

FASCIN IS UPREGULATED IN NASAL MUCOSA IN CHRONIC RHINOSINUSITIS WITH NASAL POLYPS

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Introduction. Chronic rhinosinusitis is a long-lasting (over 12 weeks) inflammation of the sinonasal tissue. The disease can either be associated with the formation of non-cancerous outgrowths called nasal polyps or develop without them. The former is called chronic rhinosinusitis with nasal polyps (CRSwNP). Numerous efforts have aimed at elucidating the mechanisms of its development. However, its pathogenesis is not fully understood. In particular, the role of an actin-bundling protein fascin involved in cell motility is under debate in CRSwNP. Thus, our aim was to evaluate the expression of fascin in the nasal tissue of patients with CRSwNP.

Methods. We evaluated fascin expression in nasal tissues of 11 patients with CRSwNP and 7 healthy individuals. Diagnosis of CRSwNP was verified using clinical and instrumental methods in accordance with “EPOS 2012: European Position Paper on Rhinosinusitis and NPs 2012” recommendations. Fascin expression was assessed immunohistochemically using antibodies manufactured by *Thermo Fischer Scientific* (UK).

Results. Fascin was weakly expressed in the nasal tissue of control individuals, whereas fascin upregulation was observed in nasal epithelial cells of polyp tissue in CRSwNP. In addition, fascin expression was stronger in the lamina propria of patients with nasal polyposis compared with the conditionally healthy controls.

Discussion. Our findings of fascin overexpression may suggest that fascin-expressing nasal epithelial cells have the increased ability to migrate, participating in tissue repair in CRSwNP, since it has been reported that CRSwNP is associated with the damage to the nasal epithelial layer as a result of inflammation with the formation of atrophic areas. We believe that the increased migratory capacity of fascin-positive nasal epithelial cells can be used as a compensatory mechanism to close the gaps found in the epithelial layer of inflamed nasal mucosa.

Conclusions. Fascin is overexpressed in the nasal tissue of patients with CRSwNP.