

History Tells Us Not to Forget Syphilis as Differential Diagnosis in Paediatric Patients

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Commentary

Syphilis is a bacterial disease potentially affecting all organs of the body. The symptoms may appear acutely or chronically over periods of many years, and - if left untreated - the disease may lead to premature death. The transmission of the

spirochete (*Treponema pallidum*) occurs via skin and mucous contacts as well as via blood from mother to fetus. Congenital syphilis is associated with neonatal death or chronic morbidities of the skin, skeleton, brain and many other organs (**Figure 1**).



Figure 1. Nodular skin lesions on the forehead of a deceased child with congenital syphilis illustrated by a *moulage*, i.e. a painted replica in wax of a plaster cast produced in Germany in the 1890s and now exposed at the university hospital in Uppsala, Sweden. Photo from the author's files.

Today, syphilis is curable with penicillin and the incidence is low in most developed countries (although the prevalence is increasing again, especially among men-who-have-sex-with-men). In less developed countries, however, syphilis is still a significant health problem, particularly in remote areas of sub-Saharan Africa where it causes stillbirths and other severe manifestations of the disease [1]. Eighty years ago, prior to the introduction of penicillin therapy, the situation was drastically different: for many centuries syphilis had affected the life and health of millions of people all over the world. This is described in a recent historical review [2] discussing the origin, transmission and sinister manifestations of syphilis, including its psychosocial effects and examples of ethical violations committed in the search of better knowledge and new treatments for the disease. A special feature is the impact of congenital syphilis on the society as a whole and on the health care system in particular. This was at a time when mercury, arsenic, and other toxic compounds were the only therapeutics available for syphilis. Affected children were isolated, sometimes for many years, in special health units and received the same toxic treatments as adults. The introduction of penicillin and more vigorous screening procedures for syphilis in the late 1940s rapidly changed all this, and consequently neonatal syphilis almost disappeared

in affluent countries. Most alarmingly though, a seven-fold increase in the incidence of congenital syphilis was recently reported from the USA; between 2012 and 2020 the incidence rose from 8.4 to 57.3 cases per 100,000 pregnancies [3].

A final reflection: If *T. pallidum* should suddenly develop novel mutations leading to a resistance against penicillin and other antibiotics, a syphilis pandemic might well re-appear potentially affecting people of all ages, including babies. Therefore, it is essential to implement more rigorous prevention measures as soon as possible.

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