

EAR PIERCING: A GATEWAY TO TETANUS

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ABSTRACT

Tetanus is initiated by the release of neurotoxins. The progressive paralysis of several muscles is due to contamination of the wound by the toxin. The case under discussion was about a patient with the tetanus infection after ear piercing due to unsterilized instruments and lack of awareness of complications. Due to the late presentation to the hospital, leading to a delay in treatment, the child could not survive. Physicians need to have a vigilant eye to have a high suspicion for tetanus at a very early stage and immediate initiation of advanced critical care, which can favour lifesaving interventions. Prophylactic tetanus toxoid should be administered before any body piercing.

Keywords: Clostridium tetani, Muscle spasms, Neuromuscular disease, Preventive medicine, Skin tagging.

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INTRODUCTION

Tetanus is a bacterial disease caused by the toxin Clostridium tetani contacted through open skin wounds. Vaccination for tetanus is available,¹ however, tetanus can result in wounds with lethal outcomes typically characterized by rigidity of the muscle tone and spastic contractions.²

It is important to study the clinical cases, increase awareness of the seriousness of this disease, decrease the resistance of the population to vaccination, and finally eradicate the disease. This report discussed the case of a patient who was suffering from a tetanus infection.

CASE REPORT

A six-year-old female girl presented in the Paediatrics Emergency with a history of fever for five days and spasms for two days. Spasms on stimulation with lockjaw were seen on the examination. Parents reported having an ear piercing done one week back.

She was hospitalized with ventilatory support, sedation, muscle relaxation, and antibiotics (Metronidazole and Penicillin) according to WHO protocol. Due to her incomplete immunization schedule, generalized tetanus was suspected. A high dose of a human immunoglobulin and one dose of tetanus toxoid were given. No tetanus prophylaxis was given in the last three years.

The monitoring was carried out by the paediatrics but due to the delay in presentation to the hospital, late

diagnosis and appearance of complications, she expired after 48 hours.

DISCUSSION

Individuals with a history of tetanus immunization have a milder disease and high survival rate.³ Tetanus infections in the West are very rare now.⁴ However, a lack of herd immunity still leads to incidental tetanus infections in non-immunized individuals.

A Dubai-based case report suggested the morbidity and mortality rate of tetanus is still too high. Therefore, it is crucial to launch an effective immunization campaign.⁴ A study in Bahrain elaborates the lethal complications resulting from tetanus, causing pneumonia in 30% cases due to laryngospasm resulting in aspiration.^{4,5} A previous study has elaborated the lack of laboratory-based diagnostic criteria for tetanus. A shorter incubation period is usually associated with a more dangerous strain and has more lethal outcomes.⁵

Taiwan-based study revealed that serological studies need to be done to ensure higher protection from the disease, especially for those at high risk. Appropriate treatment, including wound care, can essentially prevent the development of complications, which can help improve the outcomes of the disease.⁶

Another study conducted in Brazil claimed that due to poor prognosis and high rates of complications, it is necessary to constantly monitor the patient and develop a qualified multidisciplinary team.⁷ 39% children get their DPT3 vaccine completed which is primarily due to the low adherence to immunization due to several social and demographic characteristics.^{8,9}

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Generalized tetanus is pretty much a diagnostic challenge due to lack of knowledge among healthcare workers and the general population. Therefore, the physicians need to be taught about the accurate diagnosis of tetanus at the initial stages when the muscular spasm is still controllable. Initiation of advanced medical care at an early stage can promise higher positive outcomes for the patient. However, the people need to be educated about the disease. Parents should ensure proper sterilization of the instruments and prophylactic tetanus toxoid has been done administered before any body piercing.

Conflict of Interest: None.

Authors' Contribution

HM: Manuscript writing, NZ: Concept, AZ: Critical revision, TS: Data analysis, SA: Facilitator.

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