DISCUSSION

One hundred cases of chronic dacryocystitis were operated, out of which 80 cases were followed-up for a period of 3-6 months.

Out of 80 cases, 20 cases were operated by conventional method of D.C.R. and rest 60 cases by D.C.R. implant & D.C.T. with implant.

In Conventional Method of D.C.R.:

Complete patency was observed in 15 cases (75%) and partial patency in 3 cases (15%), and 2 cases (10%) were labelled complete failure.

In D.C.R. Implant:

Out of 80 cases of chronic dacryocystitis, 50 cases were operated by D.C.R. with Implant method, of which 45 cases (90%) were having complete patency in post-operative follow-up, 3 cases (6%) as partially patent and 2 cases (4%) were found complete failure.

In D.C.R. Implant where D.C.T. was already done:

Out of 80 cases of chronic dacryocystitis, 10 cases were operated by D.C.R. implant where D.C.T. was
already done. In these cases, 7 cases (70%) were having complete patency, in 2 cases (20%) as partial patency and in 1 case (10%) was found complete failure.

We have analysed these cases and tried to find out the possible causes of failure and other post-operative problems under following headings.

Age and Sex:

In our study we found 20 cases in age group of 11-20 years, 30 cases in 21-30 years, 20 cases in 31-40 years, 6 cases in 41-50 years and only 4 cases in 51-60 years of age as shown in Table No. I.

The peak incidence of the disease in female occurred in 21-30 years of age. This difference was due to the fact that specific infections are common in males while females are suffered from chronic irritation due to smoke and their daily household activities.

In our study highest incidence of dacryocystitis was found in the age group of 21-30 years. But according to "Duke Elder" (1961) highest incidence of dacryocystitis was reported in the age group of 15-20 years. Besides dacryocystitis in the newborn, the disease affects preferentially adults over middle life and can occur in advanced stage.
S.R.K. Malik (1969) found that average age in females was 35 years and in males it was 23 years. The highest incidence in females was in age group of 30–40 years, whereas, in males it was in late twenties.

Duke Elder's (1961) ratio of males and females was 1:3, however, in our study, male & female ratio observed in 1:2 (male patients were 23 cases (28.75%) and female patients were 57 cases (71.25%).

It is usually said, this very preponderence for the female is due to a narrower lumen of the bony lacrimal canal (Meller, 1929; Ruiz Bananco and Martinez Roman, 1966 and others).

Saha et al (1967) also found that the incidence of lacrimal passage pathology was more in females. Malhotra et al (1984) also observed that females were more affected than males.

**Side Involvement of Eyes**

In our study of 80 cases of chronic dacryocystitis 71 cases (88.75%) had unilateral involvement, whereas 9 cases (11.25%) had bilateral involvement of the eyes. The left eye was more frequently involved in 44 cases (55%) than the right eye (27 cases, 33.75%) as shown in table No. II. Malik et al (1969) and later on Mukherjee, P.K. and Jain, P.C. (1972) also reported that left side
was more commonly involved than right side. There is no explanation for the kind of behaviour.

**Presenting symptoms:**

In this study of 80 cases of chronic dacryocystitis, the symptom of inflammation of lacrimal sac and duct presented many variations, as shown in table III. We found that in 50 cases there was watering only, in 15 cases mucopurulent discharge and in 5 cases mucopurulent discharge with watering was the chief complaints. But in 5 cases mucopurulent discharge was associated with swelling over sac. In 3 cases swelling was associated in surrounding region also. In two cases mucopurulent discharge was associated with fistula.

The most common symptoms was mucopurulent discharge with watering which were present in 87.5% cases.

**Associated Diseases:**

Correlation of chronic dacryocystitis with associated diseases is shown in table IV. There is little doubt that the spread of infection from the neighbouring structure frequently determines the onset of inflammation, diseases of neighbouring bones and tissues, which may spread to sac. In our study 15% cases were found having deviated nasal septum and highest incidence was of hypertrophied nasal mucosa (80%).
Similarly, sinus diseases has a close relation with lacrimal inflammation. In our study 40% of cases reported were affected by maxillary sinusitis. It is probable that the infection spreads either by lymphatic pathway or other sources.

Conjunctival infection spreads directly but all the evidence points go to its rarity. In our study 65% cases were reported having conjunctivitis. But the infiltrating diseases such as trachoma also causes infections. General infections and general diseases are occasionally responsible for the onset of chronic dacryocystitis, as is indicated in influenza, scarlet fever, diphtheria, chickenpox or smallpox (Magaillan and Marenon, 1923; Mukherjee et al, 1969).

**Bleeding occurred during operation**

Bleeding during operation was more in cases where D.C.R. operation by conventional method was done as shown in Table V. We operated 20 cases by conventional D.C.R. method and out of 20, in 10 cases (50%) bleeding occurred during operation. Because due to the bony opening and sometimes destruction of nasal mucosa chances of bleeding is more. As compared to D.C.R. with implant where only 2 (4%) cases had bleeding (mild) and D.C.R. with implant 10 cases after D.C.T. operation was already done. Out of 10 cases, in 2 cases (20%) bleeding occurred during operation.
There was no incidence of post-operative abscess formation / or granulation seen in our series.

**Incidence of obstruction of bony opening:**

In our study due to obstruction of bony opening drainage occluded in three cases in conventional D.C.R. method, in which deviated nasal septum was associated. No such occlusion of drainage was reported in D.C.R. implant method, but 2 cases were reported in cases where D.C.T. was already done, as shown in Table VI.

**Incidence of Expulsion of Nasal Implant:**

In D.C.R. with implant, 60 cases was performed and out of these cases not a single case of implant expulsion.

**Patency of Naso-lacrimal duct:**

Patency of duct was seen in 67 cases of total cases as shown in table VII. High patency was seen in D.C.R. implant 45 cases (90%). Patency with conventional D.C.R. was seen in 15 cases (75%). In three cases, partial patency was seen in conventional D.C.R. method (15%) and with D.C.R. implant in 3 cases (6%). Patency with D.C.T. with implant was seen in 7 cases (70%) and partial patency in 2 cases (20%). The failure patency
was seen in total 5 cases out of which 2 cases (10%) were noted in conventional D.C.R. and 2 cases in (4%) D.C.R. implant and one case (10%) was seen where D.C.T. has already been done as shown in table VII.

Bowman (1957) used probing usually fails in establishing patency. Summerskill (1952) used polythene intubation in 80 cases but results of patency were 80%. Singh & Gary (1972) and later on Mukherjee in 1972 tried polythene intubation in 44 cases but success rate was 40%. The success rate of D.C.R. was 80 - 90% (Stallard, 1973) while 9% suffers from recurrence.

The idea of keeping the naso-lacrimal duct patent with a tube is not new. Valesstín-Gamazo (1957) reported 15 cases but there was 1 failure. Dejan (1955) achieved uniformity good results. Le-Grand (1957) reported 16 cases but got 100% failure.

Jogelkar (1978) observed 95.34% success rate by D.C.R. method. Pradeep, B. and Rajendra Babu (1983) observed complete patency in 17 cases while 2 cases were having partial patency and one case as failure. Maria, D.L. & V.S.K. Balburkar (1983) observed 78% success rate, partial patency in 12% cases and failure in 10% cases. Guillermo-Pico (1971) performed 121 operation by D.C.R. method and there were only 4 failures.
Pawar and Pateil (1987) from Nagpur Medical College, used Pawar Implants with a success rate of 95%.

In our study, out of 60 cases of D.C.R. with Implant, used Pawar Implants and achieved a success rate of 57 cases (95%).

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