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EARLY CONGENITAL SYPHILIS PRESENTING WITH A RARE CASE MANIFESTATION AND VARIOUS COMORBIDITIES: A CASE REPORT

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ABSTRACT

Congenital syphilis (CS) cases in worldwide have reached 700.000 cases until 2023. Especially late or untreated cases can cause up to 80% of poor pregnancy outcomes. This case report discusses the treatment strategy of symptomatic CS case in a newborn with multiple comorbidities. A newborn female infant was admitted with cutaneous lesions comprising white patches with a bluish-red base, as well as jaundice. The patient was born to a single mother with a history of multiple partners and never had an antenatal care. The patient exhibited pale yellow stools with a putty-like consistency and dark-yellow urine. The patient was tachypnea (oxygen saturation of 86% on room air), exhibiting jaundice of the eyes and skin (Cramer IV). Laboratory results were positive for syphilis, severe thrombocytopenia (10×103/µL), hyperbilirubinemia with total bilirubin 18.89 mg/dL, direct bilirubin 11.81 mg/dL, and indirect bilirubin 7.08 mg/dL. Babygram suggested pneumonia, while 2-phase abdominal ultrasound showed impaired gallbladder contractility. The patient was diagnosed with CS, pneumonia neonatal, and cholestasis suspicious for biliary atresia. The patient was stabilized hemodynamically, administered intravenous fluids containing dextrose 10%, benzathine penicillin G 130,000 IU was administered intramuscularly every 24 hours (10 days) according to hospital availability for syphilis treatment, combination of cefoperazone-sulbactam and gentamicin for the treatment of pneumonia, and ursodeoxycholic-acid (UDCA) for the treatment of cholestasis. The patient's condition showed gradual improvement, with the skin lesions also demonstrating improvement, although jaundice persisted. In the last follow-up, due to stable condition, the patient was discharged to outpatient with continued oral UDCA therapy.

KEYWORDS *Relocation of the Indonesian Capital, Public Policy Analysis, Implications.*

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INTRODUCTION

Congenital syphilis is caused by the vertical transmission of Treponema pallidum from a mother with syphilis. In cases of untreated syphilis in pregnancy, late treatment, or inappropriate antibiotic treatment, 50−80% of women experience poor pregnancy outcomes, with about 26% resulting in miscarriage or stillbirth (World Health Organization, 2024). Surviving infants may face short- and long-term consequences, including anemia, bone abnormalities, meningitis, and other disabilities (Hussain et al., 2024; Wu et al., 2021). Diagnosis can be challenging because neonates often show no symptoms at birth. In addition to specific syphilis testing, it is crucial to conduct investigations in infants at risk of congenital syphilis, including ophthalmologic examinations, complete blood count and blood chemistry, chest and long bone radiography (babygram), and cerebrospinal fluid (CSF) assessment if needed (Centers for Disease Control and Prevention, 2021a; Sankaran et al., 2023).

The incidence of congenital syphilis has rapidly increased worldwide, with 700,000 to 1.5 million cases reported between 2016 and 2023 (Gilmour & Walls, 2023). The World Health Organization (WHO) estimates that Africa bears the highest burden of congenital syphilis globally, accounting for 62% of the cases. Australia recorded the highest number of congenital syphilis cases in the Western Pacific region in 2020, and New Zealand reported 24 cases between 2017 and 2021. In the United States, the incidence of congenital syphilis rose from 8.4 cases per 100,000 live births in 2014 to 77.9 in 2021. The European Union/European Economic Area (EU/EEA) reported 72 confirmed cases of congenital syphilis in 2019, with significant numbers in Bulgaria and Portugal. In China, the rate of congenital syphilis initially surged to 19.68 per 100,000 in 2005, then decreased to 18.4 per 100,000 in 2018, although syphilis in pregnancy continues to rise. Japan has seen an increase in syphilis cases since the 1970s, with a rise among heterosexual men and women, followed by a rise in congenital syphilis cases (Moore et al., 2023). Thailand and India reported 47 and 62 cases per 100,000 live births, respectively, in 2017, while Nepal and Indonesia had less than 2 cases per 100,000 live births in 2016 (Gilmour & Walls, 2023).

Universal antenatal screening is generally effective in treating syphilis in pregnancy through the administration of penicillin, making congenital syphilis fully preventable. The screening program, initiated by WHO, has been implemented in Indonesia and is known as triple elimination screening (testing for human immunodeficiency virus (HIV), syphilis, and hepatitis B virus). Despite its effectiveness, several challenges remain in Indonesia, including a lack of public awareness about the importance of antenatal care for syphilis screening and treatment, particularly in unplanned or unwanted pregnancies (Armini et al., 2023; Azhali et al., 2021). A prospective cohort study reported a case fatality rate (CFR) of 31%, with 53 (90%) cases resulting in stillbirth, and 6 (10%) neonatal deaths occurring during the neonatal period (Wozniak et al., 2023).

Given the high morbidity and mortality of this condition, early detection and rapid, appropriate management are crucial. Based on this background, this case report aims to present the clinical features, diagnostic approach, and comprehensive

management of a complex case involving a newborn girl with congenital syphilis, neonatal pneumonia, and suspected biliary atresia cholestasis.

RESEARCH METHOD

Case Presentation

A newborn baby girl was admitted to Mangusada District Hospital with complaints of white spots surrounded by red to bluish areas on the skin since birth. Four days earlier, the patient's mother presented with complaints of abdominal pain, described as tightness in the abdomen, starting two hours before hospital admission. The mother was 37 weeks pregnant, and upon obstetric examination, it was found that she had 8 cm cervical dilation along with colorless and odorless fluid leakage. The mother was observed and prepared for vaginal delivery. The mother admitted that she did not routinely attend prenatal check-ups at healthcare facilities. During her pregnancy, she experienced a history of cough, cold, fever, skin rashes, and red eyes, but she did not seek medical treatment as these symptoms improved on their own. The mother also stated that this was her first pregnancy, but the baby's father was unknown due to a history of multiple sexual partners. The mother denied any history of medication use, except for paracetamol when she experienced headaches or felt unwell. A complete blood count of the mother revealed microcytic hypochromic anemia with hemoglobin levels of 9.8 g/dL, a mean corpuscular volume (MCV) of 71.9 fL, and a mean corpuscular hemoglobin (MCH) of 23.3 pg. Immunoserological tests showed a positive rapid plasma regain (RPR) of 1/16 and a positive Treponema pallidum rapid (TP-Rapid) test.

After reevaluation, full cervical dilation was achieved, and the baby was delivered with immediate crying. The baby was female, weighed 2,500 grams, had a length of 50 cm, a chest circumference of 30 cm, and a head circumference of 32 cm. No congenital defects were observed at birth, although the baby appeared weak, with white patches on the skin surrounded by red to bluish areas (Figure 1). During postpartum observation, the baby remained weak, and laboratory results confirmed syphilis. The baby was subsequently admitted to the Neonatal Intensive Care Unit (NICU) in an incubator, where intensive therapy began, including intramuscular injections of Benzathine Penicillin G (BPG) 130,000 IU every 24 hours for 10 days.

Figure 1. Foto klinis pasien saat perawatan hari pertama.

When the follow-up on the second day was found, the patient was still in a weak condition, weak movement and crying, appeared tight, appeared bull on the hands and feet, the skin appeared yellow, pus appeared around the body and limbs and bluish on the body. Physical examination found oxygen saturation of 86% room air, tachypneu, respiratory rate 64 times per minute, temperature 36.6°C, IV jaundice, and no vomiting. The results of laboratory examinations are presented in **Table 1**. Supporting examinations in the form of a babygram photo obtained the impression of cardiomegaly with a cardio thorax ratio (CTR) of 66%, suspected pneumonia because there was an infiltrate sheath in the middle zone of the right lung, observation of decreased intestinal gas distribution with a blurred mosaic pattern, and no pneumoperitoneum (**Figure 2**).

Table 1. Patient laboratory results during treatment

Laboratory parameters	Normal values and units	Day care to-				
		1	2	8	14	21
Darah lengkap						
WBC	5.00 – 38.00 $10^3/\mu L$	26.92	NA	14.68	12.41	12.14
Hemoglobin	12.7 – 24.6 g/dL	14.5	NA	12.9	10.1	12.2
Platelet	150 – 450 $10^3/\mu L$	10	NA	32	124	367
I/T ratio	< 0.2	0.14	NA	0.06	0.06	NA
Blood glucose						
Glukosa sewaktu	50 – 80 mg/dL	28	84	NA	NA	NA
Imuno-serologi						
RPR	Negative	Positive 1/8	NA	NA	NA	NA
TP Rapid	Negative	Positive	NA	NA	NA	NA
Blood chemistry						
Kalsium (Ca)	8.60 – 10.30 mg/dL	NA	8.17	NA	NA	NA
Liver function						
Bilirubin total	< 6 mg/dL	NA	18.89	12.64	13.25	14.72
Bilirubin direct	0 – 0.5 mg/dL	NA	11.81	8.88	9.58	13.14
Bilirubin indirect	0.2 – 0.8 mg/dL	NA	7.08	3.76	3.67	1.58
Electrolyte						
Natrium (Na)	136 – 145 mmol/L	NA	131	139	NA	NA
Kalium (K)	3.5 – 5.1 mmol/L	NA	4.6	4.3	NA	NA
Chloride (Cl)	94 – 110 mmol/L	NA	105	111	NA	NA
Blood gas analysis						
pH	7.350 - 7.450	NA	7.299	NA	NA	NA

pCO_2	35.0 – 45.0 mmHg	NA	36.2	NA	NA	NA
pO_2	80 – 100 mmHg	NA	67	NA	NA	NA
BE-ecf	(-2) – (+2) mmol/L	NA	-9	NA	NA	NA
HCO_3	23.0 - 26.0 mmol/L	NA	17.8	NA	NA	NA
CO_2 total	24.0 - 30.0 mmol/L	NA	19.0	NA	NA	NA
SO_2	95 – 99%	NA	91.0	NA	NA	NA
Microbiologhy						
Blood cultures	Specimen: blood, 1 side Isolate 1: no growth					
Gram staining	Specimen: urine Gram results: • Leukosit:1 - 2 /LPK • Epitel: 20 - 30 /LPK • Batang Gram negatif: 1 - 2 /LPI • Coccus gram positif: 0 - 1 /LPI found Hypha fungus germ (+)					
Biakan + resis (urin)	Specimen: urine Isolate 1: no growth					

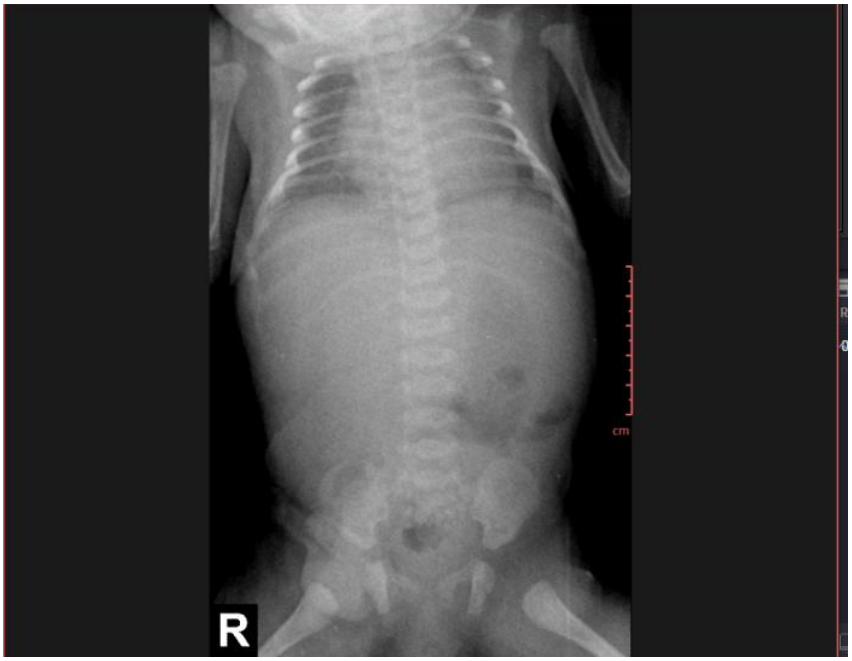


Figure 2. Babygram photo results of the second day of treatment.

Based on the anamnesis, physical examination, and supporting tests, the patient was diagnosed with symptomatic congenital syphilis, suspected early-onset

neonatal sepsis (EONS), respiratory distress syndrome (RDS) with suspected neonatal pneumonia, differential diagnosis of sepsis, and severe thrombocytopenia. The patient was treated with continuous positive airway pressure (CPAP), positive end-expiratory pressure (PEEP) of 7, fraction of inspired oxygen (FiO2) of 21%, and a flow of 8. Fluid therapy was administered with intravenous fluid drops (IVFD) D10% at 7.5 mL per hour, antibiotics Cefoperazone sulbactam 130 mg intravenously every 12 hours and Gentamycin 13 mg intravenously every 36 hours, as well as thrombocyte concentrate (TC) transfusions three times at 40 mL with premedication of intravenous furosemide 1.5 mg.

On the third day of treatment, the patient's breathing improved, with an increase in oxygen saturation to 96%, a respiratory rate of 40 breaths per minute, and a heart rate of 120 beats per minute. General physical examination revealed jaundice in both eyes, jaundice on the extremities, and the presence of bullae. Treatment was continued with CPAP PEEP 6, FiO2 21%, flow 8, breast milk (BM) of 3 mL every 3 hours, with fluids and antibiotics maintained as before. Weight assessment on the following day showed the patient weighed 2550 grams. Electrolyte tests indicated hypocalcemia, and there was suspicion of cholestasis with suspected biliary atresia. Breastfeeding was continued with increased frequency and volume, along with D10% at 9 mL per hour.

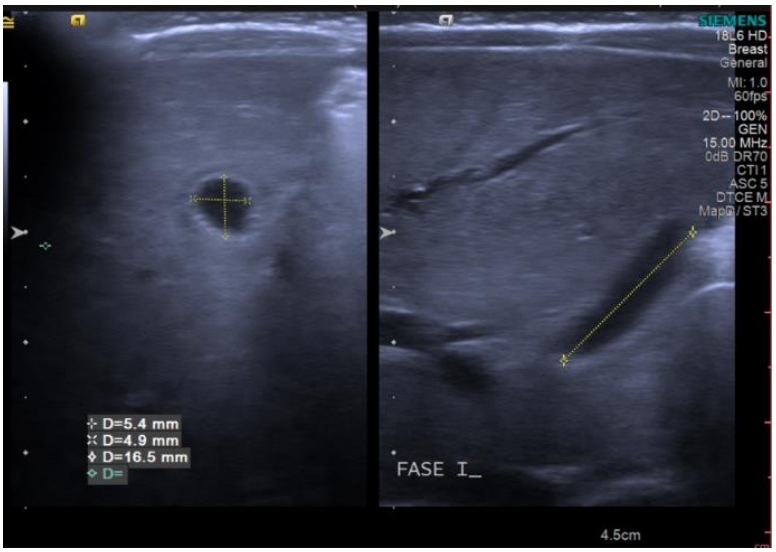
By the sixth day of treatment, the jaundice had improved, breathing difficulties had resolved, and there were no new skin lesions. Oxygen saturation was 98% on CPAP 21/5, with other vital signs within normal limits. The eyes remained jaundiced, the extremities showed minimal jaundice, and bullae were still present. Oxygen was switched to low-flow nasal cannula, oral fluids were increased, and D10% was adjusted to 5 mL per hour. Antibiotics were continued.

On the eighth day of treatment, the patient no longer appeared jaundiced, was feeding well, and was in stable condition. Reflexes and crying were strong, the patient was able to feed, and movements were active. Oxygen saturation was 98% in room air, with other vital signs normal. The eyes were no longer jaundiced, the abdomen showed no distension, the extremities displayed minimal jaundice, and bullae were still present. Feeding was increased to 15−20 mL every 3 hours, D10% was reduced to 2 mL per hour, and antibiotics were continued.

By the ninth day of treatment, the patient had improved, was feeding well, and showed no signs of respiratory distress. The extremities were still jaundiced, but no new lesions were observed. Urine culture results showed no growth. Oral feeding and intravenous D10% were continued, with breast milk provided on demand. Benzathine Penicillin G treatment was ongoing (currently on day eight), and Cefoperazone and Gentamicin were discontinued after 7 days, replaced with Amikacin 30 mg intravenously every 12 hours. The patient was also given Ursodeoxycholic Acid (UDCA) 27.5 mg orally every 8 hours. The patient was then transferred to the intermediate care unit. A stool sample was collected on the thirteenth day of treatment, which appeared pale and clay-like (Figure 3).

Figure 3. Results of collecting three portions of stool samples

On the fifteenth day of treatment, the patient's condition was the same as before, with his current weight of 2565 grams. The patient was fasted for a 2-phase abdominal ultrasound (ultrasound) examination (first phase). D10% fluid therapy on July 12, 2024 is increased to 12 mL per hour during fasting. Patients also received a 25 mL packed red cell (PRC) transfuse once with furosemide 1 mg preremediation. On the seventeenth day of treatment, the jaundice on the skin has improved, shortness of breath has improved, and drinking well. The extremities are still jaundice but no new lesions appear. The results of the urine culture showed no growth. The antibiotic was changed to Meropenem 60 mg intravenously every 8 hours.



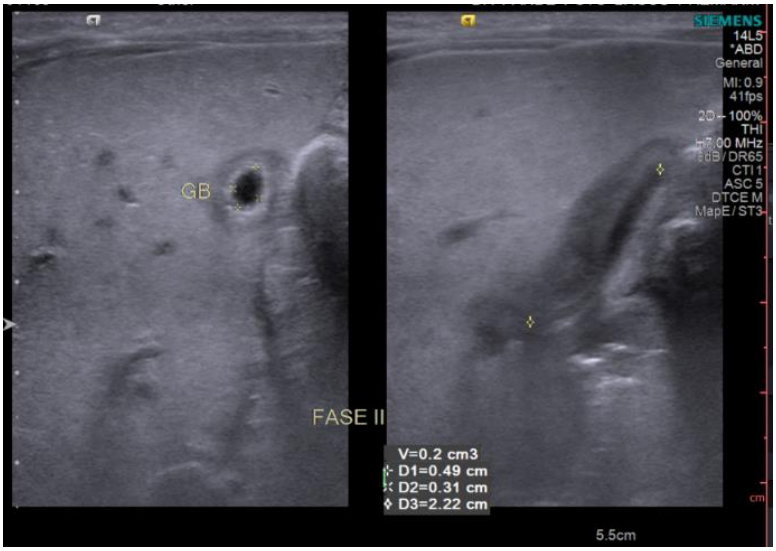


Figure 4. Results of 2-phase abdominal ultrasound on the 15th and 18th day of treatment.

On the eighteenth day, an ultrasound examination (ultrasound) of the abdomen was carried out in the second phase **(Figure 4)** with impressive findings of gallbladder contractility disorder, contraction index 22% (normal: 86±18%). The liver is within normal boundaries, the gallbladder is normal in size, the walls are not thickened, no stones/sludge are visible, and there are no triangular cord signs. In phase I, the size of the gallbladder ±0.54 × 0.49 × 1.65 cm (measured volume ±0.22 cc). In phase II, the size of the gallbladder ±0.49 × 0.31 × 2.2 cm (measured volume ±0.17 cc). On the nineteenth day of treatment, the patient's condition was the same as before, with a weight of 2625 grams. The patient again received a 25 mL PRC transfuse once with 1 mg furosemide preremediation. The results of the second urine culture showed no growth. The previous therapy was continued. On the twentieth day of treatment, the patient's condition was the same as before, the skin jaundice had decreased, and his current weight was 2670 grams. Patients began receiving 1 mg of intramuscular vitamin K and planned to be given every one week.

On the twenty-second day of treatment, the condition was the same as before, the jaundice on the skin and lesions on the skin had improved, and the abdomen was not bloated **(Figure 5).** The stool is pale yellow with the impression of putty and the urine is dark yellow, and the current weight is 2670 grams. The patient is consulted with a pediatric surgeon for clinical evaluation and ultrasound findings with suspicion of biliary atresia. Examination of the head of the neck appeared to be jaundice, abdomen was obtained jaundice, no caput medusa or venectation appeared, intestinal noise was heard within normal limits, tympanic percussion, palpable palpation, no palpable mass, hepatic border of 1 cm caudal arcus costae. The extremities are still jaundice but no new lesions appear. The patient was declared to be able to be treated as an outpatient, planned for surgery and control again on July 23, 2024 (four days post-hospitalization). Meropenem administration has been discontinued, while UDCA therapy has been continued to 30 mg orally every 8 hours.

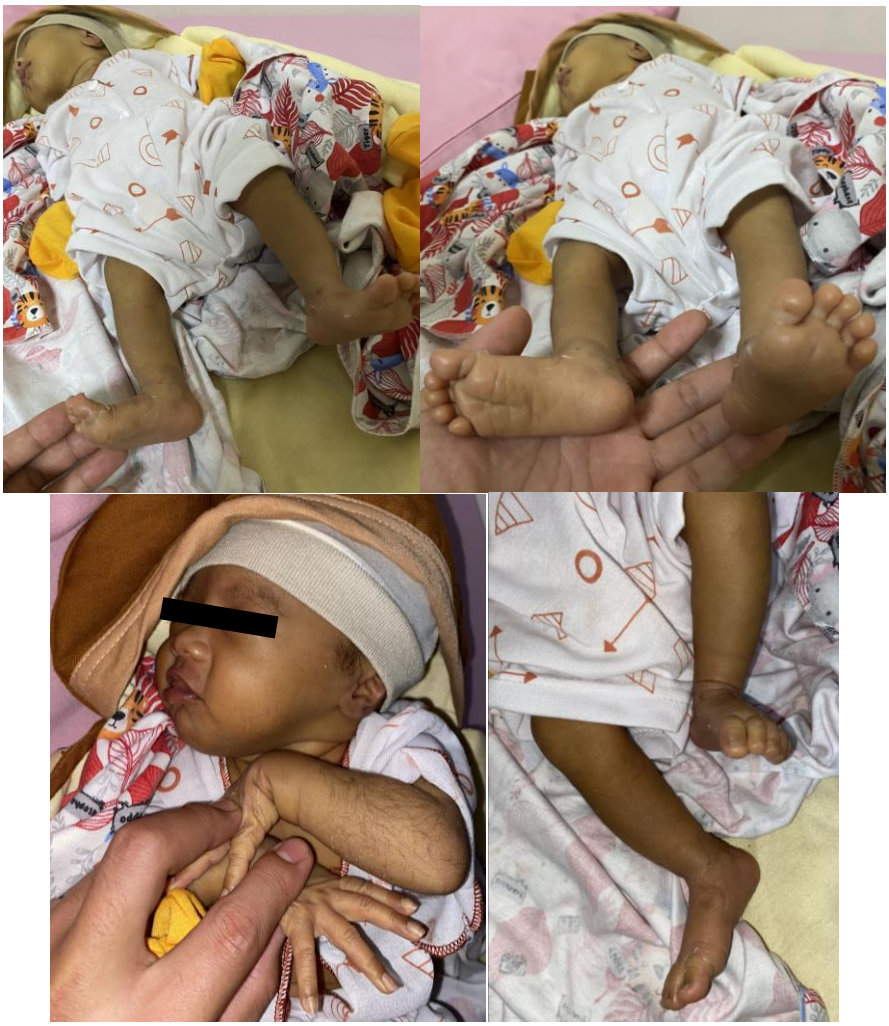


Figure 5. Clinical photo of the patient when discharged.

RESULT AND DISCUSSION

Discussion

Syphilis is a sexually transmitted disease caused by the spirochete *Treponema pallidum*. Newborns can contract this infection from mothers with syphilis through the placenta or perinatally through contact with infected maternal lesions (Vega et al., 2023). Congenital syphilis is a serious public health issue that can result in spontaneous abortion, intrauterine growth retardation, non-immune hydrops fetalis, stillbirth, prematurity, perinatal death, and severe residual symptoms or even death in some live-born infants (Armini et al., 2023; Hussain et al., 2024; Salomè et al., 2024). Congenital syphilis is divided into early and late congenital syphilis. Early congenital syphilis manifests clinically before the age of 2 years, while late congenital syphilis shows clinical signs after the age of 2 years, typically around puberty. Most infants are asymptomatic at birth, but some may present with symptoms (Centers for Disease Control and Prevention, 2021a; Sankaran et al., 2023).

The clinical manifestations of early congenital syphilis include skin rashes, runny nose, jaundice, hepatomegaly with or without splenomegaly, fever, generalized lymphadenopathy, and failure to thrive (Committee on Infectious Diseases American Academy of Pediatrics et al., 2021; Hussain et al., 2024; Sankaran et al., 2023). Additional symptoms may include Coombs-negative hemolytic anemia, thrombocytopenia, neurosyphilis, pneumonia, hepatitis, and skeletal abnormalities. Skeletal anomalies can include lucency (demineralization) and erosion (bone destruction) at the proximal medial tibial metaphysis (Wimberger's sign), metaphyseal lucent bands, serrated appearance at the edges of long bone epiphyses (Wegner's sign), diaphyseal periostitis, irregular areas of increased density and thinning, and osteochondritis in several locations. Osteochondritis is painful, and affected infants typically refuse to move the involved limbs (Parrot's pseudoparalysis). The most common skin lesions in early congenital syphilis are symmetrical copper-colored maculopapular rashes. Other rare skin lesions include acral skin desquamation, vesiculobullous eruptions (syphilitic pemphigus), mucosal patches, petechiae, targetoid lesions resembling erythema multiforme, perioral/perinasal/perianal fissures, and condyloma lata (Centers for Disease Control and Prevention, 2021a; Das et al., 2022; Shah et al., 2024).

The clinical manifestations of late congenital syphilis include perioral fissures (rhagades), saddle nose deformity, frontal bossing, and Hutchinson's triad. Hutchinson's triad consists of (1) notched, peg-shaped, widely spaced central incisors; (2) interstitial keratitis; and (3) eighth cranial nerve deafness. Other late manifestations include mulberry molars, intellectual disability, hard palate perforation, prognathism, painless knee effusion (Clutton's joints), thickening of the sternoclavicular joints (Higoumenakis sign), scaphoid scapula, and anterior tibial bowing (Galvis & Arrieta, 2020; Hussain et al., 2024; Leung et al., 2020). The three main risk factors for perinatal syphilis infection are individual, community, and systemic factors. Individual risk factors include high-risk sexual behavior, substance abuse, being part of vulnerable groups due to geographical location or race/ethnicity, low health literacy, language barriers, inadequate personal healthcare priorities and resource utilization, stigma and fear of judgment, and lack of health insurance. Community-level risk factors include inadequate access to healthcare services, insufficient medical knowledge about syphilis among healthcare providers, limited guidelines, judgmental and stigmatizing approaches, and poor provision of sexual health education. Systemic-level risk factors include poverty, structural and systemic racism, homelessness and housing insecurity, inadequate focus and resource allocation for rural and remote areas, lack of resources for contact tracing and follow-up, lack of funding, and an inadequate public health infrastructure (Centers for Disease Control and Prevention, 2021b, 2021a; Sankaran et al., 2023).

The evaluation and management of infants with congenital syphilis are based on maternal history (syphilis infection and treatment, RPR results during pregnancy and at delivery, and infection/reinfection risk factors), physical examination findings, and diagnostic tests on the infant. The evaluation and management guidelines follow the risk stratification algorithm from the Centers for Disease

Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) for congenital syphilis, as outlined in Table 1 (Centers for Disease Control and Prevention, 2021b, 2021a; Committee on Infectious Diseases American Academy of Pediatrics et al., 2021).

The patient in this case report was diagnosed with early congenital syphilis (due to clinical manifestations appearing before 2 years of age) and falls into the confirmed or highly probable CS category based on abnormal physical examination findings, despite the RPR titer being only twice that of the maternal titer (patient RPR positive at 1/8 and mother RPR positive at 1/16). Additionally, both the mother's and the patient's TP-Rapid test results were positive. Our patient presented with uncommon early congenital syphilis symptoms such as white patches surrounded by red to bluish areas on the skin since birth, jaundice, neonatal pneumonia, thrombocytopenia, and hyperbilirubinemia. The skin lesions described have not been previously reported in congenital syphilis patients, making this finding important to add to the list of skin manifestations of early congenital syphilis.

Congenital syphilis is a preventable and treatable disease. However, timely syphilis screening is crucial, as seen in antenatal care (ANC) screening programs in Indonesia. One of the key tests in these programs is the triple elimination screening, which detects HIV, syphilis, and hepatitis B in pregnant women, diseases that can be transmitted to their babies (Baker et al., 2020; Winata et al., 2023). Assessing maternal history, including personal, infection, and treatment history, as well as conducting a physical examination, is essential for accurate diagnosis (Sankaran et al., 2023). In this case report, the mother was at high risk due to a history of multiple sexual partners, signs of infection that were not treated, and lack of prenatal care, including syphilis screening. The mother's risk factors and the patient's clinical presentation were strong indications for syphilis testing at delivery.

Table 1. Guidelines for the Evaluation and Management of Congenital Syphilis.

Clinical History and Examination	Evaluation	Therapy	Cases and Risk Categories
• Abnormal physical examination • RPR titer ≥4 times the maternal titer	CSF (cell count, protein, VDRL), complete blood count (CBC), long bone radiography, and more	• Penicillin G 100,000–150,000 units/kgBW/day, given 50,000 units/kgBW/dose IV every 12 hours for the first 7 days of life and every 8 hours thereafter for a total of 10 days; or • Procaine penicillin G 50,000 units/kgBB/IM dose in a single daily dose for 10 days	Confirmed CS or highly probable

• Normal physical examination • RPR titer <4 times maternal titer and maternal care is absent/unknown/inadequate or started <30 days before delivery	CSF analysis cell count, protein, VDRL, CBC, long bone radiography	• Penisilin G 100.000–150,000 units/kgBW/day, given 50,000 units/kgBW/dose via IV every 12 hours for the first 7 days of life and every 8 hours thereafter for a total of 10 days; or • Procaine penicillin G 50,000 units/kgBB/IM dose in a single daily dose for 10 days; or • BPG 50,000 units/kgBW/IM dose in a single dose (if specific evaluation and follow-up)	Possible CS
• Normal physical examination • The RPR titer < 4 times the maternal titer and maternal care is adequate and started ≥30 days before delivery and there is no concern of reinfection	No evaluation recommended	BPG 50,000 units/kgBW/IM dose in a single dose (if follow-up is uncertain); or no treatment with follow-up titer (exact follow-up)	Less likely CS
• Normal physical examination • The RPR titer is <4 times the maternal titer and the maternal care is adequate before pregnancy	No evaluation recommended	No treatment with a follow-up RPR titer (if the infant's RPR is positive) or one-time Intramuscular Benzathine Penicillin (if follow-up is uncertain)	Unlikely CS

The patient in this case presented with physical examination abnormalities, but the infant's RPR titer was less than four times the maternal titer. According to current management guidelines, the primary therapy should be Penicillin G at 100,000–150,000 units/kgBW/day, administered intravenously at 50,000 units/kgBW per dose every 12 hours for the first 7 days of life and every 8 hours thereafter for a total of 10 days, or Procaine Penicillin G at 50,000 units/kgBW per dose IM in a single daily dose for 10 days (Centers for Disease Control and Prevention, 2021b, 2021a; Committee on Infectious Diseases American Academy of Pediatrics et al., 2021). A study in Korea has also demonstrated the effectiveness of benzathine penicillin as the primary therapy for congenital syphilis, with 92.8% of patients (from 548 infants) showing a high success rate (Lim et al., 2021).

However, the recommended therapy was not available at our facility. To avoid delaying treatment for the patient, we administered Benzathine Penicillin G at 130,000 IU intramuscularly every 24 hours for 10 days, adjusted to the available medications. Based on follow-up results, the therapy we provided was effective for the patient's clinical improvement.

Untreated syphilis infection in pregnant women has a transmission rate of up to 100%, leading to fetal complications, including prematurity, low birth weight, abortion, developmental issues, neurological and musculoskeletal complications, and even fetal death in up to 40% of cases (Gozali et al., 2024; Hussain et al., 2024; Hussain & Vaidya, 2022). A study based on national data from Korea indicated that the birth rate of infants born to mothers with syphilis has not shown a decreasing trend, and complications such as jaundice, hearing loss, kidney disease, and intellectual disability frequently occur, with 14 cases of neurosyphilis being identified (Lim et al., 2021). Delayed diagnosis and treatment can lead to persistent or late clinical manifestations such as intellectual disability, gum or skin rashes, scarring, hearing and vision deficits, severe anemia, meningitis, jaundice, liver failure, splenomegaly, skeletal abnormalities, and tertiary syphilis. Even initiating treatment in some infants may cause a Jarisch–Herxheimer reaction, which results in fever, chills, hypotension, and possibly fetal death due to the inflammatory response (release of cytotoxins) triggered by dying spirochetes. Symptoms begin within a few hours after penicillin administration and typically resolve spontaneously within 24 hours (Hussain et al., 2024; Sankaran et al., 2023).

The prognosis is very good if diagnosed and treated early. However, there is an increased risk of worse outcomes and potential death in cases such as preterm infants, patients who start therapy very late or do not receive appropriate treatment, patients with widespread disease and multi-organ failure, and those with severe Jarisch-Herxheimer reactions post-treatment (Hussain et al., 2024; Sankaran et al., 2023). Therefore, despite clinical improvement in this patient, including reduced congenital syphilis manifestations, clinicians must continue routine follow-up for long-term disease monitoring, complications, and clinical outcomes. At the last follow-up for this patient, jaundice was still present in the extremities, but no new lesions had appeared. Further follow-up will include reevaluation, and surgery is planned for suspected biliary atresia.

CONCLUSION

A case report has documented a newborn baby girl with an unusual clinical presentation of early congenital syphilis, including white patches with red to bluish areas on the skin from birth, accompanied by jaundice. The patient's mother had a history of multiple sexual partners, showed signs of infection but did not seek treatment, and never underwent prenatal care, including syphilis screening. Anamnesis, physical examination, and supporting tests confirmed that the patient had congenital syphilis, accompanied by neonatal pneumonia, thrombocytopenia, and hyperbilirubinemia, with suspected cholestasis due to biliary atresia. The patient was stabilized hemodynamically, given intravenous fluid therapy, Benzathine Penicillin G 130,000 IU intramuscularly every 24 hours (for 10 days) as per the hospital's availability for syphilis treatment, a combination of antibiotics

for pneumonia, and UDCA for cholestasis treatment. The therapy for congenital syphilis in this case was effective, as evidenced by the latest follow-up, which showed clinical improvement in the skin lesions, although jaundice persisted due to unresolved suspected cholestasis from biliary atresia. Therefore, a discussion of surgical treatment options is planned for the next follow-up. Early detection, appropriate management, a multidisciplinary approach, and intensive monitoring are essential for managing and preventing complications of congenital syphilis with associated conditions. Additionally, effective prevention strategies, such as increasing antenatal care coverage, are crucial to reducing the incidence of congenital syphilis.

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