



G3 Impetigo Contagiosa Simulating Non-Accidental Injuries in a Pregnant Woman Using Intravenous Drug

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After attending this presentation, attendees will understand the possibility of pitfalls when distinguishing between pathological and traumatic injuries.

This case presentation will impact the forensic science community by emphasizing the possibility of these pitfalls when distinguishing between pathological and inflicted injuries.

This case confirms that for subjects using intravenous drugs, a fulminating course of endocarditis by *Staphylococcus aureus* that involves the left cardiac valves in association with systemic embolism of cutaneous vessels may cause dermal lesions simulating non-accidental injuries.

Even though it is well known how the use of intravenous drug increases the risk of endocarditis, available data about the clinical aspects related to the involved site and bacteriological characterization seem to be controversial. *Staphylococcus aureus* represents the most frequently implicated microorganism (i.e., 76% of cases) that significantly impacts the tricuspid valve. Different from the other etiologic forms, the endocarditis by *S. aureus* generally starts with symptoms of sepsis and pulmonary embolism linked to a past use of intravenous drug which defines the so-called "diagnostic triad" of the tricuspid valve endocarditis. Cardiac insufficiency and neurological signs are not usual symptoms. In endocarditis cases resulting from *S. aureus*, a fulminating course has been observed only if the left cardiac valves were involved, with systemic embolism and/or cardiac decompensation. The course is favorable in the remaining cases.

Case: A young woman, at the 32.2 week of amenorrhea was assisted by first aid and admitted to the hospital with a diagnosis of "labor of preterm fetus." At the clinical exam, the woman was in a very bad general condition and not awake. She had widespread signs of acupuncture, ecchymoses and bruises in the forearms, bruises and scrubs on both the thighs and the vulva. The fetus was in cephalic presentation and the membranes were broken and very bad smelling. The woman was assisted during labor. However, the fetus, a male weighing 1,530g, was terminal. Immediately after the labor, the woman exhibited cyanosis, marked hypocapnia, hypotension, and hypothermia. She was transferred to the intensive care unit where she arrived unconscious with tachypnea, tachycardia, hypotension, metabolic acidosis, hyperkalemia, and hypercreatinemia. Despite intubation, a sudden bradycardia arose evolving into asystole after about four hours. Resuscitation was attempted but the patient died by electro-mechanical cardiac dissociation. The external exam of the decedent showed extended bruises and abrasive injuries on the thighs and on the vulva, resulting in the hypothesis that the woman could have been a victim of violence. The judicial authority, considering the clinical evolution of the patient and the hypothesis of personal violence, ordered the autopsy of the woman and fetus.

The autopsy and histological examinations revealed tricuspid valve acute vegetating endocarditis by *S. aureus*, multiple septic pulmonary, renal, encephalic, cardiac and cutaneous emboli, impetigo contagiosa causing apparent cutaneous abrasions, ecchymoses, and consumption coagulopathy. Similarly, the fetal autopsy showed that the cause of death was a sepsis by *S. aureus*.

This case emphasizes the possibility of pitfalls in distinguishing between pathological and traumatic injuries.

Impetigo Contagiosa, Non-Accidental Injuries, Cutaneous Emboli