Infection
DOI 10.1007/s15010-015-0823-5

IMAGES IN INFECTION

Necrotizing herpes-simplex virus tonsillitis mimicking peritonsillar abscess

Cédric Hirzel[1] · Susanne Nueesch[2] · Thomas Wendland[3] · Rupert Langer[4]

Received: 31 March 2015 / Accepted: 13 July 2015

A 63-year-old neutropenic woman under treatment with cytarabin and idarubicin for acute myeloid leukemia complained of left-sided throat pain and increasing difficulties in swallowing. She was already receiving cefepime and metronidazole for neutropenic fever. Physical examination revealed a febrile patient with an enlarged fibrinous coated medially displaced left tonsil in the absence of oral blisters. A computed tomography demonstrated a peritonsillar abscess formation (Fig. 1a). Needle aspiration of the peritonsillar collection was unsuccessful making a tonsillectomy mandatory. The tonsil appeared brittle and disaggregated in several pieces while performing tonsillectomy. No purulent discharge was seen during the procedure.

There was no growth of microorganisms in the retrieved tissue samples. Histopathological examination of hematoxylin and eosin stained tonsillar tissue showed necrotic areas containing numerous squamoid cells with increased cell volume harboring enlarged nuclei (Fig. 1b). Some cells were multinucleated. In part of the cells intranuclear ground-glass inclusions were present. Immunohistological staining demonstrated positivity for Herpes simplex virus (HSV) (Fig. 1c), PCR confirmed it to be HSV-1. The patient was treated with high-dose intravenous Aciclovir with a delay of 7 days after tonsillectomy. She developed PCR proven HSV viremia, pneumonia, esophagitis and colitis in the course.

Only a few cases of necrotizing HSV-1 tonsillitis have been reported so far, mostly in immunocompromised patients [1–3]. The clinical and radiological manifestation can be indistinguishable from bacterial tonsillar infections, which are by far more common. The clue to the diagnosis of necrotizing HSV tonsillitis is the cytopathogenic effect demonstrated by conventional histopathological examination. This finding should trigger further immunohistological staining to confirm the diagnosis.

✉ Cédric Hirzel
cedric.hirzel@insel.ch

[1] Department of Infectious Diseases, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland

[2] Department of Emergency Medicine, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland

[3] Department of General Internal Medicine, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland

[4] Institute of Pathology, University of Bern, Bern, Switzerland

Published online: 21 July 2015

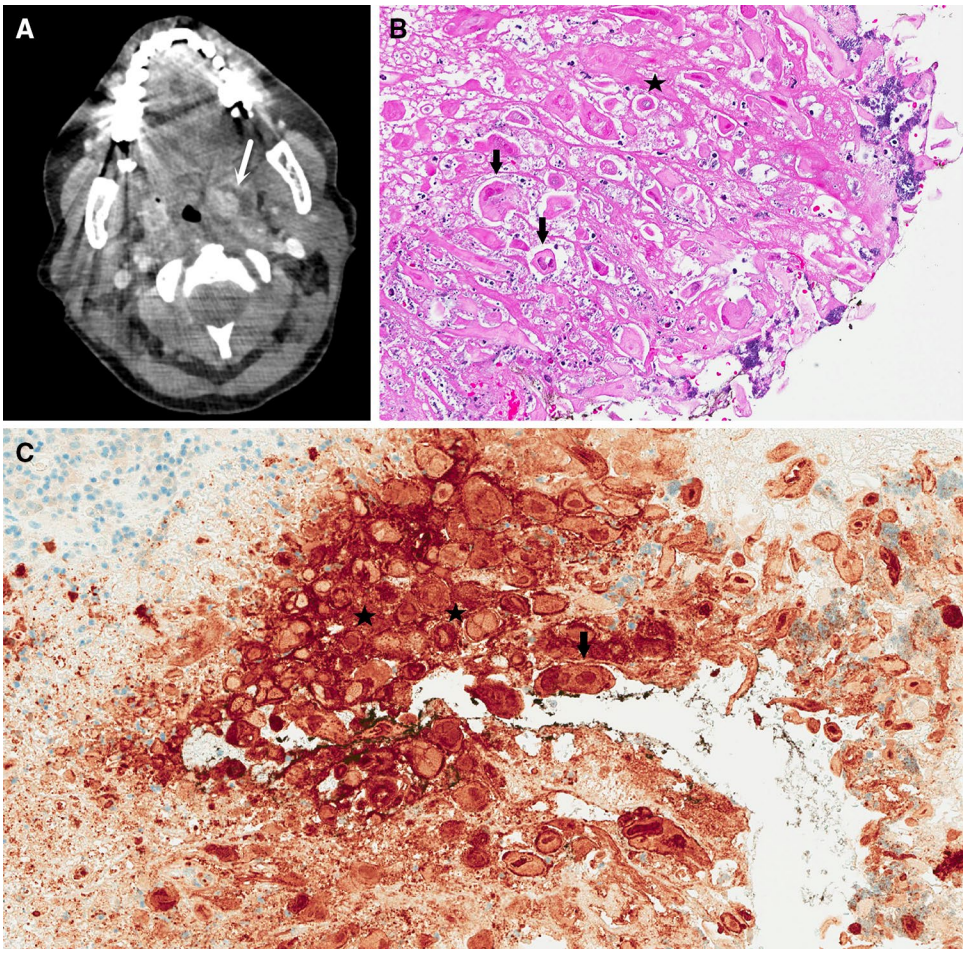

Fig. 1 Radiological and histological presentation of the necrotizing herpes-simplex tonsillitis. **a** Computed tomography (CT) of the neck. The *arrow head* indicates the peritonsillar abscess. **b** Hematoxylin and eosin stained tonsillar tissue (×20 magnification). *Arrows* indicate multinucleated cells. *Stars* indicate intranuclear inclusion bodies. **c** Immunoperoxidase staining (polyclonal anti-herpes simplex antibody) with hematoxylin counterstain of tonsillar tissue (×20 magnification). *Arrows* indicate multinucleated cells. *Stars* indicate intranuclear inclusion bodies

Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

1. Borhan WM, Dababo MA, Thompson LD, Saleem M, Pashley N. Acute necrotizing herpetic tonsillitis: a report of two cases. Head Neck Pathol. 2013;9:119–22. doi:10.1007/s12105-013-0516-2.
2. Gonen C, Uner A, Cetinkaya Y, Hascelik G, Haznedaroglu I. Tonsillar abscess formation due to herpes simplex type-1 in a severely immunocompromised stem cell transplant patient with chronic myeloid leukemia. Transpl Infect Dis Off J Transplant Soc. 2006;8:166–70. doi:10.1111/j.1399-3062.2006.00131.x.
3. Wat PJ, Strickler JG, Myers JL, Nordstrom MR. Herpes simplex infection causing acute necrotizing tonsillitis. Mayo Clin Proc. 1994;69:269–71.