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Clinical Image

Toxin Positive Corynebacterium Diphtheriae Skin Ulcers in a Vaccinated Traveller

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1. Clinical Image

A 20 year old German volunteer presented in good general condition without fever to our outpatient department with cutaneous ulcers (Figure 1) on the lower limbs and swelling of the right lower leg. The patient had just returned from a one year stay in the Ivory Coast and mentioned several insect bites a week ago while still abroad.

Laboratory findings showed mild leucocytosis of 11,120/µl and an elevated CRP level of 26.2 mg/l. Microbiological swabs of several skin ulcers revealed unanimously the presence of toxin producing Corynebacterium diphtheriae as well as group A beta-haemolytic streptococci. C. diphtheriae toxin gene PCR and the Elek's-test were positive. Antimicrobial susceptibility testing revealed susceptibility to clindamycin for both pathogens, but C. diphtheriae was resistant to penicillin. Throat swabs were negative for C. diphtheriae. Antibody test against C. diphtheria revealed a protective level of 1.68 IU/ml [1].

Oral Clindamycin treatment was initiated directly after consultation and maintained for 2 weeks (3x600mg daily). Antitoxin was not given as no systemic manifestation was present [1]. The skin ulcers healed after a few days, the swelling of the leg dissolved. Close contacts were screened for diphtheria by throat swab, all of which came out negative. None of the contacts developed symptoms. Immunization statuses were updated.

Diphtheria is a rare disease in Germany, but even mild cutaneous cases might be transmitted to susceptible contacts (i. e. unvaccinated or incompletely vaccinated), then potentially developing life threatening manifestations. Notably, the vaccine is directed against the toxins, not the C. diphtheriae itself. Exotoxin production depends on the presence of a phage carrying the tox gene [1, 2].

Awareness of C. diphtheriae, especially for returning travellers from endemic countries in tropical Africa or Asia, typically with rolled-edge skin ulcers on the legs, might be taken into account in the differential diagnosis [1,2].

Figure 1: Diphtheria skin lesion of the leg: rolled-edge ulcer (1 x 1.8 cm) with local redness.

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2. Ackowlegement

We declare the compliance with ethical standards and no competing interests. The patient gave informed consent to the anonymized retrospective publication; no measures were undertaken beside the medical routine.

References:

1. Berger A, Dangel A, Schober T, Schmidbauer B, Konrad R, Marosevic D, et al. Whole genome sequencing suggests transmission of Corynebacterium diphtheriae-caused cutaneous diphtheria in two siblings. Germany, 2018. Euro Surveill. 2019; 24(2). doi: 10.2807/1560-7917. ES.2019.24.2.1800683.
2. Gower CM, Scobie A, Fry NK, Litt DJ, Cameron JC, Chand MA, et al. The changing epidemiology of diphtheria in the United Kingdom, 2009 to 2017. Euro Surveill. 2020; 25(11). doi: 10.2807/1560-7917. ES.2020.25.11.1900462.