Cataract Through The Ages

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Sanskrit Manuscripts, 100AD describe ‘couching’. It is suggested that ancient Indian cultures practised some form of Cataract operation before this, but definitive history is lacking.

Galen (129 – 199/217D) Described Cataracts as ‘Hypochyma’, resultant from malignant humours flowing down from the brain.
Glaucoma described as a disease of the crystalline lens, and the ‘hypochyma’ an outpouring of fluid that then gels and lies between the Iris and the crystalline body.

Hypochyma (Greek), translated to Suffusio (Roman) and lastly to Gutta Opacta or Cataracta (Latin).
The Romans believed that couching came from the animal kingdom, from a fairytale about goats and thorns.

- (Claudius Aelianus c.222AD)

Aulus Cornelius Celsus (25BC-50AD), a Roman physician, described ‘Cataract couching’.
14\textsuperscript{th}. Century to 18\textsuperscript{th}. Century, Couching was the only ‘Cataract Operation’ available.

This was usually carried out by Barbers, as with dentistry and bone setting, cataract operations were considered to be too lowly for a surgeon.
Cataract Surgery
Couching
Johannes Kepler (1571-1630), identified in 1610, that the Retina was the organ of sight, and that the lens was a refracting body.

Pierre Brisseau (1631-1717) identified the lens as the site of Cataract. This was corroborated by Antoine Maître-Jan (1650-1725) in 1707.

Jacques Davile (1696-1762), performed the first Cataract Extraction in 1747. (Semi-Circular Corneal Incision).
Friedrich Jaeger (1784-1871) advocated the 12 o’clock limbal incision, allowing the upper lid to act as a bandage.

Eduard Jaeger (1818-1884) championed extraction over couching.

Henry Willard Williams (1821-1895) uses anaesthesia routinely for cataract operations. He also uses Corneal Sutures for the first time in 1865.

Carl Koller (1857 – 1944) describes the effects of Cocaine on the eye in 1884. ‘Nicknamed Coca – Koller’
Hermann Knapp (1832-1911) championed the Intracapsular method.

Ignacio Barraquer (1884 – 1965) in 1917 constructed the ‘Eryophake’, a device for sucking out the lens.

Harold Ridley (1906 - 2001) performs the first Intra-Ocular Lens implant in St Thomas’s Hospital, London, November 29th 1949.


Sir Harold Ridley

- Sir Harold Ridley (1906 – 2001)
Intra Ocular Lenses


Made Perspex CQ, Made by Rayners of Brighton & Hove

A 1994 American Survey found this substance to still be the manufacturers choice of Plastic.

The Introduction Capsulorhexis, increased the effects of Centration.
Cataract

- Incidence.

- It was estimated that 225,000 new cases of visually impairing cataract should be expected each year, the 5-year cumulative incidence being estimated at 1.1 million new cases among the population aged 65 years and older.

Procedures

Anaesthesia

There have been dramatic changes in anaesthetic practice for ophthalmic surgery over the past twenty years in the UK.

The use of local anaesthesia (LA) has risen from around 46% in 1991 to 75% - 86% in 1996-7 and has stabilized at 96% in 2003-6

The use of sedation with LA has fallen from 45% in 1991 to around 6% in 1996, 3.9% in 2003 and 1.4% in 2006.

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Intra-Capsular Cataract Extraction
Extra-Capsular Cataract Extraction
Phaco Efficiency
no unnecessary movements
no rushing, no pressure, no trauma

Uday Devgan, MD, FACS
devgan@ucla.edu
August 2006
Intra-Operative Complications

Posterior Capsule Tear (2% - 5%)

Vitreous Loss (1.1%)

Expulsive Choroidal Haemorrhage (0.04% - 0.20%)
Only 45% of affected eyes will achieve 6/60 or better on recovery.

Dropped Nucleus (0.3% - 1.1%)

Royal College of Ophthalmologists – Cataract Surgery Guidelines 2010
Dropped Nucleus
Early Post Operative Complications

Increased IOP (5.3%)

Iris Prolapse

Endophthalmitis (0.072% - 0.3%)

Incidence decreased with the increase in Day Case Surgery.

Royal College of Ophthalmologists – Cataract Surgery Guidelines 2010
Long Term Post Operative Complications

Cystoid Macular Oedema (1% - 12%)

Increased IOP (2.3%)

Posterior Capsule Opacity (15% - 50%)

Retinal Detachment (0.1% - 0.8%)

Decentration Of Lens.

Royal College of Ophthalmologists – Cataract Surgery Guidelines 2010