IMPLANT D C R (Pawar's Intracystic Implant)

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Introduction

Dacryocystorhinostomy is the operation of choice in the patients complaining of epiphora due to block at Naso - lacrimal duct. Success rate is good in average hands & very high in skilled hands. Once fails : fails forever & cannot be done in children.

BRIEF HISTORY

1. Walthen England - 1881
(used golden & silver tubes)
2. Addeo Tati-External DCR - 1904
3. Dupuy Dutemps & Bourget - 1904
4. J.F. Calhan(soft silver tube) - 1925
5. Dr.P.K. Mukherji & P.C. Jain - 1967
6. Dr.Pawar & Patil - 1985
7. Birmingham-Mindland Eye Hosp.- 1993
Role of N.L. Intubation in Childhood
epiphora

ABOUT INTUBATION

¢ It can be done in all age groups.
¢ Technically easier & effective procedure
without disturbing the anatomical structures.
¢ No nasal packing required.
¢ Silicon implant left in situ does not produce
any reaction.
¢ The whole operation hardly takes 20 mins.
¢ Can be repeated in failed cases of Intubation.
¢ No hospitalization required.

CASE SELECTION

¢ Cases having obstruction at N.L.D.
¢ Failed cases of conventional DCR.
¢ Cases having block at canaliculi & common canaliculi,with fibrosed sac, dry eye .nasal polyps are contraindicated for IDCR.

PRE-OPERATIVE INVESTIGATIONS

History and detailed examination of the lacrimal system carried out,
- Medical check up,
- ENT check up,
- Haemogram with BT, CT.
- Urine examination

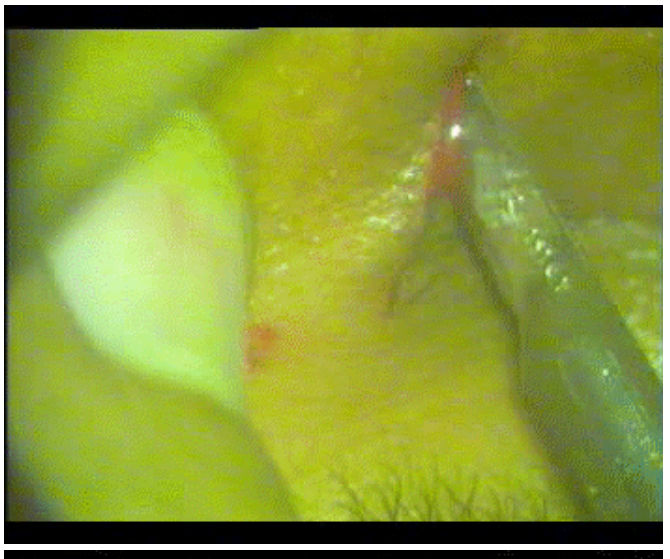
MATERIAL AND METHODS

Intracystic implant designed by Dr. Pawar , is made up of silicon elastomer providing maximum tissue compatability and minimum thrombogenicity. The lengths of silicon intracystic implant are variable viz.13mm,15mm and 17mm,with the inner of diameter of 2.5mm & outer of 3mmThe implant has a collar of 2x5x8mm in size with multiple holes at proximal & distal end of 1mm size each. The collar helps to retain the implant in the cavity of the sac & holes act as additional drainage channels.

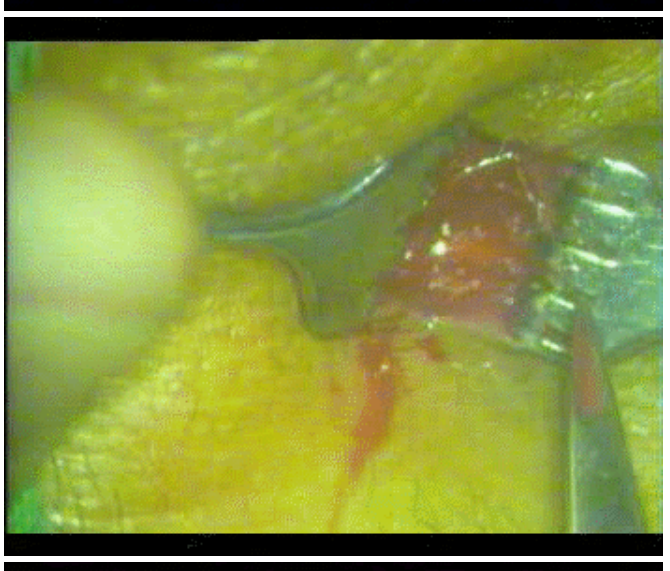
SURGICAL TECHNIQUE

Anesthesia, skin incision and exposure of sac are carried out exactly as that of conventional DCR Medial palpabral ligament is not cut. After exposing the sac a vertical 4mm incision is made on anterolet. Wall of the sac & cavity is washed with normal saline.Mastoid gouze of 3mm.Dia.is passed through the opening of sac to perforate the postero.medial wall of sac, lacrimal bone & nasal mucosa to make an entry into middle meatus.

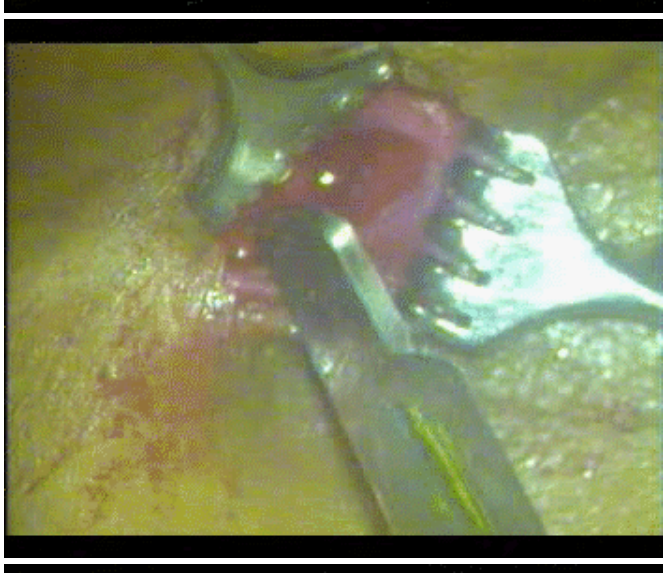
The mastoid gauze is passed into NLD when it is planned to keep the implant at that site. The sterilized implant is mounted on introducer & is introduced through the anterio-lateral opening of the sac in the nasal cavity negotiating the posterio medial wall of the lacrimal sac & newly made ostium.The wider portion of the implant lies in the cavity of the sac & encored with the sac with 6-0 Vicryl suture. The cavity is irrigated with normal saline. After closing the sac the surgical wound is closed in layers with 6-0 Vicryl.Syringing is done on the operation table to see the patency of NLD.



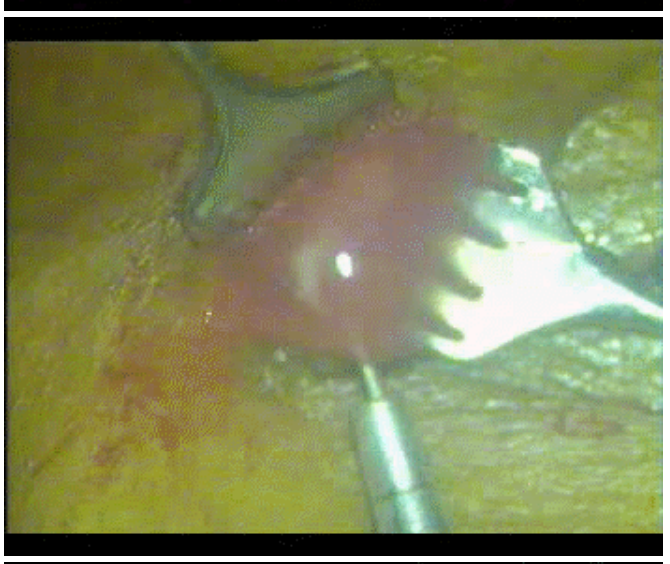
Incission



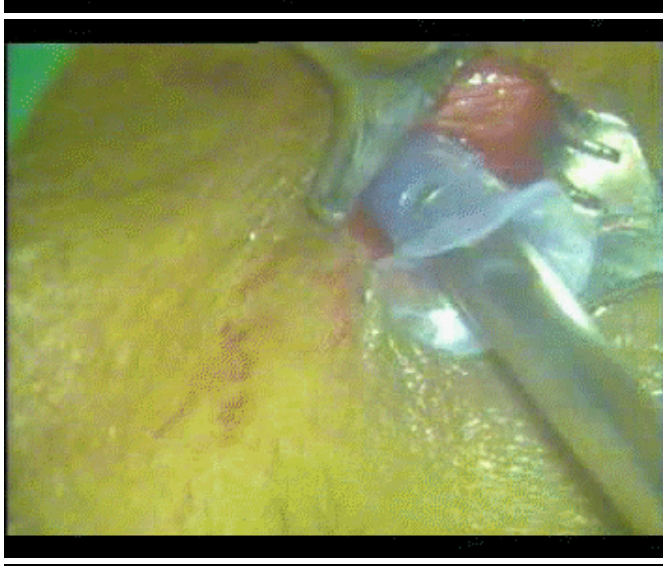
Retraction of the incission with cat's-paw retractors



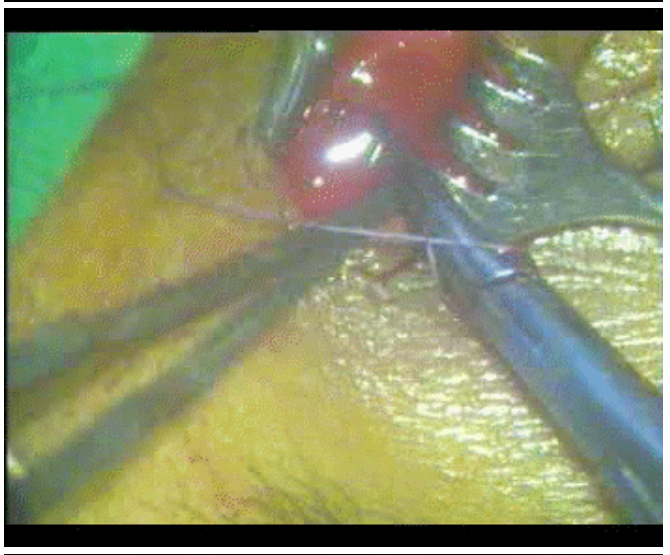
Incission into the sac



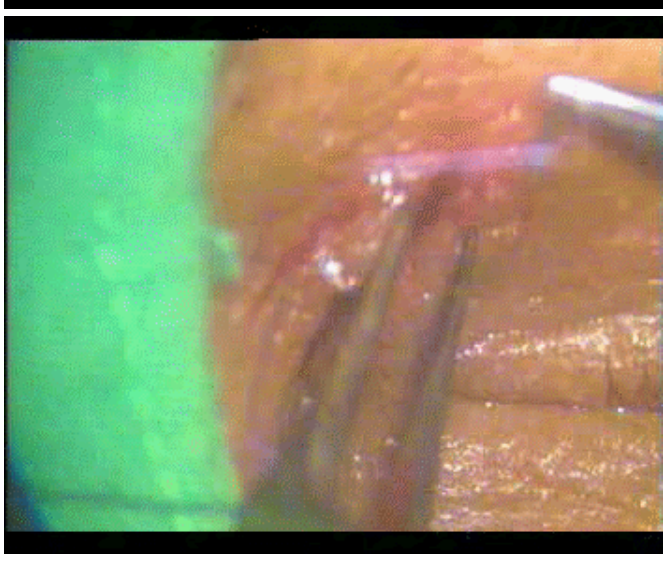
Irrigation and expulsion of the turbid contents of the sac



Insertion of the Pawar's implant



Tight closure of the sac



Wound closure in two layers following which the wound is patched (the eye is not patched)

POST OPERATIVE TREATMENT

¢ Oral Antibiotics & Anti-inflammatory drugs atleast for 5 days.
¢ Decongestive nasal drops for 1 month.
¢ Topical antibiotic drops.
¢ Acetyl - Cystine (Mucomist) drops are topically instilled frequently to avoid blockage of implant by mucoid secretions.
¢ Second syringing is done after 1 week and there after if required.

CAUSES OF FAILURE OF IDCR

1. Expulsion of implant
a. Forceful sneezing and blowing of nose.
b. Bigger ostium size
c. ENT surgeon
2. Non perforation of nasal mucous memb.
3. Displacement or misplacement of implant.
4. Blockage of implant by mucous/blood.
5. Infection.

COMPARISON WITH DCR

¢ Time 15-20 minutes.
¢ Nasal packing not required.
¢ Can be done in children.
¢ Tissue handling & bleeding less.
¢ Medial palpabral ligament not cut.
¢ Ostium size 3-4mm.
¢ Hospitalization not required.
¢ Can be repeated in failed cases.

MODIFIED IMPLANT DCR

The newly fashioned ostium is painted with 0.04% Mitomycin C for 3 mins.
The collar of the implant is encored with the sac.
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Though the external DCR.still remains the gold standard by which other methods are compared, Intubation DCR.is becoming the treatment of choice for NLD obstruction as it is simple,quick and more effective surgical procedure.