Case report

**Congenital syphilis, still a reality in 21st century: a case report**

Monica Chaudhary*, Bineeta Kashyap and Preena Bhalla

Address: Department of Microbiology, Maulana Azad Medical College and associated Lok Nayak Hospital, New Delhi, India

Email: Monica Chaudhary* - drmonica74@gmail.com; Bineeta Kashyap - dr_bineetakashyap@yahoo.co.in; Preena Bhalla - preenadr@gmail.com

* Corresponding author

**Abstract**

Congenital syphilis is a preventable disease and its presence reflects a failure of prenatal care delivery systems, as well as syphilis control programmes. The procedure to prevent congenital syphilis through antenatal screening and treatment is well established. But implementation of effective programmes has proved very difficult especially in resource constrained countries.

**Background**

Congenital syphilis is a rare and serious disease that although preventable continues to be a major health care problem [1]. Although the rate of congenital syphilis is declining in developed countries, a significant increase has been observed in the underdeveloped countries [2] in spite of the widespread use of penicillin to treat syphilis since the early 1950s. Late congenital syphilis (recognized 2 or more years after birth) [3] is a very rare clinical entity. We are reporting here a case of late congenital syphilis in order to emphasize that congenital syphilis still exists in 21st century and global antenatal screening is mandatory to prevent this serious, yet largely preventable disease. We report here a case of late congenital syphilis who presented at the age of 13 years with palatal perforation.

**Case presentation**

A 13 year old boy presented to the ENT OPD, at LN Hospital, New Delhi, India, with complaints of a hole in the hard palate which had been slowly enlarging, since its appearance 2–3 months back along with difficulty in eating and nasal speech.

Except for the presence of a perforation approximately 1 cm in diameter in the anterior hard palate, the physical examination of the child was otherwise unremarkable (Figure 1).

The routine investigations revealed Hemoglobin 12.4%, Total leukocyte count 11700/mm³, Differential leukocyte...
count – Polymorphs 57% Lymphocytes 30% Eosinophils 13%, and Platelet count 2.9 lac. Other routine biochemist-
ical investigations were insignificant. Venereal Disease Research Laboratory (VDRL) was reactive at 16 dilutions
and Treponema pallidum haemagglutination test (TPHA) was positive (TPHA TEST KIT; Plasmatec Laboratory Prod-
ucts Ltd. UK). The X-ray of the chest was normal and Man-
toux test was negative. Cerebrospinal fluid examination
was normal. Skeletal survey revealed no radiological evi-
dence of periosteal lesions or perichondritis. Ultrasound
examination of the abdomen and pelvis showed no abnor-
mality. No other orofacio-dental stigmata of con-
genital syphilis like Hutchinsons teeth were detected.
Ophthalmic examination including fundoscopy was nor-
mal. No symptoms suggestive of nervous system involve-
ment were observed. All the investigations were carried
out before starting the treatment. Following these reports,
the mother, father and three other younger siblings were
investigated. The mother and the father were weakly reac-
tive for VDRL and their TPHA was positive.

The younger siblings were all non reactive for VDRL as
well as TPHA. All the family members including the
patient were non reactive for HIV. The mother gave a his-
tory of taking some treatment for a genital lesion two
years prior to the birth of the patient. The records of the
above-mentioned condition or any treatment taken were
not available. The obstetric history of the mother was un-
ventful. The patient was a product of unbooked full term
normal vaginal delivery at home by traditional birth
attendants. Our patient had three younger siblings who
were also full term normal vaginal delivery and all are
alive and well. Except for the development of some rash in
the diaper area as a neonate there was no other history of
characteristic bullous lesions elsewhere on the body. The
developmental milestones of the patient were normal as
told by the mother. The patient gave no history of any
trauma, sexual assault or child abuse or drug abuse.

The child and his parents were started on a 3-week course
of i/v aqueous crystalline Penicillin G 50,000 U/kg (at 8-
hour intervals). He was informed of the risk of further
enlargement of the defect and was asked to come back for
palatal repair on completion of the medical treatment. He
tolerated treatment well without any complications and
showed a fall in VDRL titers to 2 dilutions when last seen
after 6 months of his first visit.

Conclusion
Congenital syphilis represents a significant financial and
emotional burden in developing countries. Even one case
of congenital syphilis is a sentinel public health event,
since timely diagnosis and treatment of syphilis infected
pregnant woman should prevent transmission almost
entirely [4]. The risks of vertical transmission and fetal dis-
eseas are directly related to the stage of maternal syphilis
during pregnancy. It is estimated that in women with
syphilis of a few years duration, about half of the pregnan-
cies will be affected, with one half of the affected pregnan-
cies ending in stillbirth (including miscarriages), and the
other half in perinatal death or serious neonatal infection
(congenital syphilis) [5]. The risk of fetal loss and congen-
tal syphilis drops slightly in early latent stage and
decreases to 10% in late latent stage, respectively [6]. As
seen in our case too, the patient was the eldest child of
the couple, who was born 2 years after the detection of a
genital lesion in the mother but the subsequent pregnancies
were unaffected, signifying the fact that the risk of vertical
transmission and fetal disease is directly related to the
stage of maternal syphilis during pregnancy. More than
50% of live born affected infants may be asymptomatic
and many of them are often not reported [7].

Differential diagnosis of a lesion presenting as palatal per-
foration should include tertiary syphilis, leprosy, tubercu-
losis, mucormycosis, mechanical trauma, intranasal
cocaine abuse, malignancies, especially nasal T cell lym-
phomas, Wegener’s granulomatosis, sarcoidosis and mid-
line non-healing granuloma [8]. A positive VDRL and
TPHA test along with a detailed family history helped us
to arrive at the diagnosis of late congenital syphilis.

A recent data from WHO states that only 68% of women
in developing countries receive antenatal care and of these
about half do not attend ANC clinics until after the first
trimester[9]. A study from Russia has stated that early
diagnosis and appropriate treatment of syphilis infected
mothers, which is the mainstay of congenital syphilis pre-
vention, cannot occur when 60% of at-risk women do not
access early prenatal care [4]. The late presentation of our
case re-emphasizes the fact that antenatal services need to
be strengthened.

It is difficult to discuss such a socially stigmatized disease,
but if congenital syphilis is to be targeted for elimination,
new approaches are required. The true incidence must be
determined, diagnostic measures improved and risk fac-
tors controlled. Countries need to reexamine their current
policies related to antenatal care and steps must be taken
to overcome all administrative and cultural barriers. Con-
rol measures must be based on mandatory antenatal
screening in 1st trimester supported by treatment and part-
ner notification with adequate follow up. ANC must be
strengthened to ensure that there is no reinfection by
preventing all sexual partners, promoting condom use during
pregnancy and counseling all women on how to prevent
sexually transmitted infection.

A study from rural Haiti has shown that decentralizing
screening for syphilis can drastically reduce the incidence
of congenital syphilis even with limited infrastructure in peripheral areas [10]. With the availability of rapid, point-of-care diagnostic tests, even the lowest level of health care delivery system can benefit. The current widespread scale up of PMTCT (prevention of mother to child transmission) programme for HIV prevention in antenatal clinics offer a golden opportunity to promote early attendance and routine testing for syphilis and HIV. Resources used to develop appropriate infrastructure for either programme can benefit both HIV and syphilis prevention programmes. Only a substantial effort can make congenital syphilis a tragedy of past.

Competing interests
The author(s) declare that they have no competing interests.

Authors’ contributions
MC carried out the detailed case study, collected references and review material, planned the study and drafted the manuscript. BK carried out the serological assays and participated in the design of study. PB conceived the study, and participated in its design, coordination and value addition and final approval of the manuscript. All authors read and approved the final manuscript.

Acknowledgements
Written consent was obtained from the patient’s father (as the patient was a minor) for publication of the study and to publish the photograph.

References
1. Lugo A, Sanchez S, Sanchez JL: Congenital syphilis. Paediatr Dermatol 2006, 23(2):121-123.
2. Gurlek A, Alaybeyoglu NY, Demir CY, et al.: The continuing scourge of congenital syphilis in 21st century: a case report. Int J Paediatr Otorhinolaryngol 2005, 69(8):1117-1121.
3. Larsen SA, Steiner BM, Rudolph AH: Laboratory diagnosis and interpretation of tests for syphilis. Clin Microbiol Rev 1995:1-21.
4. Tikhonova L, Salakhov E, Southwick K, for the Congenital Syphilis Investigation Team, et al.: Congenital syphilis in the Russian Federation: magnitude, determinants and consequences. Sex Transm Infect 2003, 79:106-110.
5. Eliminating congenital syphilis. A global health priority. Geneva, World Health Organisation; 2005.
6. Li Y, Gonik B: Is congenital syphilis really congenital syphilis. Infect Dis Obstet Gynecol 2006:1-4. Article ID 81629
7. Humphrey MD, Bradford DL: Congenital syphilis: still a reality in 1996. Med J Australia 1996, 165:382-385.
8. Bains MK, Hosseini-Ardehali M: Palatal perforations: past and present. Two case reports and a literature review. Br Dent J 2005, 199:267-269.
9. Antenatal care in developing countries: promises, achievements and missed opportunities. Geneva, World Health Organisation; 2003.
10. Fitzgerald DW, Behets F, Preval J, et al.: Decreased congenital syphilis incidence in Haiti rural artibonite region following decentralized prenatal screening. Am J Pub Health 2003, 93(3):444-446.