



Primary ecthyma gangraenosum due to central venous catheter-related bloodstream infection with *Pseudomonas aeruginosa*

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A 32-year-old male with testicular myelosarcoma, without bone marrow infiltration of leukaemic blasts, received induction chemotherapy for acute myeloid leukaemia. On day 4 of the neutropenic phase, the patient developed fever and a painful swelling of the right cervical side where the central venous catheter (CVC) was inserted. Due to thrombosis of the right internal jugular vein, the CVC was removed. Definitive CVC-related bloodstream infection [1] with *Pseudomonas aeruginosa* was diagnosed. Antibiotic therapy with piperacillin/tazobactam [2] was started immediately at the first time of fever occurrence. In the further course, within few hours, rapid deterioration of patient's condition exhibiting dyspnoea, further swelling and redness of the neck was observed. At the insertion site of the removed CVC, vesicles or bullous lesions and central haemorrhage were noted followed by the development of a grey eschar (Fig. 1). Due to the progressive oedematous swelling of the sternocleidomastoid muscle (Fig. 2), going along with dyspnoea and further deterioration of the patient's general condition an urgent surgical debridement, despite pancytopenia, was indicated. Culture of the resected cervical soft tissue revealed also *P. aeruginosa*. In face of controversies in the treatment of *Pseudomonas* sepsis [3], the antibiotic regimen was changed to a combination of meropenem with tobramycin.

The patient recovered and discharge was possible without *functio laesa* after haematopoietic recovery.

The described lesion, ecthyma gangraenosum, is a rare (<3%) but typical complication of *P. aeruginosa* bacteraemia, mostly due to haematogenous spread [4]. It is more frequent in immunocompromised or cancer patients [5], as in this case with CVC as source of infection. The patient had no other septic metastases, thus this was the primary (directly CVC-related) lesion.

Swelling of the sternocleidomastoid muscle in combination with jugular vein thrombosis reminds of Lemierre's syndrome, mostly associated with *Fusobacterium necrophorum* bacteraemia due to oropharyngitis/tonsillitis. However, the patient had no signs of these infections or of mucositis, but *P. aeruginosa* bacteraemia and soft tissue infection, so Lemierre's syndrome was not evident.

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Fig. 1 Ecthyma gangraenosa at insertion site of the removed CVC on the right neck. Vesicles or bullous lesions and central haemorrhage with a grey eschar. On the top oxygen line, on the left sore pad

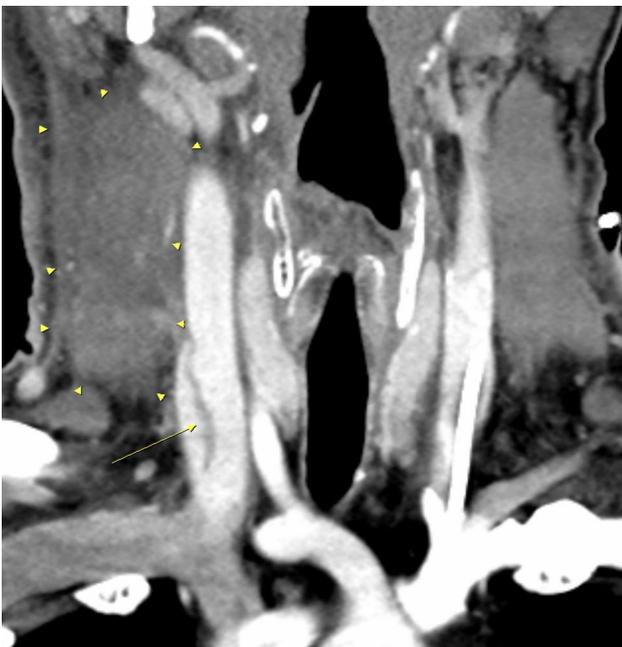


Fig. 2 Contrast enhanced CT scan in coronar reformatting. Arrow shows filiforming thrombus in the right internal jugular vein. Arrow heads show oedematous swelling of the right sternocleidomastoid muscle

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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