

Images in Infectious Diseases

Slike u infektivnim bolestima

Tetanus originating from ulcerated breast cancer

Tetanus s ishodištem iz ulceriranog karcinoma dojke

David Jutrić¹⁾, Vladimir Krajinović²⁾, Marija Santini^{2,3)}

¹⁾Clinical Hospital "Dubrava", Zagreb, Croatia

²⁾University Hospital for Infectious Diseases, Zagreb, Croatia

³⁾School of Medicine, University of Zagreb, Croatia

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Tetanus is an acute disease of the central nervous system mediated by the neurotoxin produced by bacteria *Clostridium tetani*. The disease is characterized by severe, uncontrolled skeletal muscle spasms which can lead, if untreated, to hypoventilation and death. Thanks to immunization, the number of cases has decreased, although it still affects patients of all ages in countries with social and economic backwardness. In developed countries, where active immunization was introduced in the 1940s, it occurs rarely in people older than 65 and the fatality rate of those older than 70 years reaches 50 %.

A 77-year-old female patient from the rural surroundings of Zagreb asked for medical attention due to 4-days lasting difficult swallowing, inability to open mouth and severe perspiration. Previous medical history revealed long lasting arterial hypertension and serous secreting wound on her right breast lasting for several months. The patient has never been vaccinated in her life. After excluding hypocalcaemia and temporomandibular joint disease she was seen by an infectious diseases physician. Physical examination revealed dehydration, trismus, opisthotonus and widely ulcerated right breast tumour (Figure 1) with



Figure 1. Ulcerated right breast tumor
Slika 1. Ulcerirani tumor desne dojke

no other skin damage. The diagnosis of tetanus was established. Biopsy of the right breast tumour demonstrated in-

vasive ductal breast carcinoma. This skin lesion was considered to be the point of entrance for *Clostridium tetani*. The patient was successfully treated by human tetanus immunoglobulins, metronidazole, tetanus toxoid vaccination, midazolam for muscle spasm control and mechanical ventilation. She recovered completely and was referred to an oncologist.

Typically, tetanus arises from a deep penetrating wound caused by dirty tools or animal bites. It has been also reported in association with abscesses, otitis media, chronic skin ulcers, as well as with corneal abrasions, dental procedures, child birth, foreign bodies, and postoperatively after abortions and intestinal operations. Few other studies described older female patients with tetanus and breast carcinoma.

Our case demonstrates two important needs: first is the need for better elderly population vaccination and second

is need for earlier diagnosis of breast carcinoma. Both of these needs could be met by better general physician practice, as this patient was regularly checked by her general practitioner for arterial hypertension.

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