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Inappropriate sinus tachycardia and cardiogenic shock following anaphylactic shock caused by wasp sting

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Objective: Wasp sting can cause anaphylactic shock, a life-threatening condition. Moreover, anaphylactic shock can manifest as many clinical symptoms, including neurological, cardiovascular and nephrological problems.(1) Inappropriate sinus tachycardia (IST) is non-fatal tachycardia but possibly affects patient's quality of life. IST is unusual diagnosis that is rarely reported as a complication following anaphylactic shock from wasp sting. IST is presumably more common than previously thought and in this case may hamper patient's quality of life substantially.(2)

Case Report: A 41-year-old male presented in emergency with history of sudden onset palpitations, chest discomfort, fatigue, and "choked" feeling in his neck. 30 minutes before arrival in the emergency, the patient was in his locker room where he was bitten by a wasp on his right forehead. 10 minutes after, his symptoms worsened. He had no history of any previous disease and he was not taking any medications or alcohol. Upon his arrival, the patient was panicked but still well oriented. 10 minutes after admission, he became unconscious, GCS 4, pulse was 140-150/minutes very weak, irregular; blood pressure of 60/45 mmHg, respiratory rate of 28/min, and oxygen saturation of 97% using non-rebreathing mask. His electrocardiography showed tachyarrhythmia. He was given anaphylaxis protocol treatment including adrenaline, dexamethasone and diphenhydramine injection. At 24 hours after ICU admission the patient was given dopamine injection 5 mcg/kg/min for cardiogenic shock. The patient remained in ICU for 7 days during which his vitals gradually improved. Serial electrocardiograms showed sinus tachycardia. The patient was discharged in satisfactory condition. Outpatient clinic follow-up on day 3, 30 and 60 after discharge noted palpitation and tachycardia. The patient showed class two heart failure symptoms according to New York Heart Association classification. His serial electrocardiography showed sinus tachycardia. Further follow up was not possible because the patient did not attend his fourth visit.

Conclusion: Wasp sting can be a serious problem, causing severe systemic complications. Life-threatening conditions must be treated first and subsequent thorough evaluations are required. There are possibilities of other complications that may impact on patient's quality of life.

References:

- (1) Przybilla B, Rueff F. Insect Stings. *Dtsch Arztebl Int.* 2012; 109(13): 238–248.
- (2) Olshansky B, Sullivan RM. Inappropriate Sinus Tachycardia. *Journal of the American College of Cardiology.* 2013; 61(8).