

Transcanalicular Laser Dacryocystorhinostomy for Acquired Nasolacrimal Duct Obstruction: An Audit of 104 Patients

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Background: The current gold standard in the treatment of acquired nasolacrimal duct obstruction still being external dacryocystorhinostomy (DCR), many advances have been made towards the development of modern minimally invasive therapies. These new techniques have proven to be less harmful to the patients' skin and medial palpebral structures with its palpebral-canalicular pump mechanism. Here, we report on our two-years-experience with the surgical technique, results and complications of transcanalicular laser assisted DCR.

Patients & Methods: A total of 104 patients with acquired nasolacrimal duct obstruction, underwent transcanalicular laser assisted DCR combined with bicanalicular silicone intubation. We then analysed intra- / postoperative complications as well as subjective and objective success rates.

Results: Transcanalicular laser assisted DCR in combination with bicanalicular silicone intubation could be performed surgically successful in 101 patients (97%). In three cases (3%) using the superior canalicular approach, positioning of the laser instrument at the anteroinferior rim of the middle turbinate failed due to a prominent superior orbital rim. Complications included thermal injury to the canaliculus in one, canalicular infection in two and silicone tube prolapse in ten cases. Functional success (defined as resolution of preoperative symptoms) was achieved in 80 cases (77%), functional failure occurred in 24 cases with all patients reporting persisting epiphora, 15 reporting failure to irrigate the nasolacrimal duct and 15 requiring secondary external DCR.

Conclusions: Laser assisted DCR shows promising results with few complications. It seems to be well suited as a second step procedure after failure of recanalisation and before external DCR.