Journal of Otolaryngology - Head & Neck Surgery

CORRECTION Open Access

Correction to: Clinically relevant phenotypes in chronic rhinosinusitis

Jessica W. Grayson[1*], Marina Cavada[1,2] and Richard J. Harvey[1,2]

Correction to: J Otolaryngol Head Neck Surg
https://doi.org/10.1186/s40463-019-0350-y

Following publication of the original article [1], the authors reported an error in Table 1. In the second columns of the 'Radiology' row, 'Normal anterolateral sinus mucosa' should read 'Normal superolateral sinus mucosa'. A corrected version of Table 1 is included in this Correction.

Author details
[1]Rhinology and Skull Base Research Group, St Vincent's Centre for Applied Medical Research, University of New South Wales, 67 Burton Street, Darlinghurst, Sydney, NSW 2010, Australia. [2]Department of Otolaryngology, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia.

Received: 9 July 2019 Accepted: 9 July 2019
Published online: 11 July 2019

Reference

1. Grayson, et al. Clinically relevant phenotypes in chronic rhinosinusitis. J. Otolaryngol. Head Neck Surg. 2019;48:23 https://doi.org/10.1186/s40463-019-0350-y.

* Correspondence: jessica.w.grayson@gmail.com
[1]Rhinology and Skull Base Research Group, St Vincent's Centre for Applied Medical Research, University of New South Wales, 67 Burton Street, Darlinghurst, Sydney, NSW 2010, Australia
Full list of author information is available at the end of the article

Table 1 Summary of Key Findings of CRS Phenotypes

	Phenotype		
Characteristics	CCAD (IgE mediated)	eCRS (AERD)	Non-eCRS
Clinical Presentation	- Young onset (teens to 20s) - Rhinitis symptoms - Smell preserved - Other atopic disease: ° Childhood asthma ° conjunctival symptoms, dermatitis	- Mid-Life "adult" onset (30–50 yo) - Occasionally post respiratory virus - "Completely well" prior to onset or if allergic, then symptoms limited to childhood - Smell loss (corticosteroid responsive) - Antibiotic seeking - Food and alcohol induced flares - Adult onset asthma linked temporally to CRS onset.	- Older onset 50 yrs.+ - Female, obese - Cough - Poor corticosteroid response - "Asthma" present but often poor response to inhaled preventive therapy (corticosteroid based)
Endoscopy	- Middle turbinate edema - Polypoid changes from turbinates and septum - No thick mucin - Normal sinus mucosa on surgery	- Polyps (small, multiple, large) from the middle meatus - Thick eosinophilic mucin - Secondary purulence	- Polyps or polypoid edema - Purulent secretions - Lack of eosinophilic mucin
Radiology	- Central thickening of septum and turbinates, peripheral clearing (CCAD) - Mucus trapping only in sinsues - Normal superolateral sinus mucosa ("black halo")	- Pan-sinusitis (Lund-Mackay 24) - Neo-osteogenesis	- Pan-sinusitis (undistinguishable from eCRS)
Histopathology	- Elevated tissue eosinophilia - Often without activation (no eosinophil aggregates and charcot-leyden crystals) - No serum eosinophils - Elevated total and specific IgE	- Elevated tissue eosinophilia (>10eos/hpf, but often >100eos/hpf) - Evidence of eosinophil activation (eosinophil aggregates and charcot-leyden crystals) - Serum eosinophilia	- Lack of tissue eosinophilia (< 10/HPF)
Allergy	- + allergy testing (dustmite/perennial allergens) - Often monoallergen-sensitized	- Either negative IgE sensitization or multi-allergen sensitized	- Negative skin prick, immunocap/RAST
Treatment	- Allergen directed immunotherapy - Endoscopic sinus surgery - Topical corticosteroid (spray or irrigation)	- Systemic corticosteroid treatment (up to 2–3 times per year) if limited burden of disease - Endoscopic sinus surgery (Draf 3) - Topical corticosteroid irrigations (not sprays) For AERD: - Zileuton, Montelukast, Zafirlukast - Can take selective COX-2 inhibitors (Meloxicam)	- Saline or corticosteroid irrigations - Endoscopic sinus surgery - Macrolide therapy (Clarithromycin 250 mg daily for 3 months) - Continue 3/week until 12 months if responder
Difficult to control disease	- Omaluzimab (anti-IgE)	- Mepoluzimab (anti-IL5) - Other immune-modulating therapy (Benraluzimab, Dupiliumab, Reslizumab, etc) For AERD: - ASA desensitization (1300 mg commencement and 350–700 mg daily maintenance)	- Consider re-biopsy of a patient post-surgery and post-corticosteroid based treatment if not responding and may be re-classified under this phenotype