



# Femtosecond Laser Assisted D.A.L.K. Keratoconus

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NADI AL BASSAR

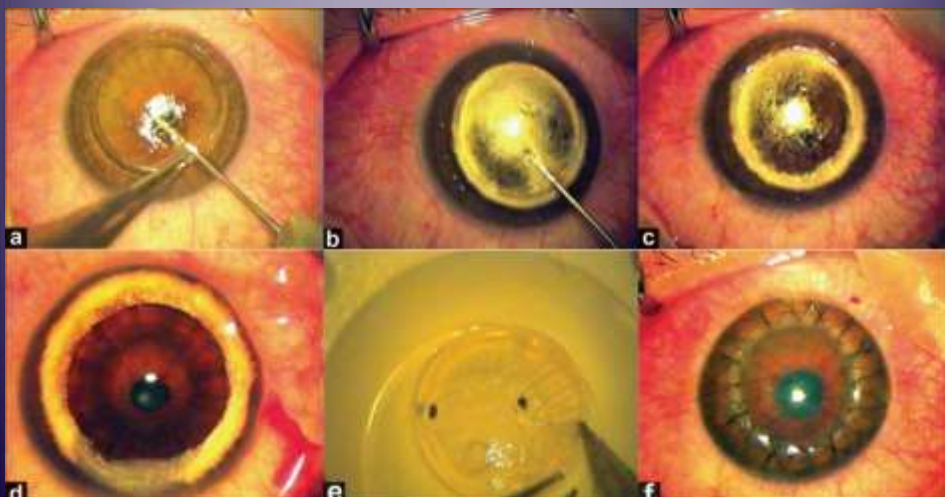


No Financial Interest

CAIRO 2019

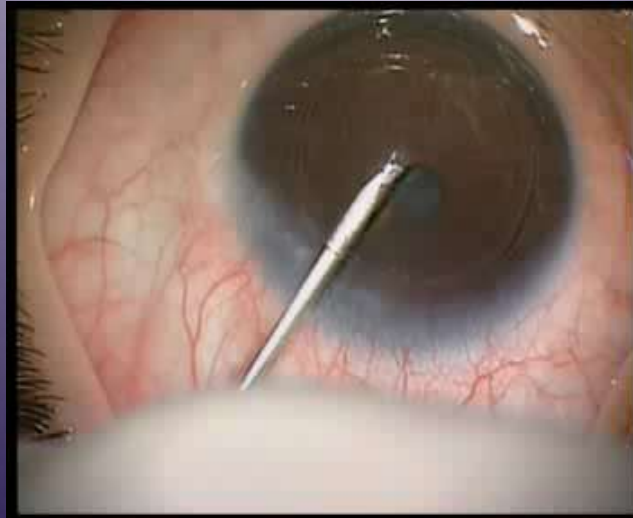


## *Big Bubble ( Anwar Technique )*

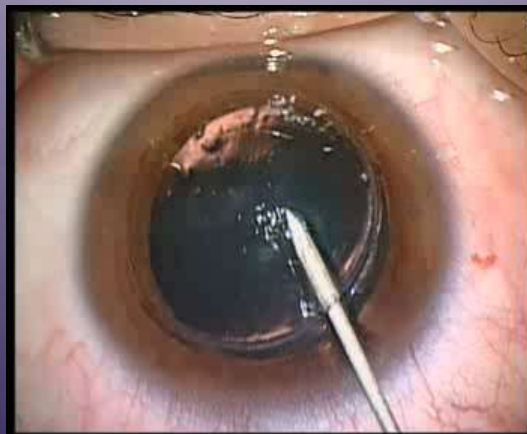




*Manual D.L.K. (perforation)*

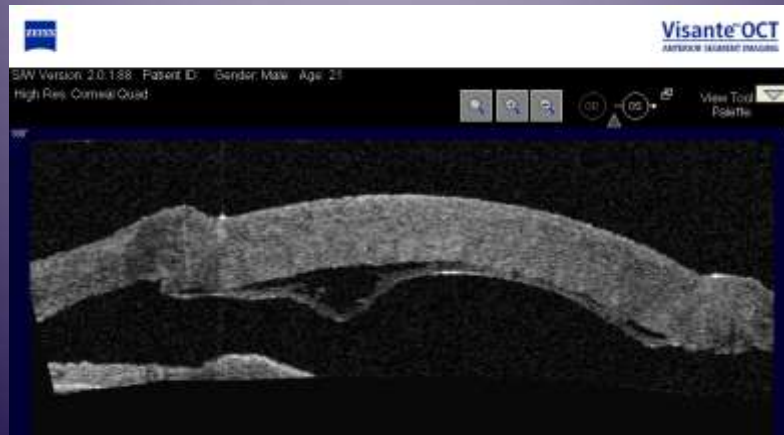


*Incomplete descemet baring :  
6 % Femto / 41 % Manual D.L.K.*

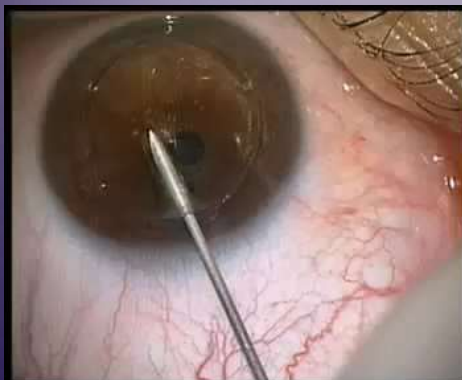




## *Incomplete descemet baring : 6 % Femto / 41 % Manual D.L.K.*

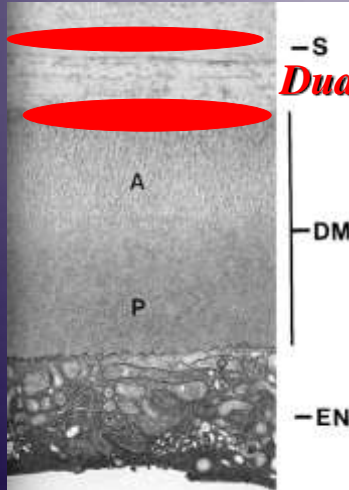


## *D.A.L.K. = Big Bubble*

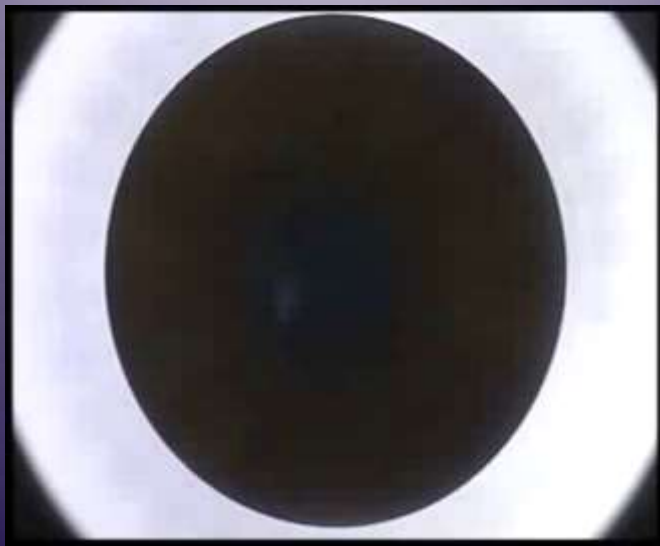




## *Big Bubble ( Dua Layer )*

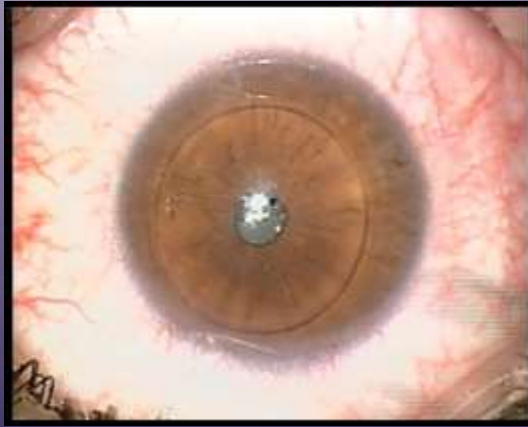


## *Femto D.A.L.K. / Keratoconus*

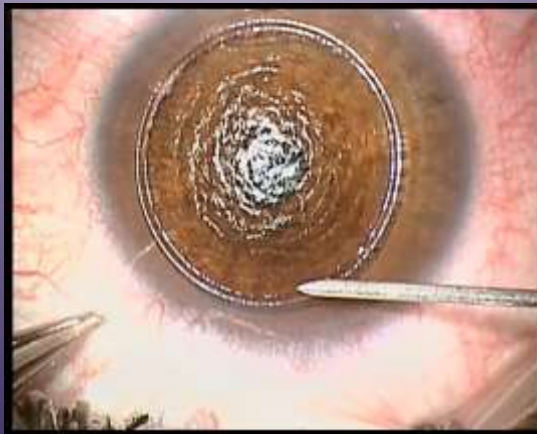




*Femto D.A.L.K. / Keratoconus*



*Femto D.A.L.K. ( 85 % big bubble )*





### *D. L.K. in Keratoconus ( Big Bubble )*

- ❑ **< 70 diopters : Manual ( 76 % ) Femto ( 88 % )**
- ❑ **> 70 diopters : Manual ( 38 % ) Femto ( 54% )**



### *D. L.K. in Keratoconus ( Big Bubble )*

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*Non Penetrating Femto D.A.L.K. / Keratoconus*

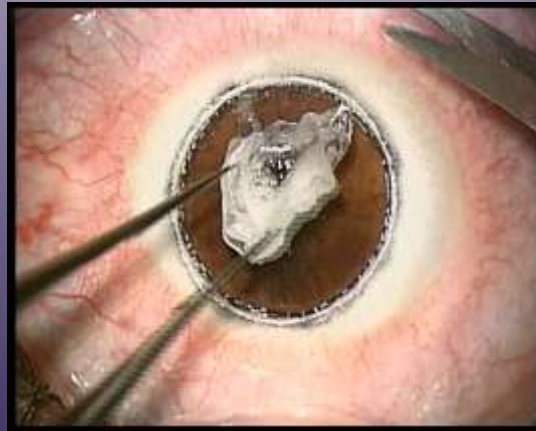


*Non Penetrating Femto D.A.L.K. / Keratoconus*

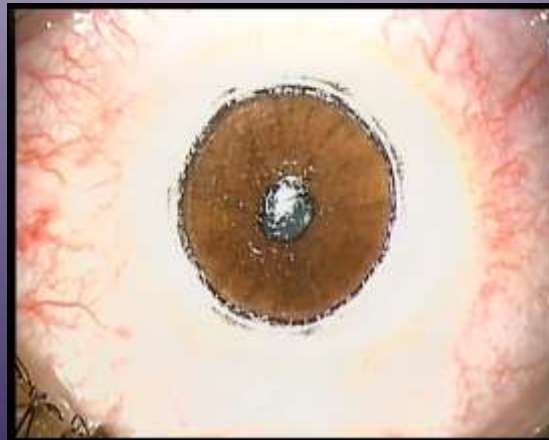




*Non Penetrating Femto D.A.L.K. / Keratoconus*



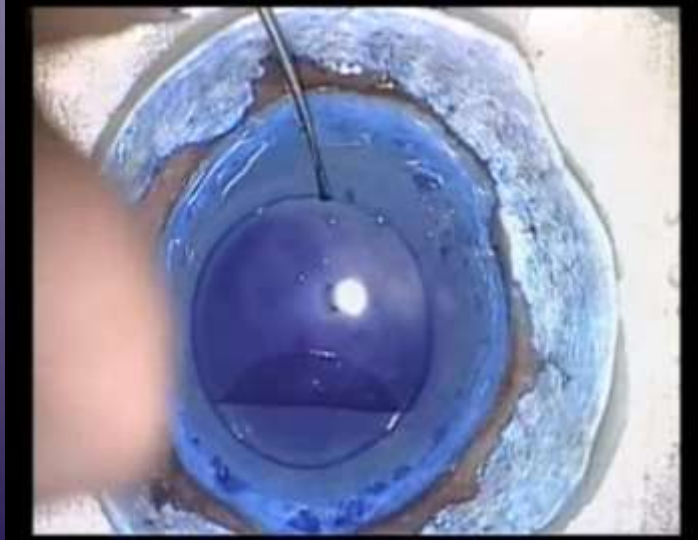
*Complete Descemet baring :*  
*94 % Femto / 59 % Manual D.L.K.*



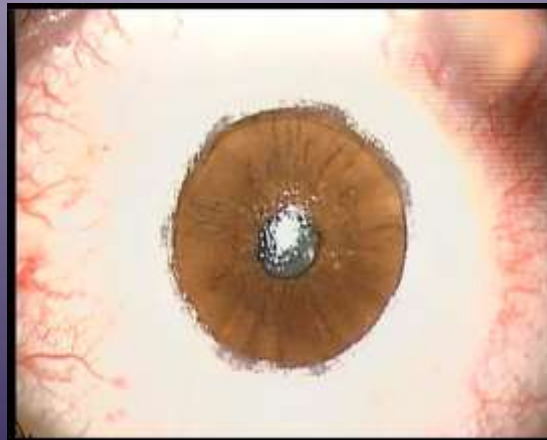




## D.M.E.K.



## *Non Penetrating Femto D.L.K. / Keratoconus*





## *Non penetrating Femto Pre-descemetic lamellar keratoplasty ( interface day 1 )*



## *M.DLK - F.DLK - F.PKP – M.PKP ( Best Corrected Vision )*

|               | 6 months | 1 year |
|---------------|----------|--------|
| Manual D.L.K. | 5.4/10   | 5.5/10 |
| Femto D.L.K.  | 5.2/10   | 5.4/10 |
| Femto P.K.P.  | 4.5/10   | 5.0/10 |
| Manual P.K.P. | 5.4/10   | 6.2/10 |



## *Manual / Femto D.A.L.K. in Keratoconus ( Astigmatism )*

|               | 6 months | 1 year | 3 years | 5 years | 10 years |
|---------------|----------|--------|---------|---------|----------|
| Manual D.L.K. | 2.05     | 2.38   | 3.15    |         |          |
| Femto D.L.K.  | 2.06     | 2.48   | 3.22    |         |          |
| Femto P.K.P.  | 1.76     | 1.93   | 5.08    |         |          |
| Manual P.K.P. | 2.57     | 2.80   | 3.94    | 4.53    | 5.68     |



## *Femto D.A.L.K. / Keratoconus*

- **Endothelium preservation**
- Vision = P.K.P.
- Descemet Baring > 95% ( femto )
- Extra D.ME.K. graft



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