Modified lateral tarsal strip for lagophthalmos in leprosy patients.

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Introduction

- Potentially Blinding Lesions are mainly:
  - Lagophthalmos.
  - Cataract.
  - Corneal problems.

- About 5% of multibacillary and 2% of paucibacillary patients have lagophthalmos

- 290,000 worldwide.
• Prevention is the best method for control.
• This can be achieved by:
  - Anti-leprosy (MDT) therapy.
  - Early & proper steroid treatment of reactions and facial patches.
• Surgery is the only method of managing lagophthalmos to avoid corneal damage.
• Which procedure?

The ideal procedure

• Effective
• Technically simple: ophthalmic assistants
• One stage: no physiotherapy, no additional surgery.
• Inexpensive to perform (terms of supplies & time)
• Good cosmesis
The ideal procedure is not available

- Several procedures are in practice:
  - Tarsorrhaphy
  - Temporalis transfer
  - Horizontal lid shortening (LTS)
  - Lid suspension / loading
- Advantages & disadvantages of each well-documented

Systematic approach to lagophthalmos surgical delivery
(experience from Egypt)

- Partners:
  - Leprosy Control Department, Ministry of Health.
  - Caritas
  - Al Noor Foundation
  - Kilimanjaro Centre for Community Ophthalmology
1st stage

- Health Education and Training of:
  - Leprosy Doctors (47).
  - Leprosy Nurses (54).
  - Leprosy Social Workers (20).
  - Several sessions,
  - Covering 25 governorates (over 60 m population)
  - Basic eye problems, basic eye care, referrals

1st stage

- About 4500 patients were examined.
- Data was collected regarding eye problems and leprosy condition and treatment.
- Data integrated with sheet at MOH.
- Data Analysis.
Plan of action for a PAL with lagophthalmos: Role of the Leprosy doctor

PAL with Lagophthalmos on forced closure
- Duration < 6 months

- >3 mm exposure
  - Refer for consideration for surgery
  - Steroid regime
    - Cured
    - Not Cured

- <3 mm exposure
  - Corneal exposure?
    - Yes
      - Refer for consideration for surgery
    - No
      - Cosmetic problem
        - Yes
          - Refer for consideration for surgery
        - No
          - Patient blind in other eye
            - Yes
              - Continue “think blink”, ointment, sunglasses
            - No

- Refer for consideration for surgery
- Duration < 6 months

2nd Stage

- 2000-04.
  - Lagophthalmos surgery centre established
  - Nationwide coverage
  - Over 300 operations done so far.

- Modified lateral tarsal strip procedure was done in all patients either alone or in combination with lateral canthoplasty and / or medial canthopexy.

- The degree of lid closure was assessed pre- and post- operatively and compared.
Findings

• The procedure was simple with no major complications or prolonged rehabilitation period.

• Over 80% of patients achieved a reduction of the lid gap of 3 mm. or more.

• Complete closure was attained in 50%

• About 15% needed an adjunct procedure.

Findings

• The amount of closure achieved varied inversely with the period of lagophthalmos.

• Older age and not receiving steroids at the onset of lagophthalmos were risk factors for a less favourable outcome.
Advantages of Modified Tarsal Strip Procedure

- Simple procedure, rapid improvement.
- One stage in most cases, yet can be repeated.
- A lateral tarsorrhaphy can be done in addition.
- Corrects associated ectropion or entropion (beneficial in trachoma patients)
- Cost-effective (instruments, sutures, medications)
- Good cosmetic result

Disadvantages

- Less effective in most severe cases: gap > 4-5mm
- Less effective in long standing cases
Recommendations

- Develop training manual for modified tarsal strip procedure
- Discontinue use of tarsorrhaphy, except as emergency procedure
- Include training of modified tarsal strip procedure in ophthalmology residency training programme and ophthalmic clinical officer training programme