Distribution of laryngeal pathologies diagnosed in the voice clinic in association to age and gender

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Figure 1: Female diagnoses

Figure 2: Male diagnoses

Introduction

Most laryngeal pathologies result in dysphonia - impairment of the voice, which can significantly influence a patient's life socially, emotionally and financially. Current evidence has suggested possible links between age, gender and pathology, however, is not large enough to produce conclusive results.

The aim of this paper is to review a larger voice-disordered population and identify the prevalence of voice problems in association with gender and age.

Method

We analytically reviewed the data from patients who had attended consultation for dysphonia at the MDT voice clinic of University Hospital Lewisham. The diagnoses of laryngeal pathologies were based on the findings of videolaryngoscopic examinations.

Results

The database consisted of 1262 females, 2433 males and 5493 diagnoses (some patients had multiple laryngeal pathologies). Overall muscle tension dysphonia (MTD) was the commonest pathology between the ages of 11-90 in both females and males (n = 1313, 24% of diagnoses).

Cysts and nodules only presented in patients below the age of 50. In contrast palsies and Reinke's oedema only presented in patients above the age of 50 (figure 3). Reinke's oedema interestingly only affected female patients with a prevalence of 1.16% of female diagnoses, with a mean age of 56 at presentation (figure 4, table 1).

	N (number of diagnoses)		Mean age (SD)		% of total diagnoses	
	F	M	F	M	F	M
MTD	855	458	47 (17.6)	50 (20.4)	15.6	8.34
LPR	601	281	48	49 (17.8)	11	5.12
Cysts	257	69	30 (11.1)	19 (16.9)	4.68	1.26
Nodules	3	13	5 (0)	5 (0)	0.05	0.24
Palsy	55	25	71 (6.8)	79 (7.3)	1	0.46
Reinke's Oedema	42	0	56 (0)	/	0.76	/
Presbylarynx	16	19	86 (0)	86 (0)	0.29	0.35
Dyplasia	0	15	/	86 (0)	/	0.27
Bowing	0	1	/	96 (0)	/	0.02
Normal	0	42	/	50 (11.7)	/	0.76
Others	1805	936				
Total	3634	1859				

F = females; M = males; SD = standard deviation

Table 1: Distribution of most commonly observed diagnoses according to age and gender

Conclusion

This is the largest review of vocal pathologies related to age in the English electronic literature. It is clear that distinct pathologies affect specific age groups. The higher proportion of cysts and nodules in patients below 50 may be explained by vocal misuse or abuse, especially in the 0-10 age range. The association between increased age and vocal cord paralysis may be related to an increased prevalence of cancer, hypertension, diabetes mellitus and general degeneration of the laryngeal system, associated with increasing age. The predominance of Reinke's oedema in older females may correlate with the greater disturbance caused by the low-pitched voice observed in this pathology. The observations from this study may allow the personalisation of specific preventative and management plans in order to reduce the number of future diagnoses. A subsequent study could include evaluation of the risk factors which may refine our results, providing more conclusive findings.

Figure 3: Comparison of commonest diagnoses by age

Figure 4: Comparison of commonest diagnoses by gender