Research Round up April 2024- Allergic Rhinitis

Introduction

Last month the research round-up provided you with an overview of articles looking at prescribing in diabetes. This month we will have an overview of different areas of prescribing in allergic rhinitis.

The first article looks at the efficacy and safety of a combination nasal spray in comparison to other more tried and tested pharmacotherapy treatments. In the second article we review the classification of pharmacotherapy in allergic rhinitis. Finally, in our third article we examine a study on the effects of systemic steroid treatment.

With allergy season upon us and set to continue over summer this topical review of recent literature may be of help to those prescribing in this common minor ailment area.

Efficacy and safety of the combination nasal spray olopatadine hydrochloride-mometasone furoate in the treatment of allergic rhinitis

L Klimek, F Klimek, C Bergmann, J Hagemann, M Cuevas & S Becker

https://link.springer.com/article/10.1007/s40629-023-00282-5

file:///C:/Users/nus776/Downloads/s40629-023-00282-5.pdf

This article, published in the Journal Allergo Journal International uses a literature review methodology to examine the available evidence in many online databases around treatment options for allergic rhinitis. Robust search methodology was employed and yielded 14 papers selected for inclusion in the review. The team do acknowledge that pharmacotherapy is the mainstay of treatment and aim to search around different drug modalities in allergic rhinitis. The search period looked for these across databases and included human studies published up to August 2023. The review found that the main drugs used in the management of allergic rhinitis include intranasal corticosteroids, nasal and oral antihistamines, leukotriene antagonists, intranasal cromogliclic acid preparations, intranasal and oral vasoconstrictors and nasal rinses. Results suggest that fixed combination preparations such as Olo-Mom nasal spray show significant Improvements in symptoms in clinical trials whether this be by daily or twice daily administration regimens. Phase three studies show that this nasal spray twice daily showed improved symptoms in comparison with placebo and with monotherapy sprays. Improvements in symptoms in the articles reviewed were made based on the total nasal symptom score. The authors conclude that although antihistamines and intranasal corticosteroids will remain the central prescribing treatments in allergic rhinitis currently, that the future may see a move to the newer combinations sprays as a larger body of evidence supporting their efficacy emerges. This will be of most benefit to those suffering with moderate and severe manifestations and those over the age of 12 years.

<u>Global expert views on the diagnosis, classification and pharmacotherapy of allergic rhinitis in clinical</u> <u>practice using a modified Delphi panel technique.</u>

DES. Larenas-Linnemann, JL. Mayorga-Butrón, J. Maza Solano, AV. Emelyanov, RLL. Dolci, MM. Miyake , Y Okamoto,

https://www.sciencedirect.com/science/article/pii/S1939455123000601

This article, published in the World Allergy Organization Journal, sought to carry out a Delphi Panel study to find out what the view of global experts on allergic rhinitis were around real-life management of the condition. The views sought were those around the diagnosis, classification and treatment of allergic rhinitis with the anecdotal knowledge that although treatment guidelines are widely available, these factors vary globally. The researchers used a modified two-part Delphi panel study consisting of two x ten-minute online questionnaires. Participants were either published experts from Brazil, Japan, Mexico, Russia and Spain and numbered seven in total, or additional participants considered allergic rhinitis experts and consisted of 11 participants from seven countries, across three continents, with 18 completing both questionnaires. The aim was to identify areas of consensus in the main outcomes around diagnosis, classification and treatment. After Panel round one a workshop too place with respondents to inform the development of the second questionnaire. The study took place between October 2021 and January 2022.

The questionnaire responses indicate a multi-disciplinary approach is preferred by those surveyed for diagnosing allergic rhinitis and is best confirmed by observation and testing. There was consensus around severity determination but not on which classification tool should be used. With regard to pharmacotherapy, there were mixed opinions although most experts agreed that stopping oral antihistamines in favour of intranasal corticosteroids was a sound treatment option. There was general agreement on step up and step down treatments and duration but opinions on as required medication and any surgical intervention were divided. The researchers conclude that there are clear differences between real world diagnostic and prescribing practice, and adherence to published guidance. They also suggest that this needs more research into management of allergic rhinitis with a view to generating information to adapt guidelines, perhaps on a more local basis, to better reflect the treatment needs of patients in different climate and geographical areas.

Limited beneficial effects of systemic steroids when added to standard of care treatment of seasonal allergic rhinitis.

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https://www.nature.com/articles/s41598-023-46869-4

file:///C:/Users/nus776/Downloads/s41598-023-46869-4.pdf

This article, published in the Nature Journal- Scientific Reports, aimed to evaluate if the use of intramuscular methylprednisolone could significantly improve the symptoms of allergic rhinitis in patients with birch pollen allergy. The study included patients between the age of 18 and 40 who had a history of moderate to severe seasonal pollen induced rhinitis. Participants were randomised to treatment arm or placebo randomly and this was a double blind study conducted in a single centre and performed in parallel over a three week period in April 2019. Participants in the treatment arm received 80mg intramuscular methylprednisolone which those in placebo receive saline. Injections were given during a period of 6 days. All patients received their injections before the pollen peak of the season. Pre-trial all patients received a "Rescue medication package" (containing Desloratadine tablet, sodium cromoglycate eye drops, Mometasone Furoate nasal spray). The rescue medication was not allowed after trial start until Day 3 after 2 consecutive days of symptoms and could then be used throughout the trial.

The primary outcome measures were improvement of symptoms with secondary outcome being quality of life. Appropriate symptom and quality scoring tools were used. In total 42 participants were entered into the study.

The study showed that a single injection of methylprednisolone at the start of a birch pollen season, reduced nasal and eye symptoms and resulted in a less frequent use of rescue medication than placebo but no systemic steroid induced improvement in quality of life was seen. Even though symptom reduction was statistically significant and probably of some clinical value, it was much smaller than the researchers anticipated. They conclude that the findings conjure no strong evidence for the beneficial effects of using systemic steroids in addition to standard care for treatment of seasonal allergic rhinitis during the peak of the pollen season. Hence, the use of intramuscular steroids in the treatment of seasonal allergic rhinitis must be questioned for its limited efficacy. They suggest that as this was a limited sized study, further research is needed to conclude the result.

Conclusion

Every year many people seek medications to control allergic rhinitis, from pollen, dust, animal dander, mites, or mold, whether this be over-the -counter preparations or prescription medications. The range of treatment options typically ranges from avoidance of the trigger, use of intranasal corticosteroids, intranasal or oral antihistamines, leukotriene antagonists, intranasal cromoglicic acid preparations, intranasal and oral vasoconstrictors, and nasal rinses. Guidelines are available to inform decision making however patient centred approaches seem to offer better patient outcomes.