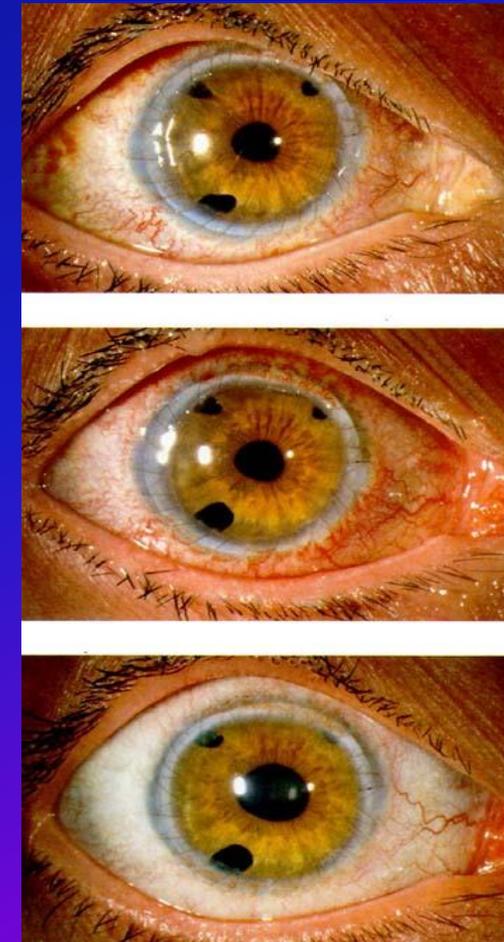
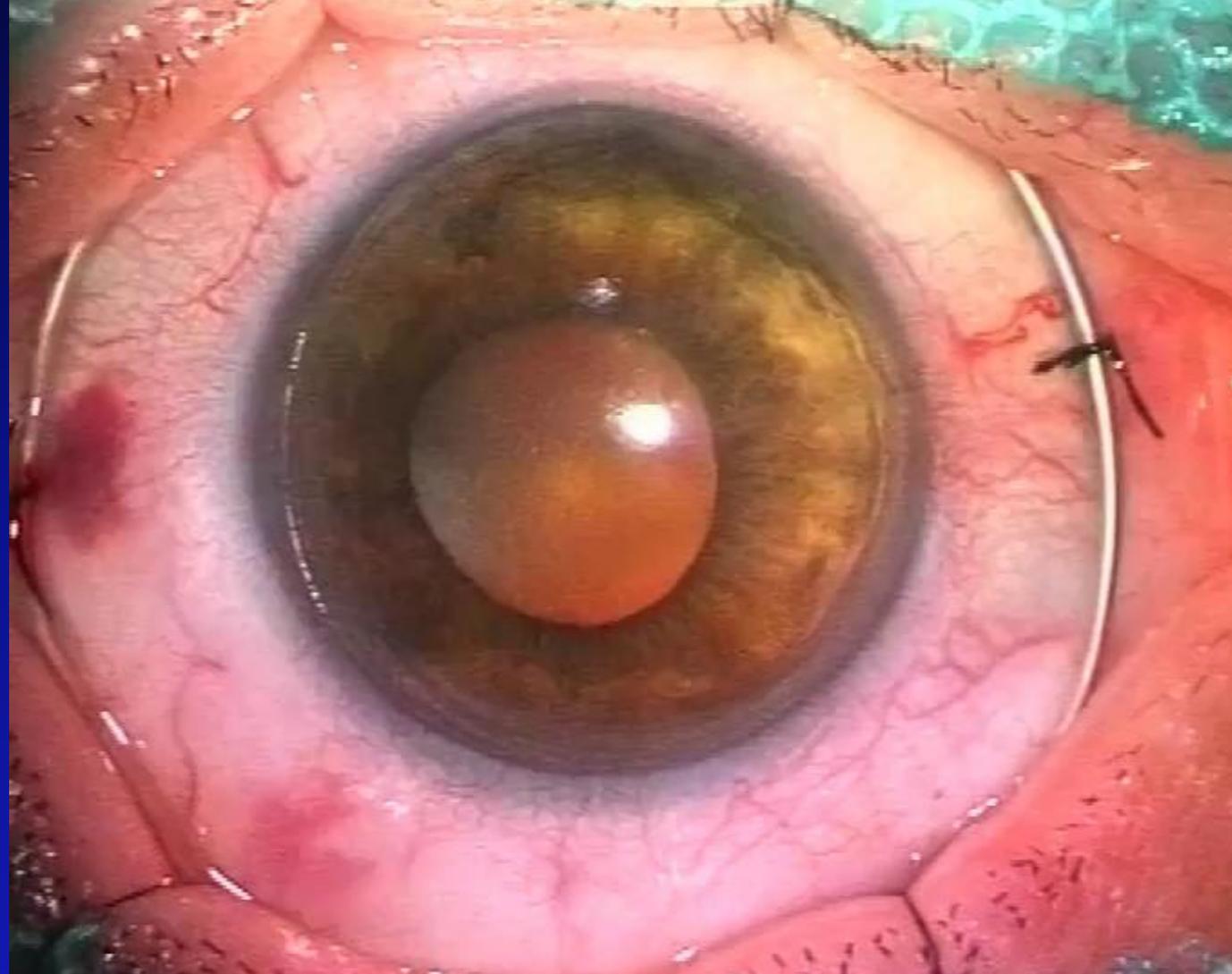
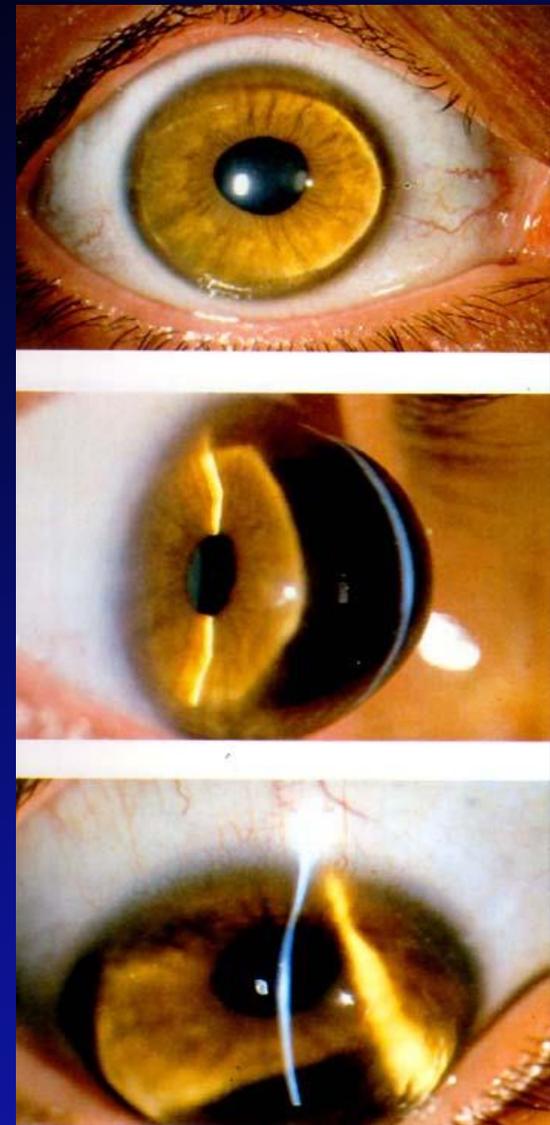
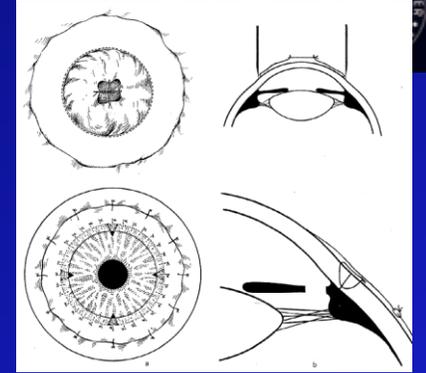
# KERATORHEUSIS

## AUTOR'S METHOD

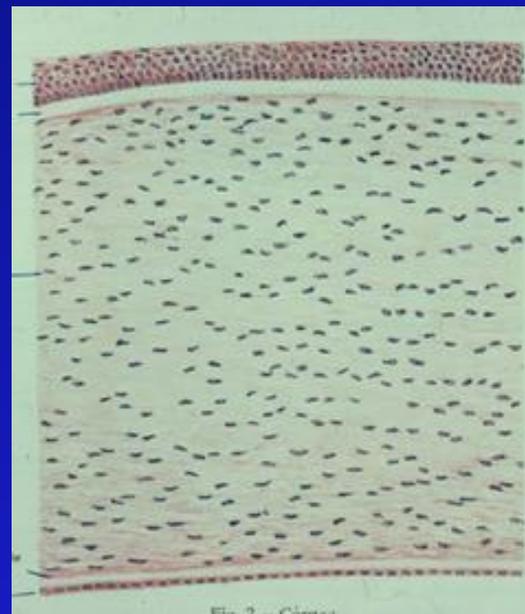
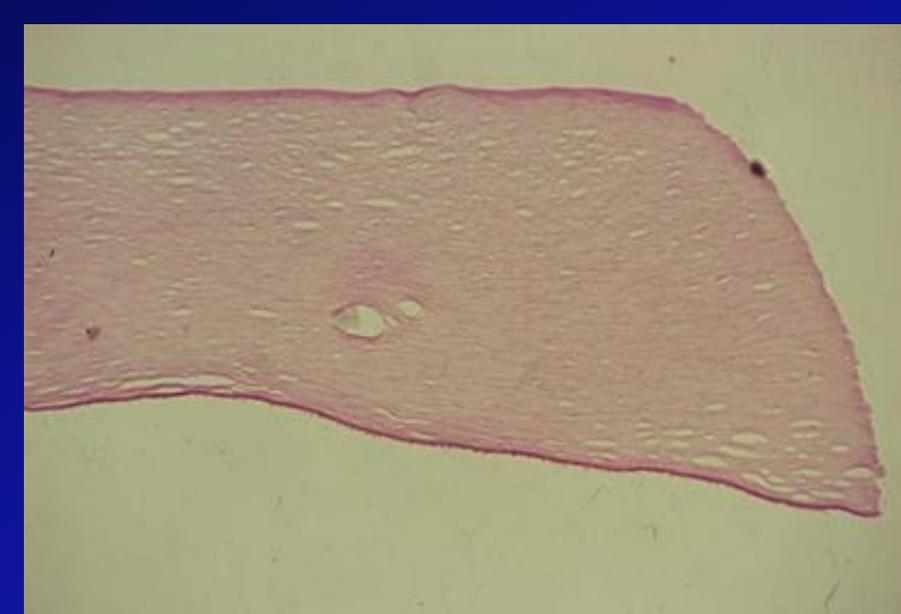
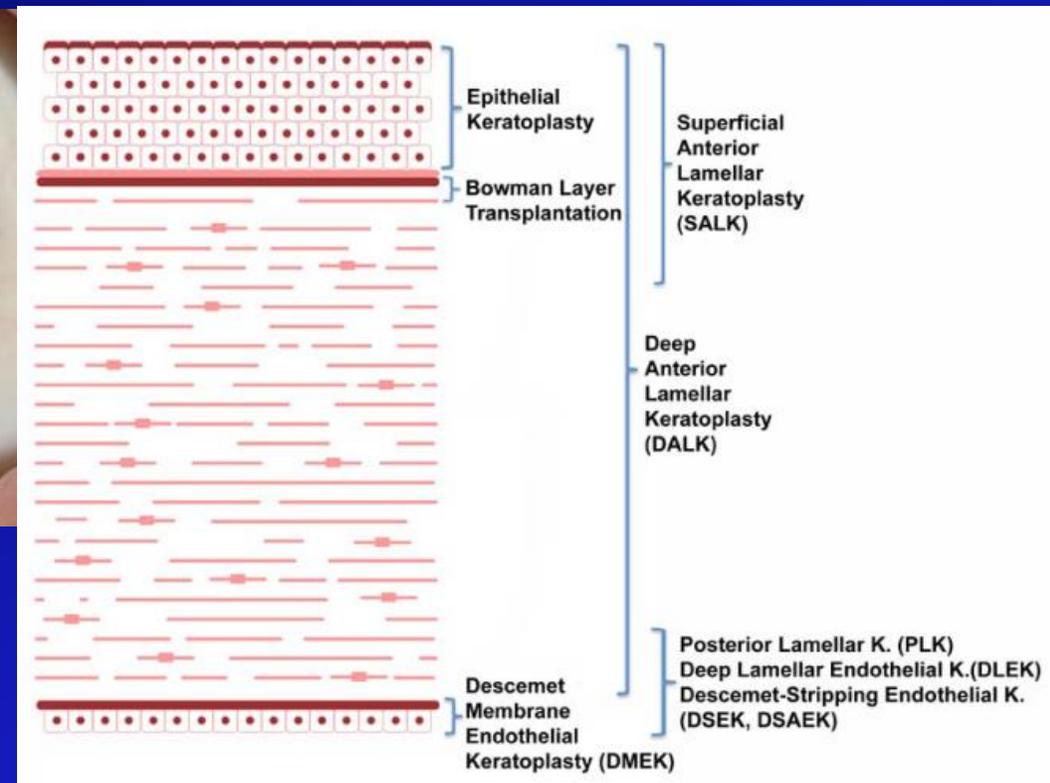
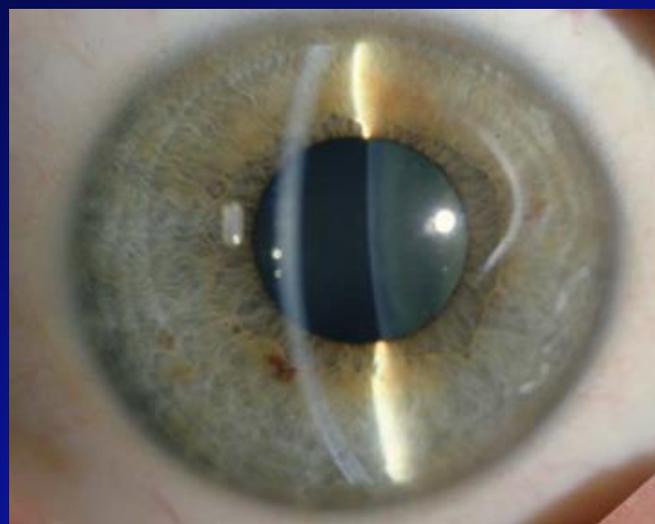
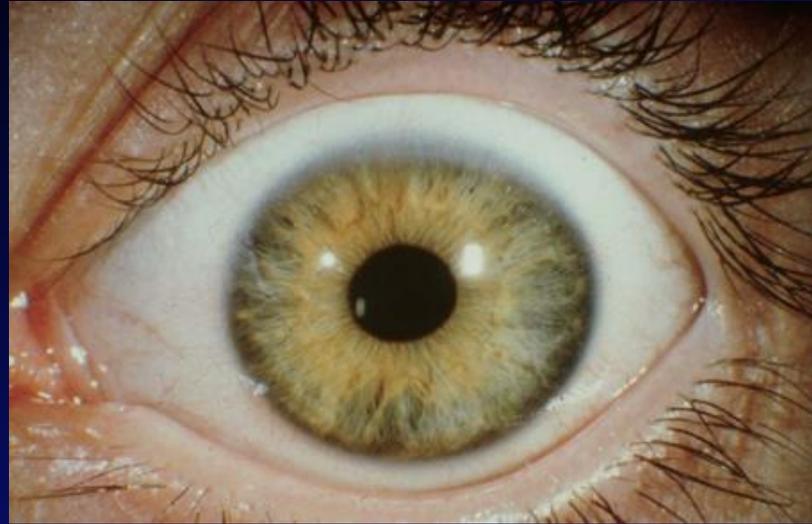
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# La Queratoplastia Penetrante, llevada al extremo (queratoglobo)



# Pero la córnea es, en realidad, una asociación de tejidos

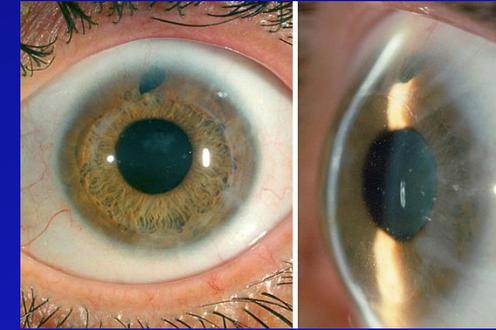
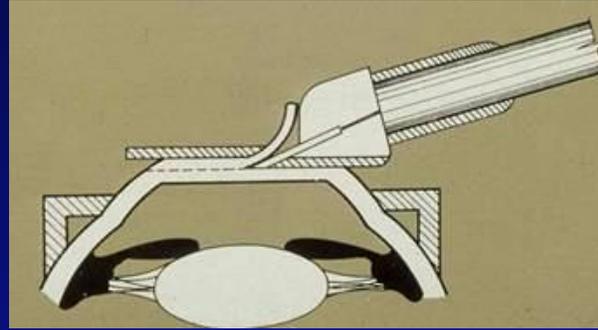


*¿Por qué cambiarla toda si la patología está sólo en un determinado nivel?*

# El cambio de paradigma: Queratoplastias laminares...

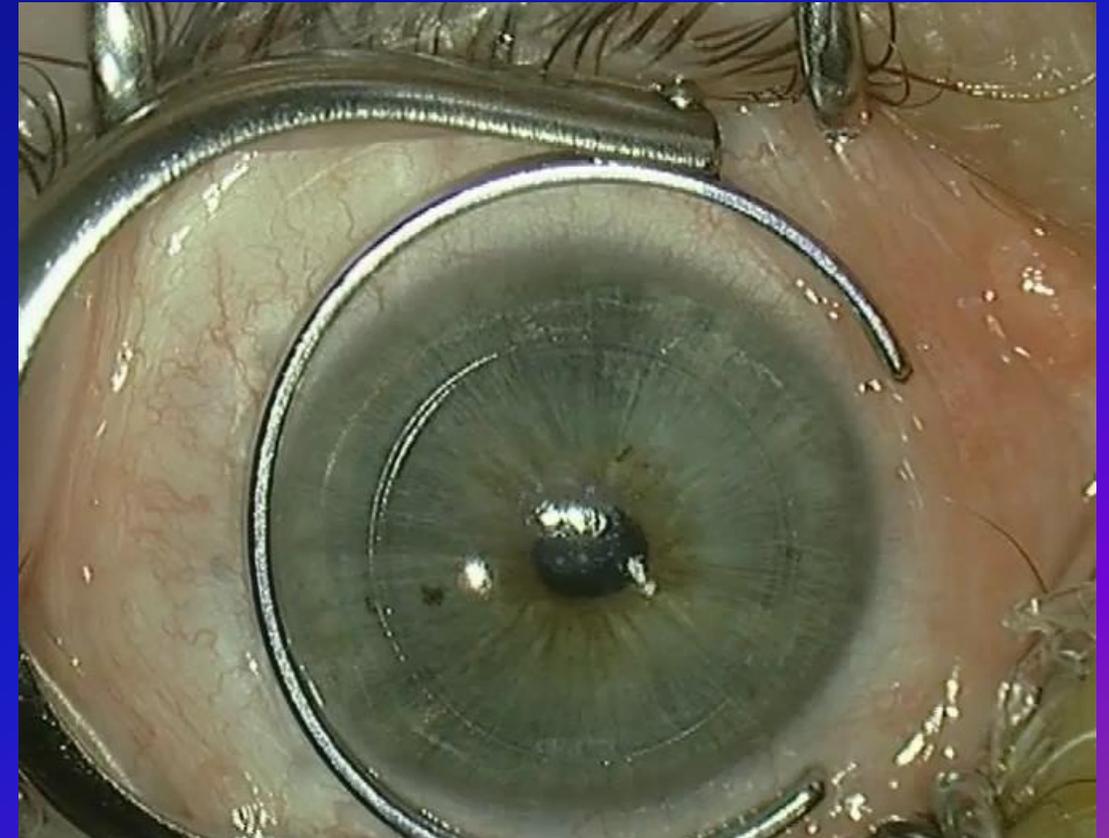
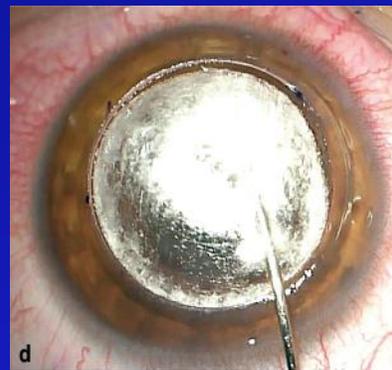
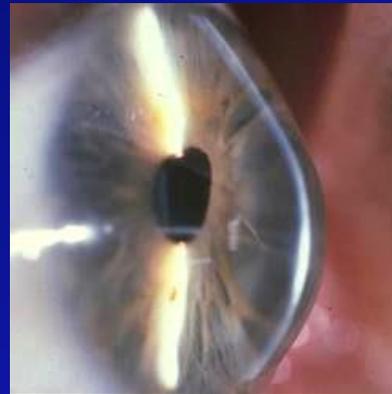
- Queratoplastias laminares con microqueratomo (J.I. Barraquer, 1965)

- ▶ Anterior (superficial)
- ▶ Posterior (profunda)



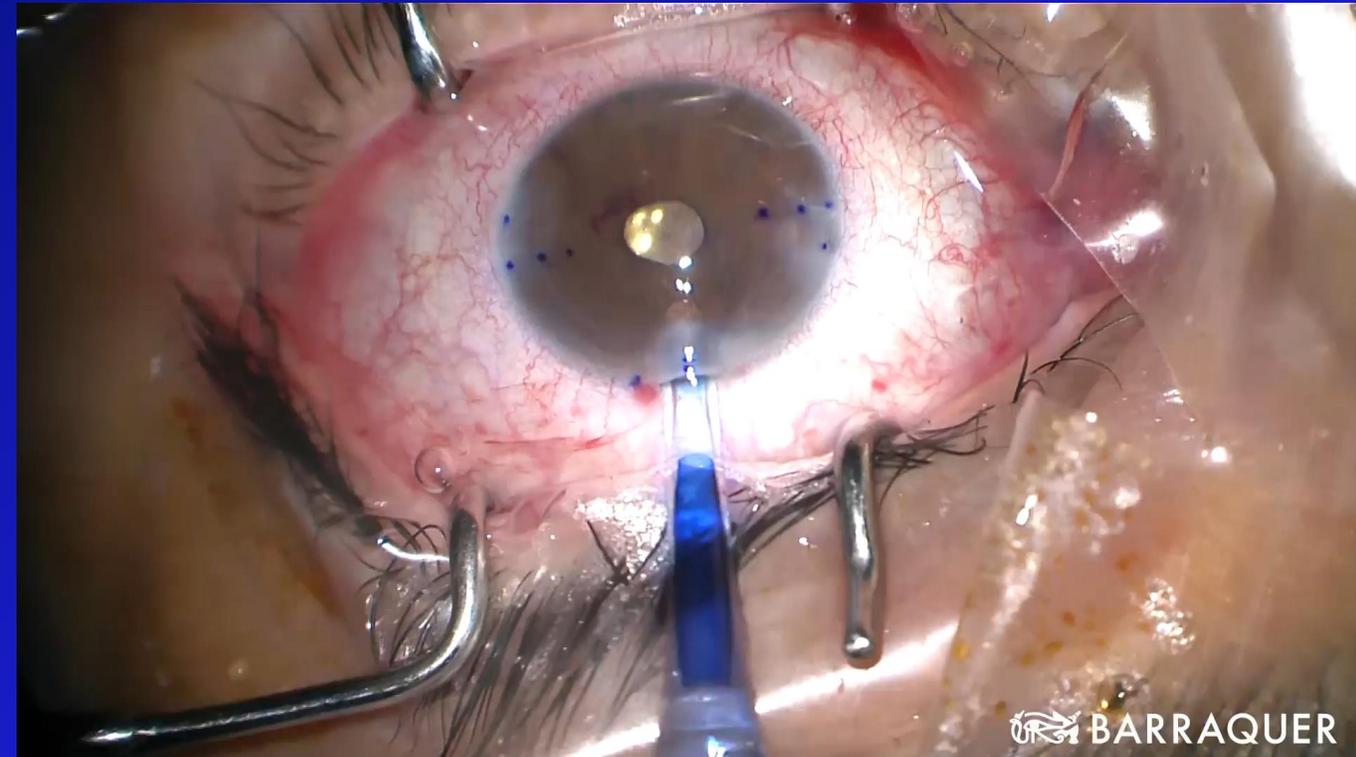
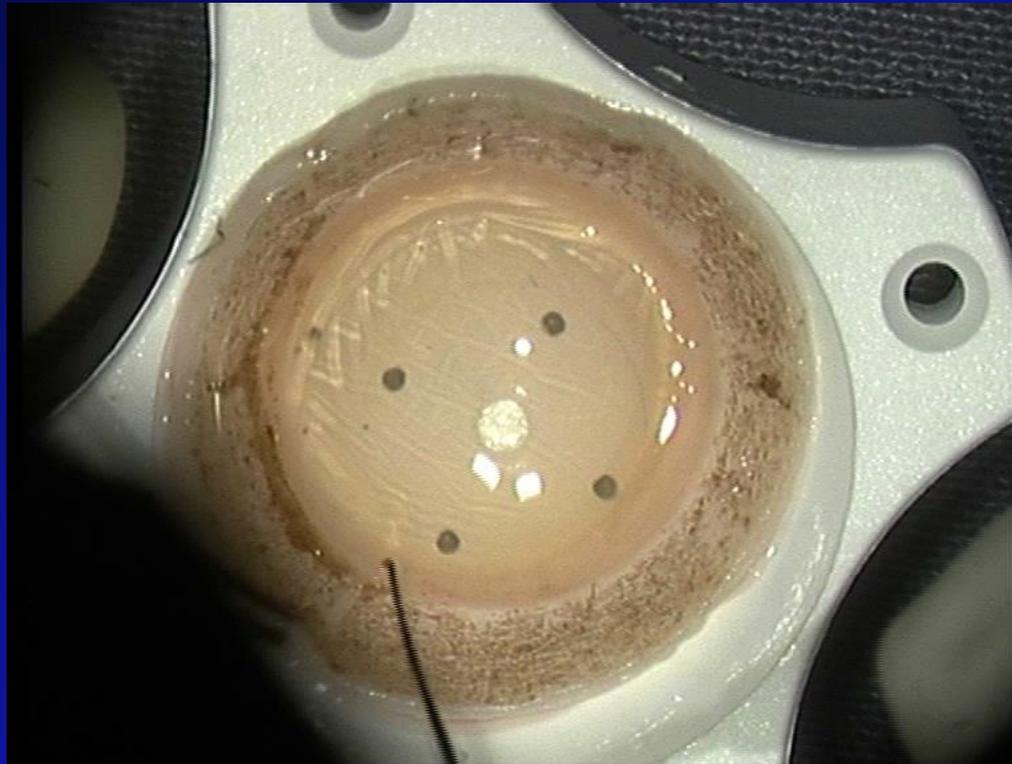
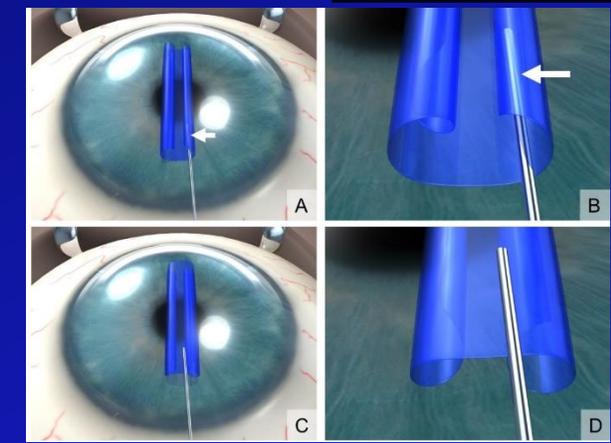
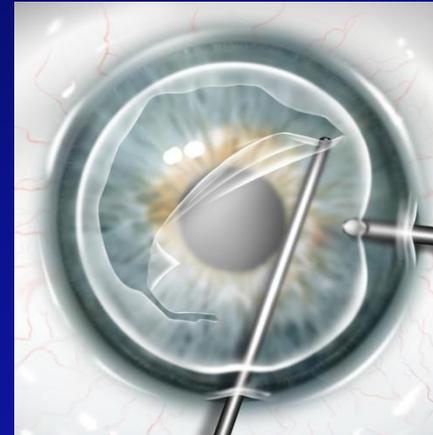
- Técnicas de disección profunda  
→ PLK → DALK

- ▶ Técnica capa a capa / pelado (Malbrán, 1960s)
- ▶ Técnicas con espátulas (Melles 1999)
- ▶ Neumodisección (**Big Bubble**, Anwar 2002)



# La queratoplastia endotelial

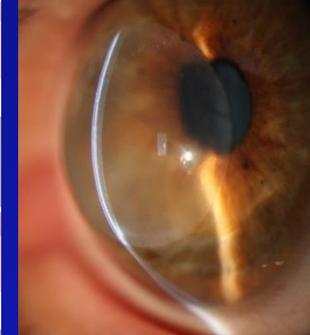
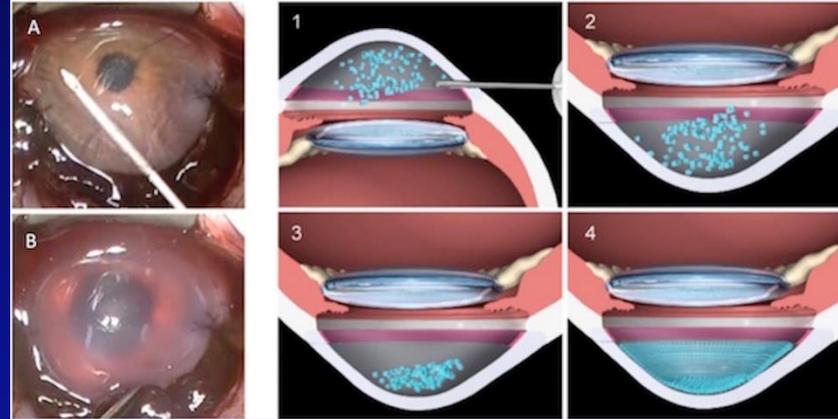
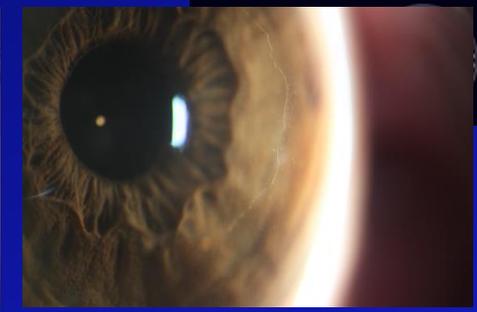
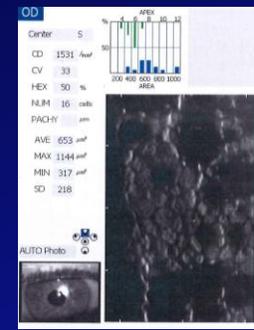
- Descemetorrexis (Gerrit Melles, 2004)
- Queratoplastia laminar posterior (DLK (Terry 2001) → DSEK → DSAEK)
- Disección solo M. Descemet y endotelio
- Queratoplastia Descemeto-endotelial (DMEK, Melles, 2006)



# El futuro...

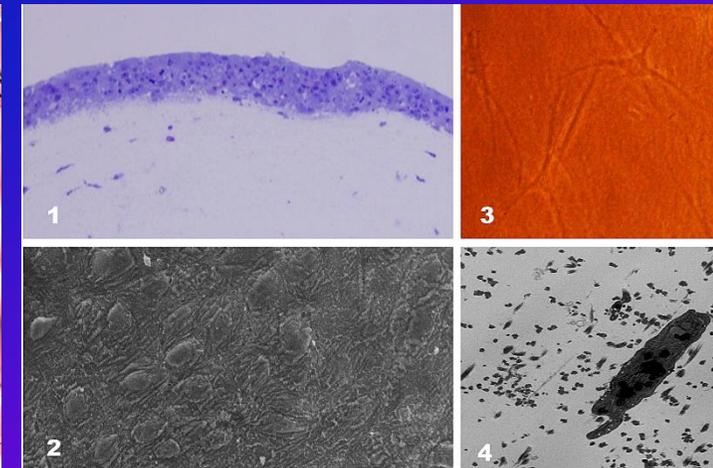
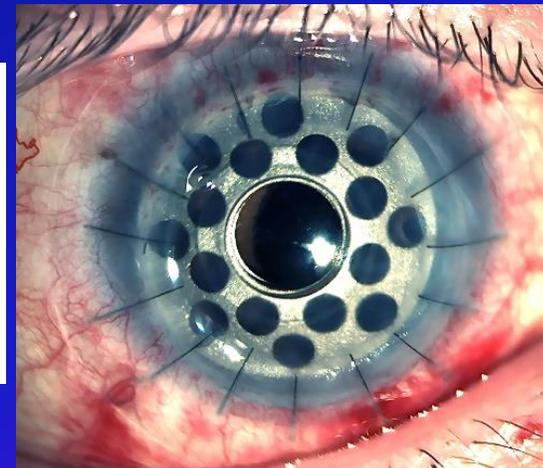
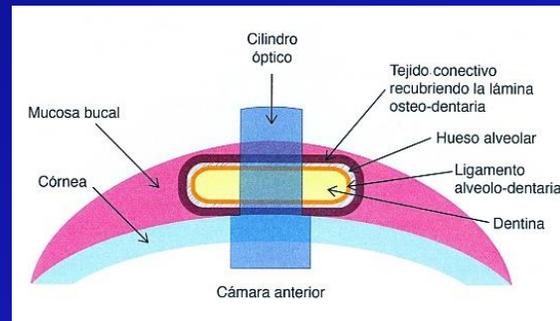
## ■ Medicina regenerativa:

- ▶ Regeneración endotelial sin trasplante (DSO)
- ▶ Cultivos celulares
  - ▲ Células madre limbares (epitelio corneal)
  - ▲ Endotelio corneal (siembra celular)
  - ▲ Células mesenquimales (tejido adiposo)



## ■ Córnea artificial

- ▶ Queratoprótesis
- ▶ Córnea biosintética





**CÁTEDRA JOAQUÍN BARRAQUER**



*Moltes gràcies*  
*Muchas gracias*