EDITORIAL

Primum non nocere

Primum non nocere (first do not harm) is the first sentence I heard when I started Medical School. It is also the very sentence that I pronounced when I obtained my medical degree. I think that this sentence, whether in Latin or in any other language, should be the primary goal for all physicians in the world. This is particularly true for non-lethal diseases for which safe and effective treatments exist.

"Hay fever" or "hay asthma" were terms proposed by Charles Blackley in the 1860's to describe pollen-induced rhinitis and its co-morbidities. In fact, "hay fever" is misleading and should no longer be used because "fever" is uncommon in allergic rhinitis and the disease is not caused by "hay". It is surprising that in 2005 such a name can still be used in a scientific publication [1].

Allergic rhinitis is a very common disease which affects quality of life and school/work productivity, but it is not a lethal disease. Very effective medications exist, albeit that some patients are not completely controlled with current medications [2]. At recommended doses these medications are well tolerated. Thus, only the safest medications can be recommended for this disease [3].

In this issue of the *Primary Care Respiratory Journal*, Østergaard et al. propose to use a single intramuscular injection of corticosteroid for the treatment of "hay fever" [1]. The authors state that "this review does not support concerns regarding possible tissue atrophy or other serious side effects... following a single intramuscular injection". The authors have investigated the efficacy and safety of these drugs in the treatment of allergic rhinitis using a meta-analysis. The method used to retrieve adverse events is incorrect since the search strategy used the term "[AND]

clinical trials"; clinical trials cannot be expected to predict all of the important adverse effects of medicines, and most adverse events are reported in post-marketing surveillance studies. No one would make conclusions on the safety of the oral contraceptive pill by looking at a few small clinical trials; rather, they would set up appropriate surveillance systems [4].

Only one post-marketing surveillance study has been reported [1,5]. Twenty-six adverse events were reported in Denmark after an estimated 330,000 patients were treated. It should be important to examine whether other studies are available.

It is surprising that some interesting papers reporting adverse events have not been referenced by Østergaard et al. [1]. Reduction of cortisol levels lasting for up to three weeks were found after a single intramuscular corticosteroid injection [5,6]. Post-injection flare, facial flushing, and skin and fat atrophy are the most common side effects of injectable corticosteroids, whereas systemic complications are rare but do exist [7]. The most common adverse event, tissue atrophy, has even been reported in children [5,8–11]. Moreover, a more persistent and possibly greater effect on bones or eyes, lasting for weeks, cannot be excluded. Depot corticosteroid treatment for hay fever was found to cause avascular necrosis of both hips [12]. Finally, four fatalities related to intramuscular and intra-articular injections have been reported [13]. Although these systemic complications may be rare, they still exist, and patients with rhinitis should not be exposed to them when other safe and effective treatments exist.

If the season is exceptionally severe, or if the patient experiences prolonged symptoms as

a result of multiple allergies, several injections may be necessary and this increases the risk of severe adverse events. However, serious adverse events can also be found with a single dose. For example, avascular necrosis of the hip is associated with corticosteroid therapy, but there is no direct relation with the total corticosteroid dosage [12].

As a physician, even though I have not treated 330,000 patients with allergic rhinitis, I can perfectly recall at least ten patients with severe adverse events following injectable corticosteroid treatment, most of them being tissue atrophy, but including two patients with very difficult-to-treat menstrual problems. I am therefore surprised that the authors of the paper, as primary care doctors seeing a large number of patients, have not noticed such adverse events.

I am concerned about the potential implications of this paper. Particularly in the USA and Canada, medico-legal issues have already arisen concerning the use of intramuscular corticosteroid treatment, and I believe that there is a potential liability risk for the authors if a physician were to quote this paper in his or her defence following a legal action by a patient.

In conclusion, I would like to ask one question: are any of the readers of this journal ready to take the rare but well-documented risks associated with intramuscular corticosteroid treatment for allergic rhinitis? I am certainly not willing to take such a risk, since I always apply the dictum *Primum non nocere*.

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