Anatomy, anatomy, anatomy……

This end of year issue is the usual blend of basic science and medical or surgical treatments, but with a strong anatomical flavour. It would seem there is little new to say about topographical anatomy and yet from a surgical perspective there is still much to be learnt, as evidenced by the in-depth investigation by Liu et al. [1] of the Vidian canal. Although vidian neurectomy is clearly still fashionable in Taiwan, the canal itself has assumed greater importance with the demonstration that this is the principle route for sphenoid invasion by juvenile angiofibroma (JAF) and thus the site of 'recurrence' if not adequately explored [2]. Drilling out the canal and the surrounding basi-sphenoid is now recognised as a key determinant in the complete removal of JAF whatever surgical approach is employed. 3-D imaging reconstruction elegantly demonstrates the range of anatomical variation related principally to increased sphenoid pneumatisation and consequent prominence of adjacent structures such as the vidian canal itself and the foramen rotundum [3,4]. A better appreciation of this anatomy might even lead to a resurgence of international interest in vidian neurectomy for the treatment of excessive watery rhinorrhoea if the associated complications from the procedure could be minimised [5,6].

Although computer-aided surgery has been around since the 1980's [7], robust level 1 evidence for the role of per-operative navigation systems improving safety, speed or efficacy of surgery is lacking in the literature [8]. However, most would agree that it has a place in selected procedures so further analysis of its role is to be welcomed and it is axiomatic that regular utilisation of these systems increases familiarity, speed of set-up and consequently its role in training. System accuracy and speed is the subject of Chang et al.'s study of surface registration using an electromagnetic navigation system [9]. It is perhaps not a co-incidence that both Liu and Chang's studies concern a Chinese population, known to have greater pneumatisation and variation in the sphenoid than is generally found in Causcasians [10,11].

A modular anatomical approach is explored by Baudoin and colleagues [12] who advocate an algorithm, which may be applied to simple as well as complex surgery, primarily for teaching purposes. It is this aspect which makes navigation most attractive but complete reliance on technology does not abrogate the need for anatomical knowledge and has little place in large parts of the world, which are less advantaged financially but where sinonasal surgery still needs to be undertaken.

The pathophysiology of chronic rhinosinusitis remains a rich seam for investigation with the concept of phenotyping and endotyping being 'borrowed' from the pulmonologists and proving an increasingly useful way of considering which treatments are likely to be the most appropriate for an individual patient. The presence of inflammasome complexes in patients with *S. aureus* biofilm formation has been sought by Jardeleza and colleagues [14]. These complexes have been shown to play a role in autoimmune diseases and airway inflammation [15,16] and are found in this study to be involved in CRSwNP. These subsets of patients supports the idea of 'difficult to treat' CRS, espoused by EPOS 2012 who might be identifiable and offered more aggressive treatment from the outset rather than occurring by default [17a].

The paediatric population would not ordinarily fall into this 'difficult to treat' group but there are a small number of young people who do develop polyps, often associated with aggressive asthma or cystic fibrosis and they may require surgery despite medical therapy. Long-term outcomes are rather rare in this population [17b,18,19] but Cornet et al. have managed to assess 44 individuals who were children at the time of their operation [20]. Through a combination of retrospective and prospective analysis, endoscopic surgery in this selected population can be shown to be beneficial in the long-term in terms of specific symptoms, QoL and revision procedures. Whilst this is not a good reason to operate on children, it is reassuring to know that it is worthwhile when medical treatment fails, particularly in those with cystic fibrosis [21,22].

Finally, please consider applying for the various Fellowships and Prizes for 2014 which you will find in this issue and on the ERS and Rhinology Journal websites (www.europeanrhinologicsociety.org or www.rhinologyjournal.com) and let me take this opportunity to wish you all seasonal greetings, happiness and good health for next year.

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