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Original article

Dacryocystorhinostomy in adolescents and young adults☆

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ABSTRACT

Objective: To study the relative frequency, causes, anatomical and functional outcomes and complications of dacryocystorhinostomy (DCR) in patients between the second and fifth decade of life.

Method: A retrospective, nonrandomized, interventional study of a clinical series of 12 patients who underwent DCR from March 2007 to March 2009, performed by a single surgeon, with an age range between 10 and 48 years. Recorded data included age at surgery, date of surgery, gender, affected side, cause of obstruction, surgical technique, outcome, and complications. The relative frequency of such cases over the total was calculated.

Results: DCR in patients between 13 and 48 years old represented 14.11% of the total (12:85). In this group 88.8% were females and in 75% surgery was on the right side. The most frequent cause of obstruction was low idiopathic obstruction (58.33%) whereas 41.66% were secondary. An external DCR was performed on 66.67% of patients and the rest were endonasal DCR. Anatomical success was achieved with resolution of symptoms in 91.6% of patients. One case had a hypertrophic scar.

Conclusion: Adolescents and young adults represent a significant percentage of cases undergoing DCR surgery. Both the external and endoscopic approaches are shown to be valid alternatives for treating these patients, with good results and low incidence of complications.

Dacriocistorrinostomía en adolescentes, jóvenes y adultos

Palabras clave:
Dacriocistorrinostomía
Obstrucción del conducto nasolagrimal
Jóvenes

RESUMEN

Objetivo: Estudiar la frecuencia relativa, causas, resultados anatómicos, funcionales y complicaciones de la dacriocistorrinostomía (DCR) en pacientes entre la segunda y quinta décadas de la vida.

Método: Estudio retrospectivo, no aleatorizado, intervencional de una serie de casos clínicos, de 12 pacientes intervenidos de DCR desde marzo de 2007 hasta marzo de 2009, realizadas por un cirujano único, con un rango de edad comprendido entre los 10 y los 48 años. Registrándose edad, día de cirugía, género lateralidad, causa de la obstrucción de conducto

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nasolagrimal (OCNLG), técnica quirúrgica, resultado de la intervención y complicaciones. Se calculó la frecuencia relativa de estos casos respecto del total.

Resultados: La DCR en pacientes entre 13 y 48 años representaba el 14,11% del total (12:85). En este grupo el 88,8% eran mujeres y en la cirugía el 75% estaba en el lado derecho. La causa más frecuente de obstrucción fue la obstrucción baja idiopática (58,33%), mientras que 41,66% eran secundarias. En el 66,67% de los pacientes una DCR externa se llevó a cabo y el resto fue DCR endonasal. En el 91,6% de los pacientes se logró éxito anatómico con la resolución de los síntomas. Un caso presentó cicatriz hipertrófica.

Conclusión: Los adolescentes y adultos jóvenes representan un porcentaje significativo de casos que reciben cirugía DCR. Tanto el abordaje externo como el endoscópico representan una alternativa válida para el tratamiento de estos pacientes con buenos resultados y baja incidencia de complicaciones.

Introduction

Nasolachrymal duct obstruction (NLDO) is the most frequent form of lachrymal obstruction. Its prevalence gradually increases at age 40, with a faster growth after 60 and a relative frequency of 20.2 per 100,000 inhabitants in the general population.[1] The risk factors described for this disease include Caucasian race (particularly Mediterranean), increased with age, female sex 4–5:1 and low socioeconomic level (perhaps due to less hygiene).[2,3]

As regards etiology, the most frequent cause of NLDO is an evolutionary stenosis in the elderly and an idiopathic stenosis in young people and adults. Other causes include nasosinusal traumatism, lachrymal duct or sac neoplasia, foreign bodies, bone anomalies, inflammatory diseases such as sarcoidosis or Wegener's disease, and reconstruction of orbitary or facial fractures.[2]

The usual treatment is dacryocystorhinostomy (DCR) with various approaches, with external DCR being utilized typically with successful results in approximately 90–95% of cases. Other approaches such as endonasal endoscopic DCR or laser endocanalicular DCR are alternatives to external approaches.[3,6]

There are very few studies about NLDO in teenagers, young people and adults. The majority of series comprise elderly patients or focus on obstructions in children.[4–6] However, very few studies have been made on the low lachrymal pathway obstruction problem in this age group.

The purpose of this study is to assess the relative frequency, the anatomic and functional results as well as the complications of DCR in patients between the second and fifth decade of life. An additional purpose is to determine in this group of patients the causes and sites of lachrymal pathway drainage system obstruction problems.

Subjects, material and methods

A retrospective, nonrandomized, interventional study of a series of consecutive clinical cases operated for DCR in 2 hospitals between March 2007 and March 2009. The clinical records of old external or endonasal DCR performed during said period of time by a single surgeon, selecting those of patients with an age range comprised between 10 and 48 years, both inclusive.

The nasolachrymal duct obstruction diagnostic was made on the basis of the epiphora clinics, with or without a history of acute dachryocystitis and the presence of reflux in the lachrymal pathway irrigation. All the patients underwent a complete assessment with slit lamp and palpebral exploration. The 2 patients with distal canalicular obstruction were diagnosed by means of probes.

The cases in which endonasal surgery was indicated were also explored by the ENT specialist to assess the nasal cavities.

After performing the surgical indication of the treatment, the patient was given the choice of external DCR or endoscopic endonasal DCR, explaining the advantages and drawbacks of each technique. If a previous endocanalicular DCR had failed, the external DCR was indicated. Bicanalicular intubation was made with silicone tubes in all patients and withdrawn after 2–3 months. In endonasal DCR or reinterventions mitomycin C was utilized.

All of the interventions were performed as major outpatient surgery with local anesthesia and sedation.

The post-operation treatment consisted in the instillation of antibiotic–corticoid eyedrops (tobramicine–dexamethasone) 3 times a day for 15 days, followed by a descending posology associated or not to corticoid nasal spray 3 times a day for one month.

The follow-up visits were scheduled at week one, month one and month 3 after the intervention, assessing the patency of the duct and the presence or absence of complications.

The relative frequency of these cases was compared against the overall number of cases.

Results

Of the 85 DCR performed in the period between March 2007 and March 2009, 14.11% were in patients with a mean age of 36.75 years and a range between 13 and 48 years. Of this group, 83.33% were female (10:2) and in 75% of cases the surgery was performed on the right side (9:3).

The most frequent cause of surgery was idiopathic NLDO in 58.33% of cases (7:12), but a significant percentage (41.66%) was due to other causes such as nasal–orbitary traumatism (1:12), synechiae in the nose with deviation of the nasal