

Oral Isotretinoin May Improve the Symptoms of Chronic Rhinosinusitis

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Dear editor,

Three patients, a woman and two men (aged from 46 to 59), presented with erythema, telangiectasia and papulopustular lesions on their faces. They were diagnosed with rosacea based on the clinical findings. They had been treated with topical metronidazole, azelaic acid and oral antibiotics without a sufficient response previously. Haemogram and serum biochemistry were within normal limits and the patients were otherwise healthy. The patients were started with oral isotretinoin 0.3 mg/kg/day. At the first month follow-up appointment, all the patients declared that they had noticed considerable improvement on the symptoms of rhinosinusitis unexpectedly. The patients had been having Chronic Rhinosinusitis (CRS) for many years and they had not experienced any improvement on the symptoms of rhinosinusitis despite using standard treatment options such as intranasal saline, topical and systemic corticosteroids and antibiotics. After four months, papulopustular lesions of rosacea disappeared completely, isotretinoin was stopped and the symptoms of CRS such as nasal obstruction, facial pressure and fullness and postnasal discharge, relapsed after a few weeks. The patients restarted oral isotretinoin and the symptoms of CRS improved again and they are continuing to receive low-dose isotretinoin (10-20 mg/day) intermittently.

CRS is a common disorder of the nose and paranasal sinuses characterized by mucosal inflammation and the symptoms such as nasal obstruction, facial pressure and fullness, discolored nasal or postnasal discharge, hyposmia and headache persisting for 12 weeks or more. CRS is diagnosed based on clinical symptoms and computed tomography. The aetiology of CRS is poorly understood and the disease is usually described as chronic inflammation of the sinonasal mucosa caused by a variety of factors such as microorganisms, medications, allergy, immunodeficiency and mucociliary dysfunction. There is no standard therapy for CRS. The treatment options include topical and systemic corticosteroids, intranasal saline, topical and systemic antibiotics, antifungals, leukotriene antagonists, omalizumab and anti-IL5 antibodies such

as mepolizumab and reslizumab, but none of these is uniformly effective. Surgery is performed for recalcitrant disease [1,2].

Isotretinoin is a synthetic retinoid (vitamin A) that is approved by the United States Food and Drug Administration (USFDA) in the treatment of nodulocystic acne [3]. Isotretinoin decreases the size of sebaceous glands and reduce sebum production and it has also anti-inflammatory, immunomodulatory properties and antineoplastic activity [3]. Dryness on the lips, eyes, and other skin surfaces are the most commonly seen adverse effects of isotretinoin [3,4]. We do not know the exact mechanism of action of isotretinoin on rhinosinusitis, possibly mucosal dryness or anti-inflammatory effect of isotretinoin may have improved the symptoms of CRS in our patients.

A recent study has found that isotretinoin had positive effects on CRS both clinically and radiologically [5]. Our findings support the outcome of this study.

CRS is a challenging condition due to the lack of efficiency of the medications used in the treatment of the disease. In addition, the disease has negative effects on patient's quality of life and health care expenditure. Therefore, we think that new treatment options will be welcomed by patients, physicians and health care providers as well. In conclusion, oral isotretinoin is worth a try and large placebo controlled studies are required to evaluate the efficacy and safety of oral isotretinoin in the treatment of CRS.

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