UK survey of the present role of ear, nose and throat surgeons in lacrimal surgery

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ABSTRACT

INTRODUCTION The objective of this study was to evaluate the current involvement of ear, nose and throat (ENT) surgeons in lacrimal surgery.

SUBJECTS AND METHODS A postal survey was distributed to 796 practicing UK consultant otorhinolaryngologists listed at the drfoster website.

RESULTS Overall, 531 questionnaires were returned, giving a response rate of 66.7%. Of these, 108 (20.6%) respondents indicated they were involved in lacrimal surgery. The majority of otolaryngologists seem to work in collaboration with ophthalmologists. In our survey, 98% (106) perform endoscopic dacryocystorhinostomy (DCR). Most respondents believed lacrimal intubation and dilation to have limited success, endoscopic DCR to have moderate success and external DCR to have high success.

CONCLUSIONS Lacrimal surgery is carried out in a spirit of collaboration with ophthalmologists rather than competition.

Endoscopic DCR is the favoured surgical procedure of otolaryngologists. The perceived success rate for endoscopic DCR reported in this survey coincides with that reported in the literature.

KEYWORDS

Lacrimal surgery – Endoscopic dacryocystorhinostomy – External dacryocystorhinostomy

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Lacrimal surgery is emerging as a popular field shared between ophthalmologists and otorhinolaryngologists for the management of epiphora. The mainstay of treatment for acquired nasolacrimal system obstruction is dacryocystorhinostomy (DCR), which traditionally has been performed by ophthalmic surgeons utilising an external technique.¹ However, with the recent advances in endoscope engineering, endoscopic dacryocystorhinostomy² has increased in popularity.

This shift in treatment of acquired nasolacrimal system obstruction, particularly from one medical specialty to another, has not been without controversy. Many ophthalmologists purport the advantages of the external technique, whereas many otorhinolaryngologists purport the endoscopic technique. In some regions, there seems to be a battle to maintain control over the management and workload of nasolacrimal duct obstruction, whereas in many other regions it seems that ophthalmologists and otorhinolaryngologists share clinical care and treatment of these conditions.

The aim of the present survey was to ascertain the current involvement of ear, nose and throat (ENT) surgeons in lacrimal surgery. How many ENT surgeons undertake this type of work? How many investigate and treat patients themselves? What repertoire of treatments do ENT surgeons offer their patients with epiphora?

To our knowledge, no such survey has been conducted previously in the UK.

Subjects and Methods

The survey was conducted using a single, especially designed questionnaire. The forms were distributed by post to every UK consultant otolaryngologist listed on the drfoster website.³ Each form was sent with a stamped, self-addressed envelope to optimise response rate. Where no response was received, a further letter was sent by post. The survey was completed over 10 months (April 2008 to February 2009). The questionnaire consisted of seven questions (Appendix 1).

Results

Of the 796 questionnaires posted, 531 were returned giving a response rate of 66.7%. Of these 796, seven were found to have retired from work at the time of this survey and were, therefore, excluded from the analysis. Amongst the remaining 789 respondents, 108 respondents indicated they were involved in lacrimal surgery (20.6% of all those returned) and only these were analysed further. We did not obtain data here on the number of cases of lacrimal disease treated by ENT surgeons.

The majority of respondents (93; 86%) indicated that ophthalmologists were their only source of referral (Fig. 1), whereas 12 (11%) received referrals from general practitioners (GPs) as well. Only three otolaryngologists (3%) reported GPs as their only source of referral. A fifth (22; 20%) of otolaryngologists stated that they are involved in the pre-operative investigation and management of patients with lacrimal system pathology, implying that the majority only provide surgical expertise. Amongst those otolaryngologists involved in the pre-operative investigation of patients, most (13; 59%) utilise lacrimal probing and irrigation. Seven utilised Jones tests and five dacryocystography. Two respondents reported the use of dacryoscintigraphy, and three respondents the use of computed tomography dacryocystography (CT-DCR).

In terms of surgical repertoire, 106 (98%) in our survey perform endoscopic DCR (Fig. 2) with two (2%) only performing lacrimal dilation and intubation. Seventeen (16%) of those performing endoscopic DCR also undertake lacrimal intubation. Overall, 76 (70%) of respondents stated that endoscopic DCR was their main method of treatment of lacrimal system disorders, whereas most of the remainder (36; 26%) favoured lacrimal dilation and intubation as a preliminary procedure. Half of those respondents favouring lacrimal dilation and intubation (17; 47%) would undertake this procedure themselves, the remainder relying on ophthalmologists.

There was wide variation in perceived success of lacrimal surgical interventions (Fig. 3). However, most respondents believed lacrimal intubation and dilation to have limited success, endoscopic DCR to have moderate success and external DCR to have high success.

Discussion

Postal surveys can have problems due to a low response rate. Often, reminders are needed to achieve the 60% response rate required for any validity.⁴ Here we had a 66.7% response rate.

The symptom of epiphora in adults may be due to a large variety of disorders; however, in the majority of patients, the cause is an obstruction to lacrimal system drainage.⁵ It can

Figure 1 Source of referrals to ENT surgeons for lacrimal surgery.

Figure 2 Lacrimal surgery repertoire of ENT surgeons.

be a troublesome condition to patients and defining the optimal method of treatment is an important question.

As the lacrimal system traverses both the orbit and the nasal cavity, ophthalmological or rhinological approaches to the surgical treatment of these conditions seem plausible. However, initial attempts at endonasal dacryocystorhinostomy by Caldwell in 1893⁶ did not gain popularity due to diffi-

Figure 3 Perceived success rate of surgical interventions.

culties in visualisation, and it was the external dacryocystorhinostomy described by Toti in 1904⁶ that became the standard treatment. With the subsequent further sub-specialisation of medicine, lacrimal surgery became the exclusive domain of the ophthalmologist. However, the improved visualisation afforded by the endoscope and the initial description of endoscopic DCR in 1991⁷ has re-ignited interest in the nasal approach to lacrimal disease amongst ENT surgeons.⁸

Until now, it has been unclear to what extent the diagnosis and treatment of lacrimal disorders is currently undertaken by ENT surgeons. Whilst we recognise the possibility of response bias, our survey does demonstrate that around a fifth of consultant otolaryngologists (20.6%) undertake lacrimal work, and we would presume that most of these are those with a subspecialty interest in rhinology. However, as a significant majority of ENT consultants (86%) still only receive referrals from ophthalmology colleagues and only a fifth (20%) play any role in the investigation of patients, the pattern seems to be one largely of ENT collaboration with ophthalmologists rather than competition. However, from our survey, we do not know how many ophthalmic surgeons work alone.

Useful clinical tests of lacrimal function include the dye disappearance test, lacrimal irrigation and probing. Although other tests of lacrimal functions have been described, such as the Jones tests, their usefulness has been questioned.⁹ Jones tests demonstrate lacrimal system patency through the instillation of a fluorescein dye onto the cornea and confirmation of lacrimal function by visualisation of fluorescein in the nose. Radiological investigations are often not required in the investigation of epiphora, but conventional or CT dacryocystography and dacryoscintigraphy can assess for anatomical and functional anomalies of the lacrimal system, respectively. Of those of our respondents who are involved in the investigation of epiphora, all these methods of investigation were utilised to some extent.

Unsurprisingly, the majority of our respondents performed endoscopic DCR, with most (70%) preferring this as the first surgical treatment. The fact that ENT surgeons did not always undertake lacrimal dilation and intubation as a preliminary procedure may reflect the poor perceived success of this procedure by our respondents. This view is supported by studies suggesting lacrimal dilation and intubation have limited success.¹⁰ Of those who did suggest this as a preliminary procedure, half did not undertake this themselves. However, endoscopic DCR is not without its critics too, with the main criticism being that it is less effective than external DCR. However, the endoscopic technique avoids a facial scar, preserves canthal anatomy and allows quicker rehabilitation.¹¹ It appears that proponents of the external technique in the literature are ophthalmologists,

whereas the proponents of the endoscopic technique are ENT surgeons.

The success rate reported for endoscopic DCR in the literature is between 70–90%.^{12–14} In our opinion, the fact that endoscopic DCR carries a success rate comparable to the external approach, does not preclude subsequent external DCR for surgical failures, and is preferred by patients¹⁵ suggests it to be preferable as the first-line treatment. Our respondents indicated that they perceived a good success rate with endoscopic DCR but, nevertheless, recognised the higher success rate of the 'gold standard' of external DCR.

It is interesting to compare our results to a similar postal questionnaire of ophthalmologists reported in 2008.¹⁶ This showed that although one-third of ophthalmologists are involved in DCR surgery, the nasal approach was infrequently used, especially by those without a subspecialty interest in lacrimal surgery. Only 12% of ophthalmologists routinely used nasal approaches to DCR as their standard treatment.

The possibility of alternative anatomical approaches to the lacrimal system has the potential to antagonise surgeons working in those separate anatomical areas, fuelled by concerns of changes in workload and the funding and infrastructure changes to service provision that come with this. Parallel concerns can be found in the shared surgical management of head and neck cancer between surgeons of an ENT training and those of a maxillofacial training. However, disease does not conveniently divide itself into anatomical areas to suit surgical subspecialties, and medicine seems best practiced as a collaboration of expertise. Our survey indicates that, in the investigation and treatment of lacrimal disorders, ENT surgeons are not taking over the work of the ophthalmologist, but rather they are working with them.

Conclusions

Lacrimal surgery is carried out in a spirit of collaboration with ophthalmologists rather than competition. Endoscopic DCR is the favoured surgical procedure of otolaryngologists. The perceived success rate for endoscopic DCR reported in this survey coincides with that reported in the literature.

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APPENDIX 1

The questionnaire

1. Are you involved in lacrimal surgery? (If no, end of questionnaire)	Yes/No
2. What is the source of your referrals for this work?	GPs/ophthalmology/both
3. Are you involved in the pre-operative investigation of these patients?	Yes/No
4. Which assessments form part of your routine pre-operative work-up?	Lacrimal probing and irrigation/
Jones tests/dacrocystography/dacrosintigraphy/
CT-DCR
5. Which lacrimal surgical procedures do you undertake?	Lacrimal dilation and intubation/
endoscopic DCR/external DCR
6. Which of the following statements best reflects your practice of epiphora:	A/B
(A) I usually undertake lacrimal dilation and intubation as the first procedure prior to considering endoscopic or external dacryocystorhinostomy	
(B) I undertake endoscopic or external dacryocystorhinostomy as the primary procedure without first undertaking lacrimal dilatation and intubation	
7. What do you think are the success rates for each of these procedures in treating epiphora?	< 25%, 25–50%, 50–70%, 70–90%, > 90%
(A) Lacrimal dilation and intubation	-----
(B) Endoscopic DCR	-----
(C) External DCR	-----