Pictorial CME

Local Tetanus – Involving Left Lower Limb

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15 year old previously healthy girl, presented with recurrent spasm of muscles, over left lower limb which lasts for few minutes. During the spasm there was profuse perspiration pain over entire lower limb which was excruciating and unbearable. The muscle spasm increased in severity and frequency and she became physically exhausted over a period of two days. The symptoms were exaggerated by emotion, sensory stimuli and movement. No h/o injury, fever, drug intake. On examination patient was conscious, oriented, PERL 3 mm both sides, normal fundus, other cranial nerves were normal. Trunk, both upper limb and right lower limb were normal. There was muscle rigidity of left lower limb due to recurrent spasm (Fig-01). There was also swelling and tenderness of entire calf region. Each spasm lasted for few minutes. There was profuse perspiration during the muscle spasm. All DTR's were normal. Sensory system was normal. Diagnosis of local tetanus was made in view of above clinical findings. Patient was treated with tetanus immunoglobulin, antibiotics, baclofen and benzodiazepines to reduce spasm.

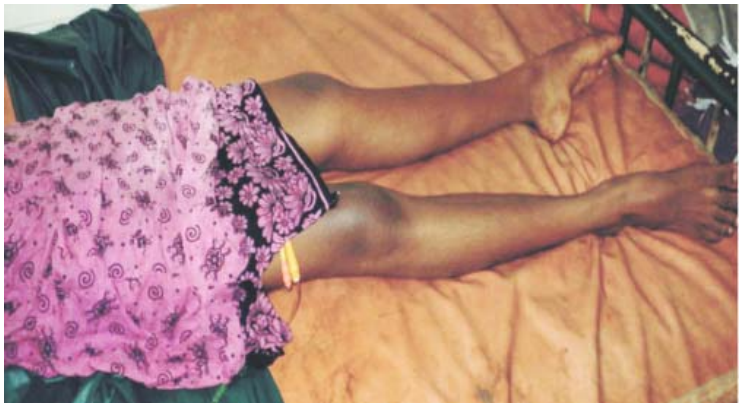

Fig 1 — showing muscle rigidity of left lower limb due to recurrent spasm.

Tetanus is caused by tetanospasmin, a toxin elaborated by Clostridium tetani which acts by inhibiting the release of gamma aminobutyric acid and glycine which are inhibitory neurotransmitters in the brainstem and spinal cord1. Local tetanus, in which symptoms remain limited to a limb, is a rare form2. Rigidity and spasm of muscles amounted with local weakness and muscle pain which may persist for a week. Local tetanus involving an extremity independent of the wound is uncommon. These patients have some degree of immunity with sufficient circulatory antibody to bind to toxin to prevent it from reaching central nervous system but not enough to prevent local disturbance. The prognosis is excellent. This may progress to generalised tetanus if not recognised and the toxin is not neutralised with antitoxin.

This case highlights the rare form of tetanus and emphasis the need for a high index of suspicion to diagnose and to treat this tropical problem.

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References

1 Ernst MD, Klepser ME, Fouts M, Marangos MN — Tetanus: Pathophysiology and management. *Ann Pharmcother* 1997; **31:** 1507-13.
2 Walter G Bradley — Neurology in Clinical Practice 2008; **2:** 1452-54.

Localized tetanus is a rare presentation which can be diagnosed on clinical suspicion. The identifiable antecedent cause i.e. wound or history of infection is usually present in most of the patient of tetanus and also in localized tetanus. But in a quarter of patients of tetanus, no cause can be indentified 3and this is also applicable in patient of localized tetanus. Presumably, minor unnoticed skin infection or abrasions are responsible for this type "Cryptogenic" Tetanus cases. Here, this is a rare case of cryptogenic localized tetanus where clinical sign and symptom are present without any history of skin infection.

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