

Cutaneous lesions caused by the yellow fever vaccine – have you ever seen them?

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SUMMARY

The Yellow Fever virus was isolated in 1927 and the disease is considered endemic and epidemic in tropical regions of South America and Africa, with thousands of new cases reported annually. Several side effects of the vaccine have already been reported. Although reports of skin rash secondary to the vaccine range from 0 to 15%, no image or detailed description of the lesions were found in the literature. Here we describe a rash on a toddler vaccinated to travel.

KEYWORDS: Exanthema. Drug eruptions. Adverse drug reaction reporting systems. Yellow fever vaccine.

INTRODUCTION

The Yellow Fever virus (YF) was isolated in 1927¹ and is an endemic disease in tropical regions of South America and Africa, with thousands of new cases reported annually².

The causal agent of YF is an arbovirus and it is transmitted through the bite of an infected mosquito, the *Aedes Aegypti* in the urban areas³.

Prior to the advent of the vaccine, YF was one of the most feared human infections due to hepatitis, renal failure, hemorrhage, shock, and death in 20-50% of cases².

Still in the 1930s, two vaccines were created, and during their development 32 laboratory workers contracted the disease and 15% of them died¹.

Adverse effects have been observed since 1930 in about 20% of cases¹. Severe effects include anaphylactic reaction, neurological disease and viscerotropic disease¹ with an extensive list of contraindications to vaccination⁴.

Although reports of rashes secondary to the vaccine can reach 15%, no images of such lesions were found in the literature.

CASE PRESENTATION

A healthy 18-month-old boy with no history of allergies received the YF vaccine isolated. After four days, erythematous papules appeared on palms,

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IMAGE 1. LESIONS ON THE LEG



IMAGE 2. ISOLATED ERYTHEMATOUS PAPULES

soles, trunk and limbs, including macular lesions on the conjunctiva (Image 1-2). There was no change in general condition, fever or pruritus. The lesions disappeared in three days without any treatment.

DISCUSSION

YF is an endemic disease in Brazil and the country has now the largest outbreak in the last decades, with a case fatality rate of 34.5% in 2017⁵.

The Brazilian vaccine is an attenuated live virus preparation of the 17DD strain lineage provided by the Oswaldo Cruz Foundation - FIOCRUZ⁶.

The reconstituted dose contains egg albumin, sucrose, sodium glutamate, sorbitol, bovine gelatin, erythromycin and kanamycin⁷. Cases of anaphylaxis may be secondary to the reaction to the egg protein

or gelatin and have been reported in 1.8/100,000 doses². However, a reaction to either component is possible, as well as to the latex from the vaccine vial lid¹.

Currently, it is questioned if vaccination should be limited to people traveling to areas where the risk of YF exceeds the risk of serious adverse events following vaccination².

A vaccine with inactive virus could reduce the risk of some of the adverse effects, especially of anaphylaxis, viscerotropic and neurotropic disease².

CONCLUSIONS

We report a case of a toddler with cutaneous reaction to the 17D YF vaccine showing the skin lesions of this adverse reaction.

RESUMO

O vírus da febre amarela foi isolado em 1927, e a doença é considerada endêmica e epidêmica em regiões tropicais da América do Sul e África, com milhares de novos casos relatados anualmente.

Vários efeitos colaterais da vacina já foram relatados. Embora os relatos de erupções cutâneas secundárias à vacina variem de 0% a 15%, nenhuma imagem ou descrição detalhada das lesões foi encontrada na literatura. Aqui descrevemos a erupção de uma criança vacinada para viajar.

PALAVRAS-CHAVE: Exantema. Erupção por droga. Sistemas de notificação de reações adversas a medicamentos. Vacina contra febre amarela.

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