Detours on the way to tuberculosis

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Background: Tuberculosis is rising again in Germany. 5329 cases were reported to the RKI (Robert Koch Institute) in 2016. Especially extrapulmonary forms of tuberculosis are often a diagnostic challenge.

Case description

23-month-old girl, who presented with local inflammatory signs in the area of the right medial malleolus; initially treated in the surgery unit with abscess cleavage and antibiotic therapy with cefuroxime for bacterial osteomyelitis.

Family history: 4th of 4 children born to healthy, non-consanguineous German parents.

Examination findings: Stable general condition, dystrophic, combined mental retardation, mild pharyngotonsillitis. Other internal status inconspicuous.

Local findings: Livid swelling of bulging elastic consistency in the area of the right medial malleolus, approx. 3 x 1cm.

Clinical course: Transfer to the paediatric department due to persistent subfebrile temperatures and a worsened general condition.

In the diagnostic workup osteomyelitis, meningitis with internal hydrocephalus and an infestation of the LVB 1 as well as a meningeal inflammation at the level of the sacrum due to tuberculosis could be demonstrated consistent with miliary tuberculosis.

Laboratory diagnostics:

Throat swab: Entero- und Rhinoviren-PCR positive. *Quantiferontest:* Positive.

CSF Analysis: Increased lactate and total protein concentration next to decreased glucose concentration; mild pleocytosis; decreased number of lymphocytes and monocytes in spinal fluid sediment.

Detection of mycobacteria by cultures from liquor and gastric juices.

Histology (bone): Granuloma-tous inflammation with caseating necrosis, detection of mycobacteria-DNA.

Discussion

In addition to presenting the difficulties of diagnosing tuberculosis with a non-typical history, this case is particularly intended to stimulate discussion about the therapy of meningitis tuberculosa and its complications.

MRI – head 07/2016

T2: liquor blockage

T1 KM: contrast uptake preponine

MRI – head 09/2016

T1 KM: increase in contrast uptake preponine

MRI – head 01/2017

T1 KM: decrease in contrast uptake preponine

X-ray – upper ankle joint
03/2016

MRI – ankle joint
05/2016

T1 KM FS: abscess / empyema

X-ray – Thorax
06/2016

MRI – Spine
10/2016

T1 KM FS: contrast uptake 1. LVB

Treatment and course

Treatment with INH, RMP, PZA and EMB as well as vitamin B6 administration in combination with dexamethasone was initiated. In the course of time, the cMRI showed an increase in the internal hydrocephalus, occasioning the tuberculostatic therapy to be extended by protonamide and ampicillin and a Rickham reservoir to be implanted. In the absence of sufficient CSF drainage, a VP shunt was implanted after decontamination of CSF.

This resulted in a gradual improvement of the condition and a marked improvement in motor skills. Since intracerebral granulomas persisted thalidomide was added. The remaining tuberculostatic therapy could be reduced and dexamethasone slowly tapered.