INTRODUCTION

Dacryocystorhinostomy (DCR) is a surgical procedure to create drainage between the lacrimal sac and the nasal cavity.\(^1\,\,\)\(^2\) External DCR is the gold standard surgical method in the treatment of NLDO. It is cheap, the learning period is short, the success rate is high and doesn’t require high technology instruments.\(^3\) An inert and easily tolerable silicone material in DCR surgery was first described by Older.\(^4\) While some surgeons routinely use silicone tubes, the others prefer it for only complicated cases. It is believed that silicone tubes prevent the blockage of ostium.\(^5\)\(^,\)\(^6\) Although, it was reported as using silicone tube intubation was one of the most effective ways to increase the surgical success rate,\(^7\) it has been a controversial issue. Silicone intubation has been used to improve the success rate. Study aimed to compare the success rate of external dacryocystorhinostomy with and without silicon intubation.

MATERIAL AND METHODS

This study was conducted at district hospital Pulwama and sub district hospital Sopore, Kashmir, J&K in year 2016 and 2017. 223 patients were included in the study. Patients with acute dacryocystitis lacrimal abscess and stenosed canaliculi were excluded from the study. All patients were recruited from the outpatient department of district hospital Pulwama and SDH Sopore, Kashmir. All patients underwent a thorough ophthalmic examination and systemic evaluation for diabetes mellitus and hypertension. Patients having problems like blockage of the upper and lower canaliculi or common canaliculus, previous lacrimal surgery, post-traumatic dacryocystitis, NLD blockage and bony deformity were excluded from the study. Standard external DCR was performed on all patients, with suturing of the anterior flaps of the lacrimal sac and nasal mucosa and trimming of the posterior flaps of the lacrimal sac. The first dressing was changed after 24 hours and irrigation of the lacrimal passage was done to ascertain the patency of the newly formed ostium and to wash out any blood clots and debris in the passage. 70 patients were operated with silicon tube intubation n 153 patients operated without silicon tube. Patients were then followed after 7 days, one month and 6 months. Successful outcome was defined as resolution of epiphora and discharge and patency of the passage on syringing.

RESULTS

In total, 223 DCR procedures were performed on 223 patients. The patients, 129 (64.2%) females and 72 (35.8%) males, ranged in age from 9 to 73 years (mean 51.3±10.7). Age, sex, and side were found to have no statistical significance among groups (p≥0.05). The distribution of case characteristics among the 4 study groups are shown in Table 1. The mean follow-up period was 21 (range 6 to 36) months. Success rate was more in DCR with sti than DCR alone, total success rate with silicon tube intubation was 94.24% as compared to DCR alone with success rate 86.92%, with p-value (p>0.05) (table-2).

DISCUSSION

The aim of the present study was to prospectively evaluate the clinical outcome of patients with nasolacrimal duct obstruction treated with bicanalicular silicone intubation stenting. The demographic characteristics of our patient population were similar to those described by others. Nasolacrimal outflow obstruction is much more common in women than in men and is associated with advanced
age. From the general data, the majority of treated patients (64.2%) were female, and 35.8% was male. Stenting of the nasolacrimal drainage system with a silicone tube has been used in conjunction with DCR in cases expected to carry a higher risk of failure. The purpose of the stent in the nasolacrimal system is to prevent adhesion of the mucosal lining of the channels during the healing process and to maintain long-term patency after removal.

Success rate in patients with silicon tube intubation was found better than patients with DCR without silicon tube, success rate in patients with DCR with silicon tube intubation was 94.24% and success rate in patients with DCR without silicon tube intubation was found 86.23%, with p-value (p<0.05). In 2009, Kaçaniku, performed external DCR with silicone tube implantation in 41 out of 166 patients, and reported that the success rate was higher in the group with intubation (95.1%) compared to in the group without intubation (87.5%), but the difference was statistically insignificant. He proposed further prospective studies to confirm the beneficial effect of silicon intubation. In 2014, the same author studied in 106 patients and he used silicone tube only in 11 eleven patients who had common canaliculir obstruction. Silicone intubation is likely to improve outcomes in external dacryocystorhinostomy. We believe that the silicone intubation facilitate epithelialization of the DCR fistula. Baig et al. reported a success rate of 87.09% out of 62 procedures of external dacryocystorhinostomy with and without suturing the posterior mucosal flaps. Med Arch. 2009;25:82-6.

CONCLUSION

Our findings suggest that success rate was higher in dacryocystorhinostomy with silicone tube intubation, although results were not statistically significant. So to get better results silicon tube intubation should be done as it has additive effect, and few conditions like canaliculir blocks, punctal problems have more positive results with silicon tube.

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