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Case Report

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Cephalic tetanus; A Case Report

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ABSTRACT:

A 68-year-old male was admitted with weakness of right side of face along with difficulty in speech and swallowing. Clinical examination was invariable with findings of C.N. VII palsy, weak gag reflex but rest of the neurological examination was normal. Brain imaging was non-conclusive. During hospital stay, he developed tachycardia followed by desaturation and marked facial spasm leading to clinical diagnosis of tetanus. Urgent tracheostomy along with TIG were given and over few days patient's spasm declines without notable autonomic instability. Patient was discharged after one week with advice of follow-up in OPD.

KEYWORDS:

Cephalic tetanus, Facial spasm, (TIG) Tetanus Immunoglobulin.

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INTRODUCTION:

Tetanus is a clinical condition with neurological & muscular impact caused by tetanospasmin, a powerful protein toxin produced by an obligate, an-aerobic, motile Gram-positive Rod Clostridium Tetani; It is found in soil, houses, operation rooms & hospitals. (1,2,3)

Tetanus may be categorized into four clinical types namely Generalized tetanus, localized tetanus, cephalic tetanus and neonatal tetanus.

Cephalic tetanus is the rarest form of tetanus and has been described in association with ear infection (otitis media); however, injury in any part of body can lead to cephalic tetanus too. (4,5, 6)

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The incidence of cephalic tetanus ranges from 1-3% of all forms of tetanus. Two third of cephalic tetanus cases progress to generalized tetanus with mortality up to 30%.

CASE HISTORY:

A 68-year-old male was admitted through emergency with weakness of right side of the face for one day associated with difficulty in speech and swallowing.

Patient had history of fall on ground ten days ago, sustained mild abrasions over the bridge of the nose, but did not seek any medical treatment. For last one day, patient complained of dribbling of saliva from right side of mouth, difficulty in opening eyes followed by difficulty in swallowing and speech. He had no co-morbid conditions, non-smoker and had no significant past medical or surgical history. Rest of the systemic enquiry was unremarkable.

On clinical examination, patient was tall lean person, vitally stable, alert conscious with slurred speech. Signs of right VII (facial nerve) palsy were elicitable. Pupils were bilaterally reactive with preserved corneal and conjunctival reflex. He had weak gag reflex with deviation of tongue towards right side on protrusion. Motor examination of upper and lower limb was normal with down going planters. Rest of the clinical examination was unremarkable.

Lab investigations are shown in box 1.

During the hospital stay, on second day patient become vitally unstable with tachycardia, tachypnea and decrease oxygen saturation on pulse oximeter. Marked spasm noted on face with inability to open mouth and difficulty in breathing.

An urgent tracheostomy was planned and patient was shifted to ICU. Soon after maintenance of airway, breathing settles over few hours and vitals return to baseline.

In lieu of clinical state, TIG (tetanus Immunoglobulins) was given along with magnesium sulfate infusion and Penicillin-G. His spells of spasm were controlled with diazepam intermittently.

Over few days patient's episode of spasm declines. No autonomic instability noted during the period.

Patients remain under medical treatment; on tenth day his tracheostomy was removed, and he was discharged next day. His follow-up visit after one week was unremarkable except for symptoms of UTI (urinary tract infection) He was further advised to continue with physiotherapy and T.T (tetanus toxoid) at one and six months.

DISCUSSION:

The major presenting symptoms of cephalic tetanus is trismus, however cranial nerve palsies often precede trismus in case of cephalic tetanus (7)

Apart from suppurative otitis media, cephalic tetanus follows cranial injuries as in our case. (8)

Since it did not progress to generalized tetanus, a good outcome was obtained with early intervention and prompt treatment.

Early suspicion and recognition of the condition is required. Treatment consists of nursing care, airway toilet, sedation, muscle relaxation, tracheostomy care, antibiotics if infection occurs and active & passive immunization. (9)

All partially immunized and non-immunized adults should receive

vaccines for prevention. The primary series for adults consist of three doses. A booster dose is required every ten years. (10)

Delay in diagnosis and management worsens condition of the patient and early recognition with appropriate interventions can prevent chronic complications or possible mortality. (6)

Conflict of Interest: None

BOX 1:LAB INVESTIGATIONS

Hb	12.9 gm%
TLC	11.8 /cumm
Platelets	342/ cumm
HbA1c	5.8
Urea	18 mg/dl
Creatinine	1.0 mg/dl
Sodium	146 Meq/L
Potassium	4.1 Meq/L
Chloride	106 Meq/L
Bicarbonate	26 Meq/L
Total lipid	510 mg/dl
Cholesterol	145 mg/dl
LDL	77 mg/dl
HDL	43 mg/dl
Triglycerides	77 mg/dl
Calcium	8.8 mg/dl
Phosphorus	2.8 mg/dl
Albumin	3/5 gm/dl
TSH	0.603 mIU/L (Adult (0.465 - 4.68) mIU/L)
Free T4	1.76ng/dl (normal 0.78 - 2.19 ng/dL)
Chest X-ray	Apical pleural thickening on the right side. Patchy air space opacification is noted in the right lower zone. This could represent Consolidation secondary to infection.
CT Brain	No recent gross infarction, intracranial bleed or space occupying lesion is seen.
MRI Brain	No recent infarction. Few small focal hyper-intensities in sub-cortical white matter of both frontal lobes on FLAIR images, suggestive of small focal white matter ischemia.
Echo	Normal size left ventricle with normal systolic function. Grade-I diastolic dysfunction.
Carotid Doppler	Normal appearing both CCA, ICA and ECA No evidence of plaque seen on either side without any narrowing of the lumen of the vessels. Incidental Findings: Large heterogeneous nodule with central cavitation measuring 2.1x1.8 cm is seen in right lobe of the thyroid gland.

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Author's Contribution:

Nadeem Ahmed Siddiqui: Final Script
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