

This and That!

We have deliberately printed the June issue early so that it would be readily available for our European Rhinologic Society biennial meeting in Toulouse, which I very much hope you will be attending (www.ers-isian2012.com). Toulouse is a wonderful city (la Ville Rose) especially in June and is a cultural and gastronomic epicentre, which will provide us with a wonderful backdrop to what I know will be an excellent scientific meeting. Some of the topics covered in this issue will undoubtedly be the subject of discussion in the many plenary sessions, symposia, free papers and posters during the meeting.

The various iterations of the ISAAC study have provided interesting demographic information on allergy, asthma and eczema in the paediatric population, showing wide disparity in incidence around the world, so the study by Peñaranda and colleagues is welcome which used the same methodology as ISAAC and involved a substantial cohort of over 7,000 children and adolescents^(1,2). Such information is vital in planning the allocation and utilisation of limited healthcare resources. Comparable data on chronic rhinosinusitis has proved more difficult to obtain though this lack is being addressed through initiatives such as GA[2]LEN, which recently showed in a large epidemiological study conducted in 12 countries encompassing more than 50,000 respondents, that the overall prevalence of CRS was 10.9% with marked geographical variation (range 6.9-27.1)⁽³⁾. It is interesting therefore, to compare this with the findings from South America, in this case São Paulo⁽⁴⁾ by Pilan and colleagues. They considered a cohort of over 2,000 individuals using face to face interviews and found a lower prevalence of 5.5%, though this is comparable to the Canadian study by Chen et al.⁽⁵⁾ who used telephone interviews and serves to highlight the difficulties and variations inherent in any epidemiological study.

The inter-relationship between allergy and infection has been the subject of some controversy though the number of and duration of upper respiratory tract infections has been shown to be greater in allergic patients, strongly suggesting an increased susceptibility⁽⁶⁾. Taylor et al.'s contribution is thus a welcome addition to the literature in which they prospectively investigated the bacterial flora in the nasal cavity of 107 individuals with persistent allergic rhinitis⁽⁷⁾ compared to a cohort of non-rhinitics, particularly as it did not demonstrate that bacterial overgrowth is increased in the presence of the chronic mucosal inflammation that accompanies allergy.

As covered extensively in the new EPOS2012⁽⁸⁾, there have been some major advances in our understanding of the pathogenesis of chronic rhinosinusitis (CRS) with and without nasal polyps. Deficiencies in innate immunity have been suggested as important factors in the development and perpetuation of CRS. However, the study from Australia by Wood and colleagues actually demonstrates an increase in lysozyme protein expression in both CRS with and without polyps when compared to normal controls suggesting that a defect in lysozyme expression is not responsible for microbial colonisation (nor, interestingly, were they able to detect any evidence of fungi in any of the specimens despite thorough analysis)⁽⁹⁾.

Nitric oxide is increasingly recognised as an important contributor to sinus health with the highest levels in the respiratory tract being produced in the sinuses. It is a very helpful indicator of inherited mucociliary defects such as primary ciliary dyskinesia and as it is generally raised in inflammation, its measurement may be used to confirm the presence of and improvement in rhinosinusitis⁽¹⁰⁾. However, it has also been shown to be paradoxically low in cases of nasal polyposis where the sinus outflow is blocked⁽¹¹⁾. As a consequence, both medical and surgical treatment of CRS have been shown to affect these levels, again often in a paradoxical fashion^(12,13) with an apparent increase due to improvement in sinus ventilation and drainage. Interpretation of expired nitric oxide levels cannot therefore be undertaken in isolation and should be done in conjunction with endoscopic examination of the nasal cavity. It is, however, increasingly utilised as a diagnostic tool and objective outcome measure.

Measurement of olfaction is also an important factor in the diagnosis and treatment of CRS⁽⁸⁾ though post-therapeutic studies tend to be rather short-term with follow-up often ranging from only a few weeks to a few months⁽¹⁴⁻¹⁶⁾. In one of the few long-term prospective studies, the results of olfactory threshold five years after endoscopic surgery for CRS with and without nasal polyps were no better than before surgery⁽¹⁷⁾, which is in contrast to the findings of Briner et al.⁽¹⁸⁾ who found the majority of patients had subjective and objective improvement in their olfaction in a similar cohort over the same timeframe. Nonetheless, all authors highlight a small but significant percentage of patients whose sense of smell is worse after surgery and emphasise the need to discuss these aspects carefully with patients pre-operatively.

References

1. Asher MI, Montefort S, Bjorksten B, et al. Worldwide time trends in the prevalence of asthma, allergic rhinoconjunctivitis and eczema in childhood:ISAAC Phases one and three repeat multicountry cross-sectional surveys. *Lancet* 2006; 368: 733-743.
2. Peñaranda A, Aristizabal G, Garcia E, Vasquez C, Rodriguez-Martinez CE, Satizábal CL. Allergic rhinitis and associated factors in schoolchildren from Bogotá, Colombia. *Rhinology*. 2012; 50: 122-128.
3. Hastan D, Fokkens WJ, Bachert C, Newson RB, Bislimovska J, Bockelbrink A, et al. Chronic rhinosinusitis in Europe - an underestimated disease. A GA(2)LEN study. *Allergy*. 2011; 66: 1216-1223.
4. Pilan RR, Pinna FR, Bezerra TF, Mori RL, Padua FG, Bento RF, Perez-Novo C, Bachert C, Voegels RL. Prevalence of chronic rhinosinusitis in São Paulo. *Rhinology*. 2012; 50: 129-138.
5. Chen Y, Dales D, Lin M. The epidemiology of chronic rhinosinusitis in Canadians. *Laryngoscope*. 2003; 113: 1199-1205.
6. Cirillo I, Marseglia G, Klersy C, Ciprandi G. Allergic patients have more numerous and prolonged respiratory infections than nonallergic subjects. *Allergy*. 2007; 62: 1087-1090.
7. Taylor MB, Tan IT, Chan KT, Shen L, Shi L, Wang DY. A prospective study of bacterial flora in nasal cavity of patients with persistent allergic rhinitis. *Rhinology*. 2012; 50: 139-146.
8. Fokkens WJ, Lund VJ, Mullol J, Bachert C, et al. European Position paper on rhinosinusitis and nasal polyps 2012. *Rhinology*. 2012; Suppl 23: 1-304.
9. Woods CM, Lee VS, Hussey DJ, Irandoust S, Ooi EH, Tan LW, Carney AS. Lysozyme expression is increased in the sinus mucosa of patients with chronic rhinosinusitis. *Rhinology*. 2012; 50: 147-156.
10. Scadding G, Scadding G. Update on the use of nitric oxide as a non-invasive measure of airways inflammation. *Rhinology*. 2009; 47: 115-120.
11. Colantonio D, Brouillette L, Parikh A, Scadding G. Paradoxical low nasal nitric oxide in nasal polyposis. *Clin Exp Allergy*. 2002; 32: 698-701.
12. Ragab SM, Lund VJ, Saleh HA, Scadding G. Nasal nitric oxide in objective evaluation of chronic rhinosinusitis therapy. *Allergy*. 2006; 61: 717-724.
13. Alobid I, Benítez P, Valero A, Muñoz R, Langdon C, Mullol J. Oral and intranasal steroid treatments improve nasal patency and paradoxically increase nasal nitric oxide in patients with severe nasal polyposis. *Rhinology*. 2012; 50: 171-177.
14. Blomquist E, Lundblad L, Anggard A, Haraldsson P, Starjne P. A randomised controlled study evaluating medical versus surgical treatment in addition to medical treatment of nasal polyposis. *J Allergy Clin Immunol*. 2001; 107: 224-228.
15. Pade J, Hummel T. Olfactory function following nasal surgery. *Laryngoscope* 2008; 118: 1260-1264.
16. Olsson P, Stjerne P. Endoscopic sinus surgery improves olfaction in nasal polyposis; a multi-center study. *Rhinology*. 2010; 48: 150-155.
17. Rowe-Jones J, Medcalf M, Durham S, Richards D, Mackay I. Functional Endoscopic Sinus Surgery: 5 year follow-up and results of a prospective, randomised, stratified, double-blind, placebo controlled study of post-operative fluticasone propionate aqueous nasal spray. *Rhinology*. 2005; 43: 2-10.
18. H.R. Briner, N. Jones, D. Simmen. Olfaction after endoscopic sinus surgery: long-term results. *Rhinology*. 2012; 50: 178-184.

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