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**Original article**

**A study on the clinical presentation and outcome of tetanus in adults with special reference to autonomic nervous system dysfunction**

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**Abstract:**

**Aims:** To evaluate the clinical profile and outcomes of the tetanus patients and to detect autonomic nervous system dysfunction in this group of patients and their outcomes.

**Methodology:** Descriptive cross-sectional study in a tertiary care center. All adults’ patients diagnosed of tetanus as per WHO criteria were included in the study. Autonomic dysfunction was also noted in the study subjects.The autonomic nervous system (ANS) dysfunction was defined as presence of labile or persistent hypertension (>140/90 mmHg) or hypotension (<90/60 mmHg) and persistent sinus tachycardia (heart rate >100 bpm), tachyarrhythmia or bradycardia (heart rate <60 bpm) alternating with tachycardia on ECG.At least one criteria is to be present to define ANS dysfunction.

**Results:** Mean age of ANS patients was 40.63 years lower than without ANS patients of 41.51 years. Nine of 11 (81.8%) patients died in ANS group as compared to six of 31 (19.3%) in without ANS dysfunction. Corrected chi-square test value between death and ANS dysfunction and full recovery is statistically significant (< p = 0.05) but the outcomes regarding partial recovery with ANS dysfunction is not statistically significant. ANS dysfunction was noted in the tetanus patients in the form of resting tachycardia, persisted hypertension, BP fluctuation, and electrocardiogram (ECG) changes in RR ratio during deep inspiration, excessive sweating, and urinary retention.

**Conclusion:** The present study highlights the detection of ANS dysfunction in tetanus patients to be of utmost importance who showed a statistically significant increment in both complete recovery and mortality as well. Hence, careful early detection of ANS dysfunction is a must to reduce mortality and achieving full recovery.

Keywords: Tetanus, ANS dysfunction, clinical profile.

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