

Introduction

Toti had originally described Dacryocystorhinostomy (DCR) procedure in 1904. His technique did not make use of mucosal flaps. In 1921 Dupuy-Dutemps and Bourguet recommended suturing the nasal mucosal flaps and lacrimal sac flaps together (*Hughes, 1986 and Werb, 1986*). Since that time, external dacryocystorhinostomy has been accepted as a highly successful procedure in dealing with epiphora from nasolacrimal duct obstruction (*Liao et al., 2000*).

The aim of dacryocystorhinostomy (DCR) is to create a new drainage pathway bypassing nasolacrimal duct obstruction. In external DCR, a large bony window is opened in the lateral nasal wall, and a mucosal anastomosis is created between the lacrimal sac and the nasal cavity (*Bosshard, 1981*).

Many techniques have been described for performing successful DCR (*Vanhoucke et al., 1990*). The patency of the passageway from the internal common punctum through the osteotomy site into the nasal cavity is usually the limiting factor in the success of the DCR (*Tenzel et al., 1991*).

Tarbet and Custer, in a retrospective study reported a success rate with primary and revised external dacryocystorhinostomies of 95% immediately postoperative and 89% at one year after surgery (*Tarbet and Custer, 1995*).

Pico stated, “in every instance, the cause of failure was found at the secondary surgery to be an obstruction of the new drainage channel by an occluding membrane, which on histological examination was shown to be composed of organized granulation tissue” (*Pico, 1971*).

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Allen and Berlin, reported 20 failed dacryocystorhinostomies. The main causes of surgical failure were fibrous tissue growth, scarring, and granulation tissue formation, which decreased or compromised the created surface area of the osteotomy site (*Allen and Berlin, 1989*).

Linberg et al showed that an appropriately large osteotomy made during surgery can narrow down to final size of approximately 2 mm due to tissue growth (*Linberg et al., 1982*).

Yazici and yazici, in 2003, confirmed that after successful dacryocystorhinostomy there was no significant correlation between the sizes of the intraoperative bony opening and the final nasolacrimal ostium, which usually contracts into a relatively small ostium (*Yazici and Yazici, 2003*).

Some Modifications of the standard dacryocystorhinostomy technique had been described to improve the success rate of nasal ostium patency as using a self retaining nasolacrimal catheter to act as a stent at the osteotomy site (*Griffiths, 1991*) and applying mitomycin C to the osteotomy site to inhibit scar formation and maintain a large osteotomy size which may improve success rate over the traditional dacryocystorhinostomy procedure (*Liao et al., 2000*).