

(11) Clinical picture of multifocal chorioretinitis caused by *Mycobacterium tuberculosis* – case report

Obraz kliniczny wieloogniskowego zapalenia naczyń i siatkówki w przebiegu gruźlicy – opis przypadku

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Streszczenie: Prezentujemy przypadek kliniczny wieloogniskowego zapalenia naczyń i siatkówki w przebiegu gruźlicy. Dwudziestoletnia kobieta została przyjęta do kliniki otolaryngologii z powodu powiększenia węzłów chłonnych szyi, ropnej anginy odpornej na antybiotykoterapię i guza nosogardła. Biopsja węzłów chłonnych i guza nosogardła wykazała ziarninę z obecnością bakterii Gram+. W badaniu reakcji łańcuchowej polimerazy potwierdzono DNA *Mycobacterium tuberculosis*.

Słowa kluczowe: wieloogniskowe zapalenie naczyń i siatkówki, angina, angiografia fluorescencyjna, *Mycobacterium tuberculosis*.

Summary: We present clinical picture of unusual case, of multifocal chorioretinitis due to tuberculosis. Twenty years old female was admitted to ENT department with cervical lymphadenopathy, profound dolorous tonsils enlargement resembling antibiotic resistant purulent tonsillitis and nasopharyngeal masses. The patient also reported transient vision disturbances. Lymph node and Waldeyer's ring biopsy revealed tubercular granulomatosis with caseation, Gram(+) bacteria, and *Mycobacterium tuberculosis* DNA presence by polymerase chain reaction testing.

Key words: chorioretinitis, angina, fluorescein angiography, *Mycobacterium tuberculosis*.

Case report

A twenty years old female was admitted to the ENT department with cervical lymphadenopathy, profound dolorous tonsils enlargement resembling antibiotic-resistant purulent tonsillitis, and nasopharyngeal masses causing nasal obstruction, difficulty in swallowing, and indistinct speech. The patient also reported vision disturbances. She had reduced visual acuity in both eyes: visual acuity of the right eye was 0.4, of the left eye 0.1 (Snellen charts), Amsler test was positive in the left eye.

Ophthalmologic examination revealed bilateral, multifocal, disseminated yellow-white choroidal lesions in the posterior pole and in the macular region. There were no signs of inflammation in the anterior segment or in the vitreous body (Fig. 1.).

The diagnosis searched for any infectious, systemic, or neoplastic diseases, including HIV infection. Lymph node and Waldeyer's ring biopsy revealed tubercular granulomatosis with caseation and Gram(+) bacteria. The tuberculosis skin test was positive. Polymerase chain reaction (PCR) confirmed the presence of *Mycobacterium tuberculosis* DNA. The lungs were free of any changes. According to the principles of tuberculosis treatment, long-term 6 months combined therapy with streptomycin, isoniazid, and pirazinamid was used.

Tuberculostatic treatment induced abatement of the signs and symptoms. A month of applying tuberculostatics resulted

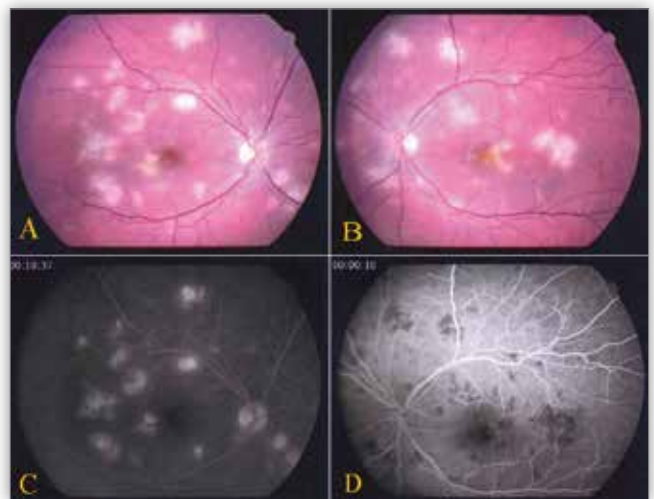


Fig. 1. Ophthalmologic examination: fundus photography – multifocal chorioiditis involving the macular regions of both eyes (a., b.), fluorescein angiography – staining of the deep inflammatory lesions in the late (c.), multifocal masking effect in the early stages (d.).

Ryc. 1. Zdjęcie dna oka: wieloogniskowe zapalenie naczyń i siatkówki obejmujące okolicę plamki obojga oczu (a., b.), angiografia fluoresceinowa – zaleganie barwnika w głębokich ogniskach zapalnych w późnych fazach badania (c.), wieloogniskowy efekt maskowania tła we wczesnych fazach badania (d.).

in scarring of the choroidal lesions and improvement of visual acuity with residual maculopathy in both eyes. Visual acuity after treatment was 0.8 for the right eye and 0.6 for the left eye.

Discussion

Ocular manifestations of tuberculosis are characterized by polymorphism of signs, which reflects different mechanisms of pathogenesis. They can accompany disseminated primary infection and reactivated latent infection in form of multifocal chorioretinitis or choroidal tubercles, or reveal in immune-mediated disease in form of retinal vasculitis and anterior granulomatous uveitis (1). The incidence of tuberculosis is low, but it should be always taken into consideration in case of uveitis (2). The gold diagnostic standard in pulmonary disease is sputum testing with acid-fast staining and culture. In our case pulmonary symptoms were absent and the diagnosis was based on typical for tuberculosis histological findings in cervical lymph-node and on polymerase chain reaction, which targets unique *Mycobacterium tuberculosis* DNA sequences. In cases of ocular granulomatous uveitis without systemic findings diagnosis is often presumptive and requires confirmation from ocular specimens: anterior chamber taps and pars plana vitrectomy specimens are collected for nucleic acid amplification. Tuberculin skin testing is helpful in differentiation between tuberculosis and sarcoido-

sis, but can be false-positive in cases with prior BCG vaccination or infection with nontuberculous mycobacteria or may be false-negative in immunocompromised patients and in AIDS (3).

Unusual coincidence of multifocal chorioretinitis with symptoms from upper respiratory tract allowed in our case on early and accurate diagnosis and consequently on appropriate and effective drug regimen.

References:

1. Kurup S.K., Chan C.C.: *Mycobacterium-related ocular inflammatory disease: diagnosis and management*. Ann. Acad. Med. Singapore 2006; 35(3): 203–209.
2. Varma D., Anand S., Reddy A.R., Das A., Watson J.P., Currie D.C., i wsp.: *Tuberculosis: an under-diagnosed aetiological agent in uveitis with an effective treatment*. Eye 2006; 20(9): 1068–1073.
3. Zub K., Zatoński T., Krecicki T.: *Laryngeal tuberculosis in the patients of otolaryngology department – case reports*. Otolaryngol. Pol. 2010; 64(3): 177–179.

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