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Short Communication

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Intramuscular Triamcinolone Injection for Severe Hay Fever

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Abstract

Despite the use of symptomatic treatment against hay fever, a subgroup of patients is hindered tremendously during the season. Intramuscular steroid injections are not mentioned in current guidelines, or even advised against, though they were often used some decades ago. Triamcinolone intramuscular injection can be considered an additional therapy with a reasonable low profile of side effects for patients with severe hay fever.

Keywords: Hay fever; Intramuscular; Triamcinolone

Introduction

Hay fever is a common condition with a prevalence of more than 10% in adolescence [1,2]. Clinical symptoms are running nose, nasal congestion, sneezing, and itching eyes; intensity can range from mildly irritating to very severe. Causative therapy consists of immunotherapy (subcutaneous or sublingual) to modify the underlying immune response permanently.

First-line symptomatic treatment includes nasal corticosteroids, oral and intranasal antihistamines, and topical ophthalmic products. In the past intramuscular injections with steroids were frequently used. Typical situations for which general practitioners used an injectable steroid were when there was insufficient relief from other treatments or a social circumstance requiring stringent symptom control [3,4].

However, since many patients are well treated with the first-line medications, the intramuscular injection became somewhat unnecessary for the vast majority of patients: i.e. those with mild or moderate complaints. Therefore, intramuscular injections are not mentioned, or even advised against, in current guidelines. But, guidelines are especially written for the 'average' patient in the general population. Therefore, not all advice is generalizable. For example, "avoid grassy areas, such as parks and fields, particularly in the early morning, evening or night, when the pollen count is highest" [5]. As one can understand, that is exactly the advice that our military patients cannot adhere to. Despite the first-line treatment options, a small subgroup of patients is still incapacitated by their allergy. This letter underlines the benefits of intramuscular triamcinolone for severe hay fever in a small subgroup of patients.

Discussion

Though we agree with the guidelines that intramuscular depot injections should not be the mainstay therapy for the majority of patients, we still think that higher impact therapy-in addition to the regular symptomatic treatment and immunotherapy-can be warranted for subgroups on the far end of the symptom severity spectrum. Therefore, we use intramuscular triamcinolone injections in our population for those servicemen whose work is hindered tremendously by allergic symptoms despite corticosteroid nasal spray and antihistamines.

We use these intramuscular injections for patients who experience peak seasonal allergic symptoms each year lasting for about one month. We only use one injection of triamcinolone 40 mg per person per year. Does it concern many patients? No, less than one percent of our allergy patients. Are they satisfied with this treatment? Yes, extremely.

Unfortunately, in the last decade no new studies concerning this topic were published. Therefore, we revisited the older literature. This, by the way, concerned studies that included the whole spectrum of patients and did not specifically describe the most severe cases.

We think that it suffices for this report to look at two previous reviews – the evidential level of the reviewed literature was low, but the quality of the reviews was good enough-that were published before [1,4].

Østergaard et al. published the most up-to-date systematic review [1]. From their manuscript it is clear that intramuscular injections are very effective in reducing symptoms that overall patient satisfaction is high, and that side effects are mostly mild. The authors are clearly in favour of prescribing this medication. The most feared side effects (osteoporosis, suppression of hypothalamic-pituitary-adrenal function) occur seldom in a clinically relevant severity with a single low dose injection.

Another review also described that the injections do have a benefit for patients [4]. The reason for concluding that intramuscular injections should not be used anymore, instead of declaring the therapy an 'optional treatment' leaves us baffled [4]. This negative advice seemed to be based on the potential side-effects. This, though even according to that very review, the side effects were not seen very often [4].

We do agree that side effects should be discussed with patients, but we also believe that they should not be an argument for authority-based excommunication of an effective therapy. The weighing of risks should be a balance between the frequency of occurrence and the impact of the complications versus the severity of the disease and its impact on the quality of life of the patient. Thus, especially the patient should be involved in this via shared decision making.

If we look at the treatment of allergic asthma with intramuscular triamcinolone injections, we find that even with higher doses the complication rate is still to some extent acceptable. Patient satisfaction with depot injection was again high; they were more satisfied with intramuscular injections than with oral prednisone [6,7].

A single dose of intramuscular corticosteroids might also be a safe and effective treatment option in order to reduce relapses following discharge from the emergency department for acute asthma [8].

A higher incidence of diabetes and osteoporosis were mentioned in a large population based study [2]. However it is unclear how many injections were given in the group with these side effects; that might be more than one single dose. Furthermore, bias might exist because patients on the depot injections might have been screened for complications more frequently than the general population [2].

The ultimate negative experience with intramuscular injections for hay fever was described in a case with femur osteonecrosis [9]. However, when compiling all the evidence, this seems to be a rare complication in case of injections for hay fever. Furthermore, one case with this complication versus deaths related to allergic asthma makes us opting in favour of therapy for severely affected patients [10].

Does other evidence exist regarding the incidence of side effects?

Latest evidence reveals that intramuscular triamcinolone is an effective and safe treatment in osteoarthritis, psoriatic arthritis, thyroid eye disease, severe asthma and dermatologic diseases [8,11-16]. These studies add to the evidence in favour of triamcinolone treatment regarding side-effects.

Conclusion

Though not mentioned in most current guidelines, a single injection of triamcinolone 40 mg for patients with severe hay fever can be an effective therapy with a tolerable profile of side effects. Although we agree that it concerns a last resort, its use should be discussed with patients who do not obtain enough symptomatic relief from first-line therapy.

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