Letters to the Editor

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Letter: seasonal variation in the diagnosis of eosinophilic oesophagitis – fact or myth?

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Sirs, We read with great interest the article by Jensen *et al.*, where the authors reported a mild seasonal variation, with significantly more cases in late spring and summer months, in a large series of 14 524 patients diagnosed with oesophageal eosinophilia or eosinophilic oesophagitis (EoE).[1] These findings have been previously reported by other groups,[2, 3] although more recent studies have displayed conflicting results.[4, 5] In our long clinical experience with EoE, newly diagnosed cases are present all year around. Here, we would like to expound on a number of reasons addressing why a seasonal variation in EoE might not be true:

All available evidence is exclusively based on retrospective studies, with their inherent biases. An EoE diagnosis is established in symptomatic patients after upper endoscopy with oesophageal biopsies. Diagnostic delay since the onset of symptoms is extremely common,[6] due to variables related to patients (underestimation of symptoms, avoidance of medical attention or eating behaviour modifications), physicians (lack of suspicion, lack of biopsies during endoscopy) and hospitals (waiting time for endoscopy). As such, equating the onset of clinical manifestations, potentially triggered by seasonal aeroallergens, with the time of performance of the endoscopy may be inaccurate.

All of the aforementioned confounding variables are eliminated when EoE is diagnosed due to food impaction. Although a recent study has also reported a seasonal variation in EoE-related food impaction,[7] food impaction is usually a consequence of the fibrotic oesophageal remodelling in patients with long-standing EoE.[6] Likewise, food impaction during outdoor seasons might also be related to different food and social behaviours during holidays.

EoE patients are usually sensitised to indoor perennial aeroallergens[8] and *de novo* onset of EoE has been associated with exposure to mould and dust.[9] Thus, conferring a predominant triggering role to seasonal pollen seems overly simplistic. The majority of atopic diseases are related to IgE-mediated reactions that are rapidly triggered after exposition to sensitised allergens. In contrast, EoE constitutes an IgG4-associated food allergy,[10] and patients do not show immediate response after exposition to foods triggering the disease.

Last, but not least, most EoE patients suffer from atopic conditions with seasonal flares during the pollen season, leading to visits to the allergy clinic. In this context, if the patient also reports chronic mild oesophageal dysfunction symptoms, the opportunity of achieving an EoE diagnosis during the same season is highly likely.

Either way, whether a seasonal predominance in the incidence of EoE is true, or merely derives from seasonal diagnostic opportunities, should be elucidated with high-quality prospective studies.

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Letter: seasonal variation in the diagnosis of eosinophilic oesophagitis – fact or myth? Authors' reply

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Sirs, We thank Drs Molina-Infante and Lucendo for their interest in our recent paper,[1, 2] and feel that they have a raised a number of important points regarding the interpretation of the literature regarding seasonal variation in the diagnosis of eosinophilic oesophagitis (EoO). We agree that in retrospective studies of seasonal variation in EoO, it is generally not possible to determine when symptom onset occurred, as opposed to when the diagnostic endoscopy was performed, and that prospective studies could help clarify this.

Furthermore, delays related to presentation after symptom onset, referral to a gastroenterologist, and scheduling an endoscopic procedure all could impact on observed seasonal variation. While these factors could have affected our results, our study differed from that of previous studies in that the both the case and control groups were composed of patients undergoing endoscopy and biopsy in centres throughout the USA. The associations we observed were mild, but consistent, and the study population was large and adequately powered to detect an association, suggesting that this may be a real trend. In addition, the fact that the peak of diagnosis was shifted later in the year in cold climates as compared to arid or temperate zones, supports a role of some type of seasonally related environmental factor. This is a new observation, as prior studies have been from single centres or single regions, and have not had the power to examine this issue over several climate zones.

We agree that attributing seasonal pollen as the trigger for EoO is likely overly simplistic, but the interesting implication of our results is that they are hypothesis generating. Future studies will potentially be able to drill down on aetiologic environmental factors, and even if they only pertain to a proportion of EoO cases, we may be able to learn a great deal about the pathogenesis and onset of EoO from these patients.

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