

Rare Effect of Vaccine Administration in Children

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Abstract

An 18-month-old child presented with progressive swelling of the left deltoid following DTPaHibVIP vaccination. Physical examination revealed a firm, erythematous swelling without fever or systemic symptoms. A diagnosis of cellulitis secondary to a local vaccine reaction was made, treated with amoxicillin/clavulanic acid, with improvement. While local reactions are common, cellulitis is rare. This case highlights the importance of recognizing rare complications without altering future vaccination schedules.

Keywords: Vaccine-related Adverse Event; Cellulitis; Pediatric Immunization; Local Reaction; DTPaHibVIP Vaccine

Introduction

An 18-month-old previously healthy female child was observed in the emergency department (ED) due to left deltoid swelling that had been developing over 7 days and progressively worsening. There was no fever or other associated symptoms. The history included the administration of the Diphtheria, Tetanus, Whooping Cough, Haemophilus influenzae type b, and Poliomyelitis (DTPaHibVIP) vaccine 13 days prior. An infectious complication had been evaluated in the hospital 1 day after DTPaHibVIP vaccination, with fever and a self-limited nonspecific macular rash.

On physical examination, a stony, hot, and painful erythematous swelling measuring 4x5 cm with well-defined borders was noted in the anterolateral region of the left deltoid (Figure 1). There were no movement limitations, no fluctuation, and no other notable changes [1,2].



Figure 1: Clinical image of the exuberant swelling at the site of vaccine administration.

Discussion and Conclusion

A diagnosis of a local adverse reaction to the vaccine complicated by cellulitis was made, and the child was treated with amoxicillin/clavulanic acid. Clinical reassessment at 48 hours showed improvement in inflammatory signs and spontaneous drainage. Local reactions are the most common adverse events following immunization, typically presenting as pain, edema, redness, or itching at the injection site. More exuberant reactions are rare and occur especially after booster doses of DTPa. Post-vaccination cellulitis is extremely uncommon, particularly with single-use equipment. Local reactions do not indicate an allergy to the vaccine and do not necessitate specific precautions for future vaccinations.

Conflict of Interest

No financial interest or conflict of interest exists.

Bibliography

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