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### POINT OF VIEW

## Use of anti-allergic drugs in children



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#### KEYWORDS

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**Abstract** Allergic rhinitis is one of the most frequent chronic diseases in children. We have analysed the prescriptions habits of anti-allergic medications in children (<14 years old) in 2011. We calculated the DHD (N°DDD/1000 children/day) for oral antihistamines and intranasal therapies (corticoids and antihistamines) in the region (sanitary districts I–VIII) and specifically in sanitary district V (health centres 1–15). We also reviewed the clinical records in six health centres in sanitary district V to know more details about age and diagnosis and to value if these prescriptions are adequate. We observed a use of 8.78 DHD in the group of oral antihistamines, with a predominance of desloratadine (3.48 DHD), a 3rd generation drug of this group, and in second place the intranasal therapy with a preference of corticoids (budesonide 3.5 DHD and mometasone 2.25 DHD). We think that it is necessary to improve the knowledge of anti-allergic drugs in children.

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Nowadays allergic rhinitis is one of the most frequent chronic diseases in children. Its prevalence has been increasing during the last 20 years.<sup>1,2</sup> The international Study of Asthma and Allergies in Childhood (ISAAC) showed differences in the prevalence between countries and regions.<sup>3,4</sup> This disease is important due to the influence in quality of life<sup>1,2</sup> and because it is often related to asthma severity and control.<sup>5</sup> Both things cause an important cost for families and countries.<sup>2</sup> There are few studies about drugs for

allergic rhinitis in children and the consequence is that the dosage of these drugs is extrapolated from adults, with a high risk for children.<sup>1</sup>

We report the results of a cross-sectional and retrospective study that we designed to analyse the prescriptions habits of anti-allergic medications in children (<14 years old) from Asturias, a region in the north of Spain, during 2011. We calculated the DHD (N°DDD/1000 children/day) for oral antihistamines and intranasal therapies (corticoids and antihistamines) in the region (sanitary districts I–VIII) and specifically in sanitary district V (health centres 1–15). We have also reviewed the clinical records in six health centres in sanitary district V to obtain more details regarding

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age and diagnosis in order to value if these prescriptions are adequate.

If we analyse the results by groups, the most widespread drugs for this disease are oral antihistamines. We obtained a use of 8.78 DHD for this group with differences between sanitary districts and health care centres. The most important active substance was desloratadine (3.48 DHD), followed by cetirizine (1.64 DHD). We did not find other studies to compare these results, although we think that this data is very important because it shows that paediatricians prefer the use of a 3rd generation antihistamine that is not the first step in the treatment of allergic rhinitis in children if we follow the current recommendations<sup>1,5,6</sup>; maybe this situation is due to the dosing regimen (once a day) which is simpler for children and their families, different prescriptions habits, or the pressure of pharmaceutical companies, like other authors have described with other drugs. When we analysed the diagnosis, we found prescriptions associated with allergic rhinitis (R96) that we considered adequate, but also with common colds (R74) that are not indicated nowadays.<sup>1</sup> This situation may occur because of an error in the codification or it could be associated to an inadequate use of these medications. In 2011 in our country oral antihistamines were indicated in the data sheet for children older than two years of age, because of this we found 80.8% of inadequate prescriptions. Therefore, we think that it is necessary to improve the codification and training in the use of oral antihistamines.

The other drugs for allergic rhinitis are nasal corticoids and antihistamines. We observed a use of them of 6.66 DHD with differences between sanitary districts and health care centres. The most important active substances in our region are corticoids, specifically budesonide (3.5 DHD) and mometasone (2.25 DHD). There are no studies to compare these results. Additionally, there are currently few studies that analyse the different active substances in allergic rhinitis in children, although it is known that these medications are indicated in persistent rhinitis and when a predominance of nasal obstruction exists.<sup>5</sup> We found 10% prescriptions off-label related to age: in the data sheet this medication was authorised for children older than four or six years of age. We think that more studies are necessary to learn about dosage, effectiveness and safety in children.

## Conclusions

With our study we have observed the prescription use and patterns of anti-allergic drugs in Asturian paediatricians.

The study has limitations because of its retrospective nature, but we consider that it could be useful for new studies in this subject to improve our prescription habits that should follow the current recommendations. More studies are necessary to know if these groups of medications are safe and effective for children, particularly in younger children.

## Ethical disclosures

### Confidentiality data

The authors declare that they have followed the protocols of their work centre on the publication of patient data and that all the patients included in the study have received sufficient information and have given their informed consent in writing to participate in that study.

**Right to privacy and informed consent.** The authors declare that no patient data appears in this article.

**Protection of human subjects and animals in research.** The authors declare that no experiments were performed on humans or animals for this investigation.

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