

Complications of Endoscopic Examination in Patients at Idris Teaching Hospital Sialkot

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ABSTRACT

Objective: To study Complications Of Endoscopic Examination In Patients At Idris Teaching Hospital Sialkot.

Study Design: Experimental and observational study

Place and Duration of Study: This study was conducted at the Idris Teaching Hospital Sialkot during Jan 2018 to July 2019.

Materials and Methods: This study comprises 1021 patients undergoing endoscopic examination. The demographic data and complications during endoscopic examination were noted down and lab tests were also advised for example hepatitis A, B and C HIV. Written informed consent was also taken from every patient before the start of the endoscopic examination. The Permission of ethical committee was also considered before collection of data and get publishing in the medical journal. The results were analyzed on SPSS version 10.

Results: Mean Age was 45.34 years and SD(standard deviation) was 16.23 years. At the age of 10-20years, there were 50(10.18%) male and 51(9.62%) female of endoscopy were included in this study. At the age of 21-30 years there were 101(20.57%) male and 85(16.04%) females. At the age of 31-40 years there were 100(20.36%) male and 75(14.15%) female, At the age of 41-50 years there were 101(20.57%) male and 130(24.52%) female, at the age of 51-60 years there were 25(5.09%) Male and 75(14.15%) female. At the age of 61-70 years there were 75 (15.27%) male and 85(16.04%) female, at the age 70 years and above there were 35(7.12%) Male and 29(5.47%) females patients were included in the study. It was observed that female patients of endoscopy were more prevalence than male patients. There were 17(3.46%) Male and 15(2.83%) female patients were found in bleeding during endoscopic examination, the perforation was found in 07 (1.42%) Male and 06(1.13%) Females. The hepatitis A 15(3.05%) Male and 07(1.32%) Female, the hepatitis B 13(2.64%) Male and 03(0.56%) females, the hepatitis C were 18(3.66%) Male and 13(2.45%) female and HIV 02(0.41%) male and 00(00%) female patients.

Conclusion: Endonasal endoscopy without stent is considered as effective, safe and minimally invasive primary procedure for the treatment of nasolacrimal duct obstruction. This procedure has fewer complications and is well tolerated by the patient. In this procedure there is minimum damage to anatomical structures. Mutual efforts by Ophthalmologists and Otorhinologist made endonasal DCR a good alternative to external DCR with high success rate and comparable outcomes. Regular follow up are required to evaluate the process of wound healing and early detection of complications leading to failure of the procedure.

Key Words: Complications, Endoscopy, Hepatitis A, B and C, HIV, Demographic data

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INTRODUCTION

Nasolacrimal duct obstruction most commonly presents with epiphora,^{1,2} other symptoms are discharge from the eyes and swelling over the sac area.

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Watering due to nasolacrimal duct obstruction causes much disturbance for the patient but is not a serious problem. It is generally unilateral. Symptoms persist if the condition is not treated and may predispose to chronic or acute dacryocystitis.³ Conservative treatment like massage over the sac area does not relieve the symptoms. Syringing and probing also does not help but sometimes causes temporary relief of symptoms in patients with incomplete blockage of nasolacrimal duct. Treatment of nasolacrimal duct obstruction is dacryocystorhinostomy.^{1,4,5}

As cited by Tan NC et al 2009; Mortimore S et al 1999, Toti in 1904 first described the procedure of external dacryocystorhinostomy.^{5,6} External dacryocystorhinostomy is a gold standard traditional surgical approach to treat nasolacrimal duct obstruction.^{3,7} Success rate of other techniques is measured and compared with this method.³ Most Ophthalmologists

believes that external dacryocystorhinostomy provides highest success rate as compared to other techniques.⁷ As cited by various studies intranasal dacryocystorhinostomy was first described by Caldwell in 1893.^{5,6,8,9} Intranasal technique remained limited at that time due to poor visibility of intranasal anatomy. This technique gained popularity after introduction of high resolution fiber-optic endoscopes and rigid endoscopes with different degrees of angulations.¹⁰ As cited by Tan NC et al 2009; Mortimore S et al 1999, McDonogh and Meiring introduced endoscopic trans-nasal dacryocystorhinostomy in 1989.^{5,6}

Various changes in surgical procedure of dacryocystorhinostomy have been introduced to acquire a good surgical success rate.¹ Basic concept of various procedures is to create a fistula between lacrimal sac and nasal cavity for the drainage of tears.^{6,8}

Endonasaldacryocystorhinostomy is a surgical technique in which a fistula is created from inside the nasal cavity.⁸ It can be performed surgically using drill or rongeur to remove the bone or by laser.⁹

This procedure is now regularly being done at Ziauddin University Hospital, Keamari, Karachi. Our aim was to see the outcome and complications of endoscopic DCR at our center.

MATERIALS AND METHODS

This study comprises 1021 patients undergoing endoscopic examination. The demographic data and complications during endoscopic examination were noted down and lab tests were also advised for example hepatitis A, B and C HIV. Written informed consent was also taken from every patient before the start of the endoscopic examination. The Permission of ethical committee was also considered before collection of data and get publishing in the medical journal. The results were analyzed on SPSS version 10 .

RESULTS

Mean Age was 45.34 years and SD(standard deviation) was 16.23 years. At the age of 10-20years , there were 50(10.18%) male and 51(9.62%) female of endoscopy were included in this study. At the age of 21-30 years there were 101(20.57%) male and 85(16.04%) females. At the age of 31-40 years there were 100(20.36%) male and 75(14.15%) female, At the age of 41-50 years there were 101(20.57%) male and 130(24.52%) female , at the age of 51-60 years there were 25(5.09%)Male and 75(14.15%) female , At the age of 61-70 years there were 75 (15.27%) male and 85(16.04%) female, at the age 70 years and above there were 35(7.12%) Male and 29(5.47%) females patients were included in the study. It was observed that female patients of endoscopy were more prevalence than male patients as shown in table 1.

Table No. 1: Age and Gender Distribution in Patients undergoing Endoscopic Examination

Sr.No.	Age	Male	Female
1	10-20	50(10.18%)	51(9.62%)
2	21-30	101(20.57%)	85(16.04%)
3	31-40	100(20.36%)	75(14.15%)
4	41-50	101(20.57%)	130(24.52%)
5	51-60	25(5.09%)	75(14.15%)
6	61-70	75(15.27%)	85(16.04%)
7	70 and above	35(7.12%)	29(5.47%)
Total		491(100%)	530

Table No. 2: Complications In Patients undergoing Endoscopic Examination

Sr. No.	Complications	Male	Female
1	Bleeding	17(3.46%)	15(2.83%)
2	Perforation	07(1.42%)	06(1.13%)
3	Hepatitis A	15(3.05%)	07(1.32%)
4	Hepatitis B	13(2.64%)	03(0.56%)
5	Hepatitis C	18(3.66%)	13(2.45%)
6	HIV	02(0.41%)	00(00%)
7			

There were 17(3.46%) Male and 15(2.83%) female patients were found in bleeding during endoscopic examination , the perforation was found in 07 (1.42%) Male and 06(1.13%) Females. The hepatitis A 15(3.05%) Male and 07(1.32%) Female , the hepatitis B 13(2.64%)Male and 03(0.56%) females , the hepatitis C were 18(3.66%) Male and 13(2.45%) female and HIV 02(0.41%) male and 00(00%) female patients as shown in table no 2.

DISCUSSION

Endoscopy have some advantages compared to external endoscopy. There is no skin incision, minimum tissue injury which is limited to the fistula site, short hospital stay, rapid rehabilitation and patient's preference.^{2,8,9,11,12} Endonasal technique requires time to acquire expertise of using endoscope, i.e. steep learning curve and high equipment cost.¹¹

Proper pre-operative examination of nasal cavity is important for patient selection for this procedure. Nasal septum deviation causing narrow nasal cavity at the neo-ostium, connective tissue disorder,sarcoidosis, chronic sinus disease, mucocoele, previous external endoscopy or other nasal surgery are the pre-operative risk factors.¹¹ Severe nasal deformity and scarring of nasal mucosa are the basic contraindication for endonasal endoscopy.¹¹

In this study There were 17(3.46%) Male and 15(2.83%) female patients were found in bleeding during endoscopic examination , the perforation was found in 07 (1.42%) Male and 06(1.13%) Females . The hepatitis A 15(3.05%) Male and 07(1.32%) Female ,

the hepatitis B 13(2.64%) Male and 03(0.56%) females , the hepatitis C were 18(3.66%) Male and 13(2.45%) female and HIV 02(0.41%) male and 00(00%) female patients.

No intra operative complications were observed in our study. In the literature, bleeding from the nasal cavity occurs if there is extensive damage to the lacrimal sac mucosa or mucosa of the nasal septum^{7,10}, Orbital injury, especially when too much of the soft tissue is removed while removing the medial wall of the lacrimal sac⁷, recurrent infection if the bone covering the lower part of lacrimal sac is not removed completely⁷ are the complications of endonasal DCR.

Post-operative outcomes like relief of the symptoms of epiphora, patency of ostium opening into the lacrimal sac positive Jone's dye test are indicators of successful surgery.^{6,11} By and large endonasal DCR without stent is an effective and safe method to treat nasolacrimal duct obstruction.

CONCLUSION

Endonasal endoscopy without stent is considered as effective, safe and minimally invasive primary procedure for the treatment of nasolacrimal duct obstruction. This procedure has fewer complications and is well tolerated by the patient. In this procedure there is minimum damage to anatomical structures. Mutual efforts by Ophthalmologists and Otorhinologist made endonasal DCR a good alternative to external DCR with high success rate and comparable outcomes. Regular follow up are required to evaluate the process of wound healing and early detection of complications leading to failure of the procedure.

Author's Contribution:

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Conflict of Interest: The study has no conflict of interest to declare by any author.

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