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Case Report

Two cases of acute dysphagia

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Introduction

Tetanus is rare in the Armed forces today. Therefore diagnosis may be delayed.¹ Fatality is very high in the elderly.² The diagnosis is most frequently made on clinical manifestations.³ In the early stages patients may be termed hysterical or trismus in the elderly may be mistaken for a temporomandibular joint problem.

We report two cases of tetanus in elderly ladies who had unusual presentation with sudden onset of dysphagia.

Case report-I

A 55 years old village lady reported sudden dysphagia to liquids and solids since 1 week. There was no history of pain throat, drug intake, dog bite, trauma, fever, change of voice. She had uterine prolapse since many years and was treated successfully for a swelling in the left groin 20 days back. She was not immunized against tetanus.

On examination her neck muscles were hypertonic and taut but the neck could be flexed. Mouth opening at this

juncture was full. Examination of oral cavity and indirect laryngoscopy (IDL) was normal. There was no evidence of palatal palsy and the larynx moved normally in the act of deglutition. Gag reflex was present. The act of deglutition was watched by giving her water to drink. This resulted in drooling out of the water after some time. There was no nasal regurgitation. A Barium swallow done at a previous hospital opined obstruction at level of piriform fossa. However this was ruled out on IDL. A rigid oesophagoscopy was planned to rule out post cricoid growth. A nasogastric tube was passed easily signifying that there was no reason to prevent fluids from going down. Gynaecological examination revealed procidentia with no evidence of decubitus ulcer. Antibiotics were started to cover up for any subclinical infection.

She worsened in the next 2 days, in that she developed trismus and neck stiffness and the characteristic 'Risus Sardonius' face (Fig. 1). Intermittent abdominal spasms were noted whence stomach contents regurgitated out through the nasogastric feeding tube without any retching or vomiting. Reflexes were brisk and there was stiffness of the proximal muscles of limbs. Planters were flexor. There was no fever or pain and mentation was clear. She had excessive salivation. Systolic blood pressure fluctuated between 90 and 110 mm of mercury. ECG was normal. All lab parameters, CSF and CECT brain were normal. A diagnosis of tetanus was made in view of trismus, dysphagia without a neurological deficit or obstructive lesion, increased reflexes and intermittent hypertonicity of limbs while all other relevant central nervous system disorders were ruled out. The patient was nursed in the ICU. Prophylactic tracheostomy was considered as secretions were very profuse and could initiate a laryngospasm by aspiration. However, the patient positioned herself laterally with head down so that the secretions fell in the kidney tray and she even slept in this position. Instructions were given to insert an

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Fig. 1 – Risus Sardonius.

IV cannula through the cricothyroid membrane in the event of a laryngeal spasm. Injection human tetanus immunoglobulin 6000 IU intramuscular was given at various sites. Injections metronidazole 500 mg, piperacillin 4 g, tazobactam 0.5 g, diazepam 10 mg IV and tablet baclofen 10 mg eight hourly were also started. Low molecular weight Heparin 40 mg subcutaneously O D was given as prophylaxis against venous thrombosis. Constipation was tackled with enema as glycerine suppository failed. On 10th day of admission she started swallowing saliva and could take a few sips of water (Fig. 2). She complained of a pain, right upper first molar. This was extracted. Mouth opening became full on 15th day. Diazepam and baclofen were gradually discontinued. She started taking normal diet by the 18th day and was discharged on 24th day. Upper GI endoscopy was done before discharging the patient and this was normal. Active immunization against tetanus was also given.

Case report-II

A 70 years old village lady was referred to the surgeon as a case of cervical spondylosis with history of stiffness in the back of the neck and sudden dysphagia to liquids and solids since 4 days. He referred her to the medical specialist to rule out a neurological disorder wherein a provisional diagnosis of

Fig. 2 – After 10 days of treatment.

hysterical neurosis was made, but she was sent for an evaluation of the throat to rule out any local cause.

There was no history of pain in the throat and no history of trauma, foreign body/food bolus impaction, dog bite or fever. On examination she was alert, normotensive, looking distressed. Voice was normal. There was no cervical lymphadenopathy or tenderness over the cervical spine. Neck muscles were hypertonic and taut so the neck could not be flexed (Fig. 3). Trismus (Fig. 4) was present with mouth opening of two fingers. There was no tenderness at the temporomandibular joints. On IDL through the available gap there was a severe spasm of the jaw muscles and the mirror was caught inside the mouth for a few minutes till the spasm gradually passed off. This immediately aroused the suspicion of tetanus. There was no evidence of dental sepsis. Muscle tone was increased. Deep tendon jerks were brisk and planters were flexor. All laboratory parameters, CSF, and CECT brain were normal. Radiograph of the cervical spine showed mild evidence of spondylitis. Patient was admitted in the ICU.

Human tetanus immunoglobulin 3000 IU intramuscular stat and injection tetanus toxoid were administered at different sites. Injections diazepam and metronidazole were started. Swallowing difficulty improved and neck muscle spasm reduced gradually over the next 2 weeks whence a Barium swallow and upper GI endoscopy were also done but found normal.

Discussion

The diagnosis is relatively easy in areas where tetanus is seen often but is delayed where cases are seen infrequently as in the Armed forces, or when the primary manifestation is other than trismus. Both of our patients had an uncommon presentation as dysphagia. Our first patient was investigated in a previous hospital with a Barium swallow (Fig. 5) which was totally misleading as there was no dynamic obstruction in the oesophagus. The second patient too didn't give an obvious clue except for a mild trismus. A chance spasm when indirect laryngoscopy was being performed was what clinched the diagnosis. Also our patients were villagers and not previously immunized hence tetanus was a high probability.³

Trismus, neck stiffness and facial distortion occur early in tetanus as the shortest peripheral nerves are the first to

Fig. 3 – Stiff neck, hypertonic muscles.

Fig. 4 – Trismus.

deliver the toxin to the CNS. It is important to recognize the condition at this stage otherwise it progresses to become generalized as happened in our first patient in whom there was delay in diagnosis as trismus occurred much after dysphagia. The “spatula test” that involves touching the posterior pharyngeal wall with a sterile, soft-tipped instrument may be helpful in some cases. A positive test result is the involuntary contraction of the jaw (biting down on the “spatula”).⁴ We found this negative in our first patient who did not have trismus at the time of presentation. Once trismus occurred the test became positive. However in the second case where there was already some trismus it was positive. Indirect laryngoscopy (mirror substituted for the spatula) examination induced a severe spasm of the jaw muscles and the mirror could not be withdrawn till the spasm passed off. It seems that the test is more likely to be positive when trismus has set in. Electrophysiologic studies can also be helpful.⁵

We used metronidazole in our patients. It is the preferred antibiotic of choice⁶ over penicillin which is a GABA antagonist and may enhance effects of the toxin. In the first case, source could be odontogenic or a trivial trauma in the left leg 3–4 weeks back which resulted in inguinal lymphadenitis, mentioned as a swelling in the groin, by the patient. Also she had proclivita where a decubitus ulcer too could be

a source.⁷ In the second case source of infection could not be identified. In 30% of patients no portal of entry is apparent.

The first case had to be given a larger dose of tetanus immunoglobulin due to the severity of the case. Some workers claim greater efficacy of tetanus immunoglobulin when administered intrathecally, whence the required dose and therefore costs are much less.⁸

A lack of neural control of the adrenal glands results in release of catecholamines, thus producing a hyper-sympathetic state and widespread autonomic instability which was partially evident in the first patient by fluctuations in the blood pressure and sialorrhoea.

Due to the extreme potency of the tetanospasmin toxin immunity is not acquired after getting tetanus. Hence our patients were also given active immunization. Once the toxin becomes fixed to neurons, it cannot be neutralized with antitoxin. Recovery of nerve function from tetanus toxins requires sprouting of new nerve terminals and formation of new synapses. This explains the slow recovery, as occurred in our patients.

Differential diagnosis includes strychnine poisoning, dystonic reaction to phenothiazines, rabies, severe cervical spondylosis and other causes of trismus like temporomandibular joint problems and infections of parapharyngeal space which can all be excluded by a good clinical examination and radiological help.

Prognosis is usually good after 1 week. Some clinicians have devised scoring systems to assess prognosis.⁹ The aim of reporting these cases is to highlight that tetanus can have an unusual presentation as sudden dysphagia¹⁰ and that though Armed forces has a good immunization protocol, elderly patients who are dependants of soldiers, residing in villages may not be immunized and hence a high index of suspicion must be kept in mind when dealing with them.

Conflicts of interest

All authors have none to declare.

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Fig. 5 – Showing hold up of barium at piriform fossa.

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