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Medicine

LOCAL TETANUS: A RARE CASE REPORT

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ABSTRACT **Introduction:** "local tetanus" is used to denote those cases of infection by *Clostridium* [Cl] tetani in which muscular spasms and contractures are limited to one region of the body throughout the course of the disease.

Case Report: 10 years old male child had small wooden stick prick injury to his left foot while he was playing . After 6 days he had mild fever followed pain in the foot. On 7th day of injury he had sudden onset spasms of the left lower limb which localized only to the left lower limb for which he was referred to GMCH Aurangabad for further management. Human anti tetanus immunoglobulin 2000iu were given intramuscularly. he was addmitted for 28 days and discharged with advise of physiotherapy.

Conclusion: This case report the importance of the recognition of a rare form of this fatal infectious disease, which may present with prodromal symptoms before the generalized form shows its clinical effects. Moreover, the clinician should be aware of the variable presentations of this infectious disease, with early identification greatly reducing the associated risks of morbidity and mortality.

KEYWORDS :

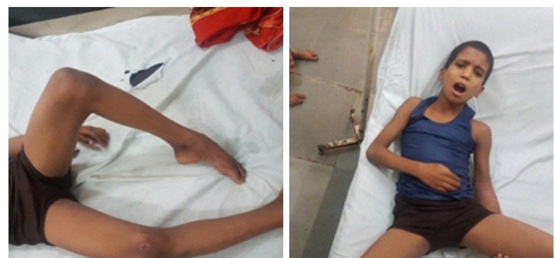
Introduction :

Tetanus is a serious and a life-threatening infectious disease with a grave outcome if not detected and treated at an early stage. An infection found more frequently in Tropical climates; it accounted for 58,900 deaths worldwide in 2013 [4]

Majority of the cases described in clinical practice involve the classical generalized form of the disease with fatal sequel, patient requring ventilator support. However, the atypical forms of this includes neonatal, cephalic, and even rarer subtype; localized tetanus is rarely reported.[2]

The most frequent form was the monoplegic, affecting an arm or a leg, but paraplegic, cephalic, and (rarely) abdomino-thoracic types were recorded. Splanchnic tetanus, so called because it follows a visceral infection.[3]

Case Report : 10 years old male child brought by relatives was admitted in GMCH Aurangabad on 14/4/2017 with history of Fever since 8 days,spasms of the left lower limb .Child was alright 10 days back to start with he had small wooden stick prick injury to his left foot while he was playing in school ground on 04/4/2017 followed he had bleeding from the injury site. In the home he was taken to local practioner where some treatement was given and dressing of the wound done and adviced antibiotics. But the pain continued and swelling increased followed the swelling get burst and pus came out along with the small bit of wooden pieces.After 6 days he had mild fever followed pain in the foot. On 7th day of injury he had sudden onset spasms of the left lower limb which was localized only to the left lower limb for which he was refered to GMCH Aurangabad for further management.On admission he had high grade fever, irritibal, spasms localized the left lower limb.There was no history of trismus, neck rigidity,laryngeal muscle spasms, upper limb spasm. he had no previous history of surgery to left lower limb. Pregnancy was unbooked and no history of tetanus immunization during pregnancy. Normal vaginal delivery hospitalized and baby well cried after birth he received BCG Vaccine on 3rd day , polio vaccine till age of 5 .As per history given by his parents he had received 2 doses DPT vaccin till age of ane and half years, but as parents are illiterate it cannot be confirmed whether patient recived it by proper schedule as documents are not available on examination he was febrilw,irritable and crying, Pulse86/min, BP- 90/70 mm hg ,Spo2-99%.he has abdominal muscle rigidity,all Cranial nerves were normal, no focal neurological deficit.in other systemic examination nothing significant detected. locally he had wound over plantar surface of left foot of size 3*2 cms, hyperextension at hip, knee and ankle joint. he did not have trismus,neck rigidity, laryngeal muscle spasms, opisthotonus. his Hb was 9.1g/dl, all his routine blood investigation in the normal range.he was admitted in dark room and was given injectable antibiotics. Human anti tetanus immunoglobulin 2000iu were given intramuscularly. his total duration of admission was 28 days. spasm of lt. leg started decreasing from day 16,he had minimal restriction of movement at ankle joint and was advised physiotherapy.



Discussion:

*Clostridium tetani*is an anaerobic bacterium found commonly in soil in spore form or in the gastrointestinal tracts of mammals and produce a potent neurotoxin, tetanospasmin. Incubation period ranges from 3 to 21 days, with most average incubation period being 10 days. Tetanospasmin causes spastic paralysis by blocking the release of γ-aminobutyric acid, an inhibitory neurotransmitter acting on motor neurones.

Generalized tetanus is far more common than the localized form, which involves painful spams of the muscle adjacent to the wound site, and this eventually leads to the former variety. Cephalic tetanus is a rarer subtype of localized tetanus, which presents as dysphagia, trismus, retracted eyelids, deviated gaze; all primarily involving bulbar musculature(5). Localized tetanus involving other groups of muscles is even rarer with limited evidence of similar cases in published literature.(6)

There is no doubt that national immunization programs in india have indeed abolished almost cases of tetanus. However, there are still a small number of cases, which present with ambiguous or non-specific

symptoms such as dysphagia, neck stiffness, and other oropharyngeal symptoms portraying a prodromal state of the illness, which could eventually lead to full-blown generalized tetanus. Once developed or allowed to progress, it ultimately leads to respiratory or autonomic dysfunction necessitating long-term intensive care or even death in more severe cases [7]

Another diagnostic challenge lies in the distinction between localized and other forms of this disease. The former involves muscle spasms limited to specific body areas with generally good outcomes, but rare cases go on to involving vital structures such as the cranial nerves leading to cephalic tetanus and increasing the risk of developing generalized tetanus with high mortality rates[8]. On extensive search of liteature on internet few reported cases of localised tetanus were found[1],[2],[3]. This highlights an important aspect of diagnosing this rare infection, considering some cases may even present without an acute wound as evident in our case and in another case series[9].The second step and the most vital aspect of managing this disease is the administration of tetanus immunoglobulin, which greatly reduces the morbidity and mortility from generalized tetanus.

Conclusion:

Local tetanus is indeed a rare form of tetanus, which may present with variable symptoms before a full-blown generalized state occurs. The unusual presentation of this infectious disease still exists in the developling countries. Furthermore, this case report also signifies the fact that all open wounds with muscle spasm should be routinely screened for tetanus and early prophylaxis should be given if required. Surprisingly this patient did not progress or worsen to involve other muscles of body. It is also recomanded that regular vaccination of preventible diseases. Like DPT which is widely and freely avalible in every remote part of India should be made mandatory.

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