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ORIGINAL ARTICLE

An Evaluation of Success Rate of Endoscopic Endonasal Dacryocystorhinostomy at Tertiary Care Hospital

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ABSTRACT

Objective: To evaluate the success rate of endoscopic endonasal dacryocystorhinostomy at tertiary care hospital.

Material and methods: Between July 2020 to December 2020, total 50 patients having age between 20-60 years, both gender, cases of epiphora, cases with evidence of obstruction were recruited from Department of ENT, DG Khan Medical Collge, DG Khan. Success of DCR was evaluated.

Results: Fifty cases were selected for this study. Age range was 20-40 years with mean age 38.80 ± 8.74 years. DCR was successful in 47 (94%) patients while in 3 (6%) patients surgery was not successful. Male patients were 35 (70%) while female patients were 15 (30%). Surgical success was noted in 33 (94.29%) male patients and 14 (93.33%) female patients. Insignificant (P = 1.00) association between surgical success and gender was noted.

Conclusion: In this study high success rate of DCR was noted. Males were prominent. Most of the patients were between 20-40 years and no association of success of surgery with age group and gender found.

Keywords: Dacryocystorhinostomy, Epiphora, Intubation, Chronic dacryocystitis

INTRODUCTION

Adult cases of nasolacrimal duct (NLD) obstruction are widely managed with Dacryocystorhinostomy (DCR).[1] By opening the middle meatus lateral wall and medial wall of lacrimal sac of the nasal cavity, the obstruction is bypassed.[2] Over the course of 100 years after being introduced the procedure have developed from external DCR to non-endoscopic endonasal surgery and then to modern-day endoscopic endonasal DCR.[3] Along with including steroids and leukotriene antagonists, methods such as intubation of lacrimal passages, post OP topical drugs and during operation use of mitomycin-C are implemented to increase success rate of DCR. .[4] endonasal techniques were inferior to external approach DCR in success rates but further advanced methods have made it possible to compare endoscopic DCRs and endonasal non-endoscopic in success rates.[5] In order for safer preservation of the lacrimal pump mechanism the Endoscopic DCR is recommended and it leaves no scar so it's more cosmetically acceptable while giving early post-operative recovery.[6] In both adults and pediatric patients, external DCR is used as an alternative.[7]

MATERIAL AND METHODS

Between July 2020 to December 2020, total 50 patients having age between 20-60 years, both gender, cases of epiphora, cases with evidence of obstruction were recruited from Department of ENT, DG Khan Medical Collge, DG Khan. Patients blow 20 years, patients with history of DCR, patients with congenital NLDO were excluded.

History was taken and clinical examination was done. Pre-OP work up was done and then all patients were underwent endoscopic endonasal DCR. Demographic and clinical profile of all the patients were noted on pre-designed proforma. After two months follow up success rate was assessed. Success of surgery was denoted by patency on probing or irrigation, resolution of symptoms on follow-up.

All the data was entered in SPSS version 20 and analyzed. Numerical data was presented as mean and SD while categorical data as frequencies.

RESULTS

Fifty cases were selected for this study. Age range was 20-40 years with mean age 38.80 ± 8.74 years. DCR was successful in 47 (94%) patients while in 3 (6%) patients surgery was not successful. (Fig. 1) Male patients were 35 (70%) while female patients were 15 (30%). Surgical success was noted in 33 (94.29%) male patients and 14 (93.33%) female patients. Insignificant (P = 1.00) association between surgical success and gender was noted. (Table 1) Two age groups (20-40 years and 41-60 years) were created. There were 41 (82%) patients in 20-40 group years while 9 (18%) in 41-60 years group. Surgery was successful in 40 (97.56%) patients and 7 (77.78%) patients of 20-40 years group and 41-60 years group respectively. Association between surgical success and age group was not significant (P = 0.079). (Table 2)

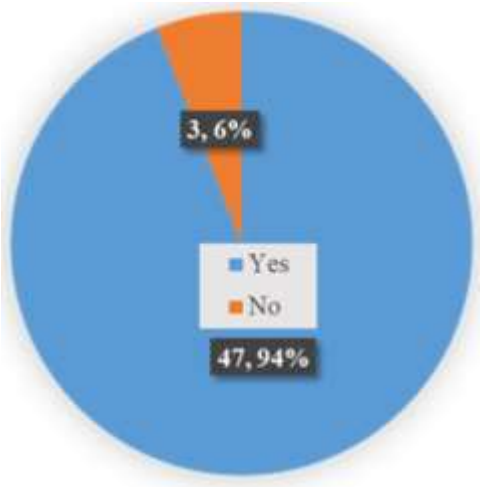

Fig. 1: Surgical success rate

Table 1: Association of success of surgery with gender

Gender	Surgical Success		Total (%)	P value
	Yes (%)	No (%)		
Male	33 (94.29)	2 (5.71)	35 (70)	1.00
Female	14 (93.33)	1 (6.67)	15 (30)	
Total	47 (94)	3 (6)	50	

Table 2: Association of success of surgery with age group

Age group	Surgical Success		Total	P value
	Yes	No		
20-40	40 (97.56)	1 (2.44)	41 (82)	0.079
41-60	7 (77.78)	2 (22.22)	9 (18)	
Total	47 (94)	3 (6)	50	

DISCUSSION

The measure for success is considered to be relief of symptoms in cases underwent DCR.[8,9] Literature describes plenty of different DCR techniques. The endoscopic surgical route can be performed

on both sides under local anesthesia while causing minimal postoperative discomfort and being cosmetically acceptable as it leaves no facial scars. Most of the bone removal is done in the initial operation and the scarred tissues planes of the orbit and lateral wall are avoided where the previous operation was an external DCR.[10]

Purpose of our study was to evaluate the success rate of DCR in cases underwent endoscopic endonasal dacryocystorhinostomy. Total 50 patients were selected for this study. Mean age was 38.80 ± 8.74 years with age range 20-60 years. Two age groups (20-40 years and 41-60 years) were created. There were 41 (82%) patients in 20-40 years group while 9 (18%) patients in 41-60 years group. Surgery was successful in 40 (97.56%) patients and 7 (77.78%) patients of 20-40 years group and 41-60 years group respectively. Association between surgical success and age group was not significant (P = 0.079). In study of Yang et al,[11] selected patients were between 16-84 years with mean age 47.1 ± 12.1 years which is little higher than our study. In study of Coumou et al[12] 442 patients were recruited for endoscopic dacryocystorhinostomy, mean age of the patients was 50.2 years. In study of Jawad et al,[13] age range was 25-66 years and mean age was 40.70±10.84 years. Total 19.1% patients were between 21-30 years, 38.3% were between 31-40 years, 25.5% patients were between 41-50 years, 14.9% patients were between 51-60 years and 2.1% patients were > 60 years. Ayoob et al[14] recruited total 50 patients for endoscopic dacryocystorhinostomy, between 15-60 years with 43.54 ± 9.36 years mean age. Most of the patient were between 31-50 years.

In our study, male patients were 35 (70%) while female patients were 15 (30%). Surgical success was noted in 33 (94.29%) male patients and 14 (93.33%) female patients. Insignificant (P = 1.00) association between surgical success and gender was noted. In sudy of Yang et al,[11] males and females were 59 and 211 respectivley which is not in accordance with this study. In study of Coumou et al,[12] out of 442 patients, female patients were 77.3% while rest were males. In study of Jawad et al,[13] female patients were 87% while male patients were 13%. In study of Ayoob et al,[14] out of 50 patients, males were 38% while females were 62%.

In our study, DCR was successful in 47 (94%) patients while in 3 (6%) patients surgery was not successful. In study of Yang et al[11] surgical success rate was 97.8% which is comparable with our findings. Coumou et al[12] reported success rate as 90.1% which is also in agreement with our study. In study of Jawad et al,[13] success of surgery was achieved in 97.9% patients. Of them, total 78.7% patients were completely symptom free, 19.1% patients were partially symptomatic. In study of Ayoob et al[14] endoscopic dacryocystorhinostomy was performed among 50 patients, surgery was found successful among 92% patients with follow up time 6 months. Zaman et al[15] reported success rate as 95%, Tan et al[16] as 95%, Kakar et al[17] as 90%, Yung et al,[18] 93% Massegur et al[19] as 92.7%

CONCLUSION

In this study high success rate of DCR was noted. Males were prominent. Most of the patients were between 20-40 years and no association of success of surgery with age group and gender found.

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