Dacryocystorhinostomy – external, endonasal and transcanalicular

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The history of dacryocystorhinostomy (DCR) is well known and has been retold frequently. The exceptionally successful ductal approach has remained essentially unaltered since its 19th century inception, with the notable exception of mucosal linings by Dupuy-Dutemps and Bourguet in 1922 and concurrent silicone intubation by Jones in 1962. There is little dispute that external DCR affords the greatest likelihood of resolving epiphora due to complete lacrimal duct obstruction when compared with endoscopic surgical approaches. Transcanalicular laser DCR represents one of many recent attempts to improve lacrimal surgery.

MATERIAL AND METHOD

The preoperative enrollment of patients included: epiphora related to lacrimal pathway obstruction, positive fluorescein dye test, obstruction in probing. Dacryocystography was made in most cases. A small number of analyzed endoscopic surgery were due to lack of a diode laser at the moment of examination's beginning. Subjects with lacrimal sac and duct obstruction were listed for endonasal dacryocystorhinostomy or transcanalicular reconstruction of the lacrimal drainage with the use of the diode laser. Posttraumatic or canaliculal lacrimal drainage obstruction was disqualified. Also anamnyses in DCG (diluvetum), pathological palatine (polyps, granulation tissue, Wegener's disease) were disqualified. All lacrimal drainage systems were intubated using Crawford's sonde. 3 months after surgery Crawford's sonde was removed.

POSTOPERATIVE CARE

Topical antibiotic/steroid eye drop for 14 – day course, systemic antibiotics for 5 days, endoscopic inspection of surgical site after 1 month and 3 months, lacrimal irrigation to assess fistula patency once a month. Endonasal and transcanalicular with the use of the diode laser procedures were performed with patients under local anesthesia, EXT DCR under general anesthesia.

Complete therapeutic success:
1. Complete reduction of epiphora 2. Jones test positive in endoscopy 3. Osteotomy > 1.5 mm
Partial therapeutic success:
1. Intermittent epiphora 2. Patent fistula during lacrimal irrigation 3. Osteotomy < 1.5 mm
Failure rate:
1. Epiphora 2. Fibrosis of the osteotomy

Intraoperative and postoperative complications in DCR were: intraoperative bleeding, cicatric, surgical emphysema, removal of intubation. Intraoperative bleeding was an intraoperative complication in endonasal DCR. In LDCR there were no complications.

CONCLUSIONS

The allure of incision-sparing surgery and shortened convalescence continues to produce innovations in lacrimal surgery. Although myriad techniques and lasers have been explored, success rates for laser DCR continue to range from 50% to 85% for one procedure. Clearly, neither Transcanalicular laser DCR nor any other endoscopic technique has consistently matched the success rate established for external DCR. Continued advances in technology and technique, such as endonasally deployed ostium collars, innovative lacrimal stents, antimetabolites, and greater laser availability, will likely bring this simple approach to the forefront of lacrimal surgery.

REFERENCES


THE HISTORY OF DCR

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