Letter to Editor

Intravenous dexamethasone-induced perineal pain in children

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Dexamethasone is one of the most commonly used corticosteroids in pediatric practice, especially for allergies and various types of airway inflammation. Since the 1980s, there have been many reports of the occurrence of short-lived, self-limiting, and unpleasant perineal pain in adults, particularly women, following intravenous administration [1,2]. In this letter, we describe two cases of young girls who suffered from severe anogenital pain that occurred immediately after starting the injection of intravenous dexamethasone.

CASE 1

A 2-year-old girl was brought to the pediatric emergency department due to repeated vomiting and an itchy rash after eating peanuts for the 1st time. The case was diagnosed as anaphylaxis. She was treated with an intramuscular injection of adrenaline, followed by an intravenous dose of diphenhydramine and an intravenous dose of dexamethasone. It was remarkable that the moment the intravenous dexamethasone dose started, the child started crying hysterically and attempting to scratch her anal area and genitals. Examination of the area was normal, and an uneventful recovery was observed 2–3 min after the end of the intravenous administration of dexamethasone. The child was monitored for several hours and released in good general condition.

CASE 2

A 4-year-old girl was brought to the pediatric emergency department for vomiting, rash, and shortness of breath following an ant bite. The child was examined clinically and was found to have wheezing on clinical examination. The case was diagnosed with anaphylaxis. She was treated with intramuscular injection of epinephrine and salbutamol nebulization. She also received one dose of intravenous diphenhydramine and one dose of intravenous dexamethasone. The child improved, but suffered from itching and severe pain in the anal, perineal, and genital areas after starting an intravenous infusion of dexamethasone, without any local clinical symptoms. This painful feeling disappeared a few minutes after the end of the intravenous dose. She was placed under observation and discharged home after 6 h in good general condition.

This unpleasant pain phenomenon, which is often considered a skin reaction and described as itching or pruritis, can be the result of a sudden and painful contraction of the pelvic floor muscles, especially in the absence of skin symptoms in the anogenital area. The mechanism of this side effect is still mysterious and the proposed explanations for this event revolve around blaming the phosphate ester, one of the components of dexamethasone, for the occurrence of this interaction [2], without explaining why it only affects the tissues in the perineum, while sparing tissues in other areas, leading us to believe that this area is more susceptible to this side effect due to factors not yet known.

We noticed that the diluted 0.6 mg/kg doses of dexamethasone in the cases described above were administered relatively quickly as an intravenous infusion within 2–4 min compared to the usual intravenous infusion period of up to 15–30 min, which in our experience, does not correlate with this reaction. A clinical trial found that a prolonged injection time of diluted dexamethasone significantly reduces the occurrence of this undesirable reaction [3]. On the other hand, some studies have examined the effect of administering lidocaine or fentanyl on reducing the frequency or severity of this side effect [4,5]. However, we believe that an ounce of prevention is better than a pound of treatment.

CONCLUSION

Physicians should be aware of this unpleasant perineal side effect of intravenous dexamethasone administration in both children and adults, especially women. A slow intravenous infusion of diluted dexamethasone appears to be a cost-effective method of preventing this reaction.

CONSENT FOR PUBLICATION

Written informed consent was obtained from parents for the publication of this case report and all associated images.

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Parents understand that while every effort is made to maintain the confidentiality of their children identity, name, and initials, anonymity cannot be guaranteed.

AUTHORS' CONTRIBUTIONS

All authors contributed to the completion of this work. The final manuscript was read and approved by all authors.

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