BLINDING OCULAR SYPHILIS IN CHINA: A RETROSPECTIVE COHORT STUDY

Xin Gu[1],MD, Ying Gao,[1] MD, Yan Yan[2] MD, Michael Marks[3] MD, PhD, Lin Zhu[1], MD, HaiKong Lu[1], MD, Zhi Fang Guan[1], MD, Mei Shi[1]， MD, Liyan Ni[1] MD, Ruirui Peng[1], MD, Wei Zhao[1]， MD, Juan Wu[1],MD, Tengfei Qi[1]， MD, Sheng Lu[1],MD,Yihong Qian[1], MD, Weiming Gong[1] MD, Pingyu Zhou[1]， MD, PhD
[1]Sexually Transmitted Disease Institute, Shanghai Skin Disease Hospital, School of Medicine, Tongji University, Shanghai 200050, People's Republic of China
[2]Department of Ophthalmology, Renji Hospital, School of Medicine, Jiaotong University, Shanghai 200127, People's Republic of China
[3] Department of Clinical Research，
London School of Hygiene & Tropical Medicine
Keppel Street, London WC1E 7HT, United Kingdom

The first four authors (Xin Gu[1], MD, Ying Gao[1], MD, Yan Yan[2], MD, Michael Marks[3], MD, PhD) contributed equally.

Corresponding author: Professor Pingyu Zhou
Phone number: 86-18017336631
E-MAIL: zpyls@yahoo.com
Sexually Transmitted Disease Institute, Shanghai Skin Disease Hospital, School of Medicine, Tongji University, Shanghai 200050, People's Republic of China
Address: 200 Wuyi Road, Shanghai, China, 200050

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Abstract

Background:

The prompt diagnosis and proper treatment of ocular syphilis is fundamental to avoid long-term consequences. We identified patients presenting with syphilis to establish risk factors for ocular syphilis and blindness and reviewed the features of blindness caused by ocular syphilis due to delayed diagnosis and treatment.

Methods: We report risk factors for ocular syphilis amongst patients seen at the Shanghai Skin Disease Hospital between October 2009 to October 2017. We identify patients with ocular syphilis resulting in blindness and report the clinical characteristics, laboratory findings follow-up results, and treatment effectiveness of these patients. For patients with syphilis related blindness we measured the change in visual acuity as the main outcome measure.

Findings: A total of 8310 new cases of syphilis were seen during the study period of which 213 had ocular disease and 50 had blindness due to syphilis. Age and higher RPR titers were associated with ocular involvement but there was no association with HIV status. Fifty patients had at least one eye affected by ocular syphilis which met the WHO definition of blindness (67 eyes with blindness) prior to treatment for syphilis. The most common ocular diagnosis was optic atrophy (27 of 50 patients). The majority of cases of blinding syphilis were associated with definite (n = 42) or presumptive (n = 7) neurosyphilis. At the end of follow-up vision had improved in 24 of 67 eyes (35·8%), although 9 eyes still met the definition of blindness. The remaining 43 eyes did not improve after treatment and thus 52 eyes were finally classified as permanent vision loss. Treatment of uveitis was associated with the most improvement in visual acuity, whilst patients with optic atrophy had the worst outcomes.

Interpretation: Our data demonstrate ocular syphilis is an uncommon but important manifestation of syphilis which may result in blindness. Treatment outcomes for ocular syphilis are poor if detected late; early recognition and diagnosis is vital to avoid permanent visual loss.