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Clindamycin Induced Delayed Maculopapular Skin Eruptions in Pediatrics: A Case Report

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Abstract

Recently, the use of Clindamycin has increased significantly in pediatric population. Immediate and delayed skin allergic reactions to Clindamycin have been rarely reported in pediatrics. In this case report, we report a delayed maculopapular skin eruptions caused by clindamycin in a 12-year-old girl.

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Introduction

Clindamycin is a lincosamide antibiotic that has been approved to treat gram positive infections in pediatric patients. Recently, clindamycin use has increased significantly due to its excellent coverage for skin/soft tissues and bone infections, it is considered a good alternative for Methicillin-Resistant Staphylococcus Aureus (MRSA) [1]. Although allergic reactions caused by clindamycin are rare, immediate and delayed skin reactions has been previously reported [2-9]. Maculopapular skin eruptions are the most reported presentation in adults [3-4]. To the best of our knowledge, there are no cases reported before for this type of reaction in pediatric population.

Case report

A 12-year-old girl, known case of CHD2-Gene mutation related intractable epilepsy on Lamotrigine. She underwent Vagal Nerve Stimulator (VNS) implant on (19/9/2018) 3 months prior to hospitalization and was discharged with no complications. On (24/12/2018), she presented to our emergency room with exposed stimulator lead in the neck with chronic hypertrophic superficial scar with no puss or gross infection. She was started on Cefazolin as a surgical prophylaxis and underwent wound debridement and cleaning. Wound and tissue cultures grew Methicillin-Resistant Staphylococcus Aureus (MRSA) and ID team was consulted thus Cefazolin was discontinued after 3 days and she

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was started on intravenous clindamycin 40 mg/kg/day every 8 hours. After 6 days of her admission she was discharged on clindamycin oral capsules to complete her course of therapy. At that time, she is not known to have any history of allergies.

Four days later, she presented to the neurosurgery clinic with mild maculopapular rash involving abdomen, thighs, inguinal area, upper and lower extremities with no mucosal or systemic involvement for 2 days (Figure 1).

No other systemic manifestations of fever, lymphadenopathy, joint pain or swelling or organomegaly. Her CBC showed a WBC of 4.04x10^9/L with neutrophils, 63%, lymphocytes, 25% and eosinophils 5%; hemoglobin 120 g/L and platelet 347×10^9/L. She was admitted to the hospital, viral testing for respiratory syncytial virus (RSV), parainfluenza virus, influenza-A virus, influenza B virus and adenovirus were all negative. Clindamycin was replaced with vancomycin to complete her course of therapy. She was given chlorpheniramine during her stay. After 1 day of clindamycin discontinuation, rash and skin eruptions improved significantly. The rash subsided completely within three days and she was discharged home in stable condition after she completed her course of therapy with vancomycin. The treating team did not seek consultations from neither dermatology nor allergy/Immunology or required to perform the patch test to confirm this reaction since the clear cause for this reaction was due to clindamycin after excluding all other factors.

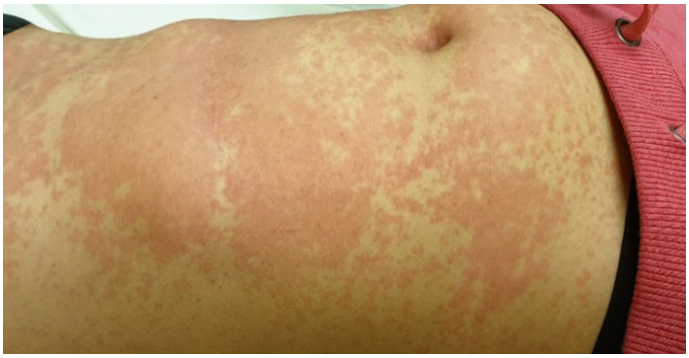

Figure 1

Discussion

Adverse drug reactions of clindamycin are infrequent and mostly limited to abdominal pain, diarrhea, metallic taste, transient abnormal hepatic function tests and agranulocytosis [10]. Hypersensitivity reactions, including rash and urticaria, have been reported, as well as rare cases of anaphylaxis, Drug Rash with Eosinophilia and Systemic Symptoms (DRESS) syndrome and Stevens-Johnson Syndrome (SJS) [6-9]. However, delayed cutaneous allergic reactions are relatively uncommon and reported exclusively in adults [11]. The most reported presentation was delayed maculopapular eruptions, usually develop 5 to 10 days after clindamycin initiation [3]. Similar reactions have never been reported in pediatric population.

Symptoms and signs that are characteristics of previous reported cases in adults were similar to the clinical presentation of our patient but with different severities [3-4]. All of the cases were managed by discontinuing clindamycin and symptoms disappeared after 1-3 days. No diagnostic tools as skin prick and intradermal tests have been found useful in most studies [4,14,15]. However, patch test showed mixed results with positive tests up to 30% [3]. The pathogenesis of this reaction has not been explained, however, patch tests have been shown to be positive suggesting a probable T-cell mediated hypersensitivity reaction [3]. Which was not performed in our case. There is one single case report showed successful desensitization of clindamycin in an HIV patient who had a delayed generalized exanthema [16].

At the time of the reaction, the patient was on Lamotrigine which can cause similar reaction. However, Lamotrigine is unlikely to be the cause of the reaction, since she used it for 3 years without reporting any adverse events. No other medications were added except clindamycin which makes it the most probable cause of this reaction. We evaluated the probability of a clindamycin-induced maculopapular skin eruptions in this patient using the Naranjo nomogram and the World Health Organization Collaborating Centre for International Drug Monitoring (WHO-UMC) assessment system, both showed probable/likely causality [12,13].

Conclusion

A delayed maculopapular skin eruptions attributed to clindamycin has been reported previously; however, there are no reported cases of similar reaction in pediatrics. The mechanism of this reaction is unclear, however, the concomitant use of lamotrigine might be a contributing factor, but there is no evidence for such assumption. Pediatric health care providers should be more vigilant in monitoring and reporting such reactions.

References

1. Liu C, Bayer A, Cosgrove SE, Daum RS, Fridkin SK, et al. Infectious Diseases Society of America Clinical practice guidelines by the Infectious Diseases Society of America for the treatment of methicillin-resistant Staphylococcus aureus infections in adults and children. Clin Infect Dis. 2011; 52: e18-e55.
2. Mazur N, Greenberger PA, Regalado J. Clindamycin hypersensitivity appears to be rare. Ann Allergy Asthma Immunol. 1999; 82: 443-445.
3. Pereira N, Canelas MM, Santiago F, Brites MM, Goncalo M. Value of patch tests in clindamycin-related drug eruptions. Contact Dermatitis. 2011; 65: 202-207
4. Lammintausta K, Tokola R, Kalimo K. Cutaneous adverse reactions to clindamycin: results of skin tests and oral exposure. Br J Dermatol. 2002; 146: 643-648.
5. Sulewski RJ, Blyumin M, Kerdel FA. Acute generalized exanthematous pustulosis due to clindamycin. Dermatol Online J. 2008; 14: 14.
6. Chiou CS, Lin SM, Lin SP, Chang WG, Chan KH, et al. Clindamycin-induced anaphylactic shock during general anesthesia. J Chin Med Assoc. 2006; 69: 549-551.
7. Karakayal B, Yazar AS, Cakir D, Cetemen A, Kariminikoo M, et al. Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome associated with cefotaxime and clindamycin use in a 6 year-old boy: A case report. Pan Afr Med J. 2017; 28: 218.
8. Miller Quidley A, Bookstaver PB, Gainey AB, Gainey MD. Fatal clindamycin-induced drug rash with eosinophilia and systemic symptoms (DRESS) syndrome. Pharmacotherapy. 2012; 32: e387-e392.
9. Sulewski RJ, Blyumin M, Kerdel FA. Acute generalized exanthematous pustulosis due to clindamycin. Dermatol Online J. 2008; 14: 14.

10. Murphy JL, Fenn N, Pyle L, Heizer H, Hughes S, et al. Adverse Events in Pediatric Patients Receiving Long-term Oral and Intravenous Antibiotics. Hosp Pediatr. 2016; 6: 330-338.

11. Sanchez-Borges M, Thong B, Blanca M, Ensina LFC, Gonzalez-Diaz S, et al. Hypersensitivity reactions to non-beta-lactam antimicrobial agents, a statement of the WAO special committee on drug allergy. World Allergy Organ J. 2013; 6: 18.

12. Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, et al. A method for estimating the probability of adverse drug reactions. Clin Pharmacol Ther. 1981; 30: 239-245.

13. The use of the WHO-UMC system for standardized case causality assessment. World Health Organization (WHO)-Uppsala Monitoring Centre. 2019.

14. Notman MJ, Phillips EJ, Knowles SR, Weber EA, Shear NH. Clindamycin skin testing has limited diagnostic potential. Contact Dermatitis. 2005; 53:335-338.

15. Seitz CS, Brocker EB, Trautmann A. Allergy diagnostic testing in clindamycin-induced skin reactions. Int Arch Allergy Immunol. 2009; 149:246-250.

16. Marcos C, Sopena B, Luna I, Gonzalez R, de la Fuente J, et al. Clindamycin desensitization in an AIDS patient. AIDS. 1995; 9: 1201-1202.