Short Reports

Summary
A 15-month-old boy developed osteomyelitis five months after complete recovery from meningitis. Haemophilus influenzae type b was isolated from the blood during both episodes. The probable source of reinfection was persistent carriage of the organism in the family. Immunological studies revealed a deficiency of IgA and IgG in the patient's serum.

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Congenital Tuberculosis
The birth of a baby already infected with tubercle bacilli either during pregnancy or at the time of delivery is a rarity. Beitzke (1935) suggested the following criteria for a diagnosis of congenital tuberculosis; the tuberculous nature of the lesions in the infant must be proven; the lesions must be present at, or within a few days of birth; in cases where tuberculosis is diagnosed after the first weeks of life, a primary complex must be found in the liver, or extrauterine infection must be excluded, the infant being separated immediately after birth from the mother or from any other possible source of infection. Applying Beitzke's criteria, Corner and Brown (1955) found 134 published cases; since then, occasional reports have appeared.

In spite of effective chemotherapy, congenital tuberculosis has a high mortality rate and only 6 cases have been reported with survival (Miller, Seal, and Taylor, 1963). This is due partly to the gravity of the condition, and partly to delay in diagnosis.

We report a case of congenital tuberculosis diagnosed by liver biopsy, successfully treated, and surviving apparently without sequelae.

Case Report
This female baby was the first child in the family, born with normal delivery after an uneventful pregnancy. Though born at term, her birthweight was only 2300 g. She was well until 40 days old when she suddenly developed fever and abdominal distension, and became very fretful. She was seen by the family doctor who attributed the symptoms to dehydration and ordered fluids by mouth. The fever and abdominal distension subsided in a few days. Three weeks later, the baby was brought again to the family doctor because of further abdominal enlargement. Her general condition during this period was very good and there was no jaundice, anorexia, or vomiting, but the family doctor found hepatosplenomegaly and sent the child to the hospital.

She was admitted to a hospital where she remained for 2 weeks. From the information we had, routine examinations were negative except the chest x-ray which showed signs of bronchopneumonia. The baby was subsequently transferred to this hospital with a diagnosis of liver cirrhosis. A liver biopsy revealed tuberculous lesions. Typical tubercles, formed by epithelioid cells, were lying in the liver lobules or in the intralobular spaces. In many places there were areas of caseous necrosis with giant cell formation. Marked lymphocytic infiltration was seen around the tubercles. Numerous acid-fast bacilli were seen in sections of the lesions.

After the diagnosis had been established treatment was started with isoniazid and streptomycin. After the liver biopsy her condition suddenly deteriorated, with tachypnoea and grunting respirations.

The picture now was that of a very ill baby, pale and wasted, with a very distended abdomen (Fig.). There were few scattered rhonchi in both lungs. The liver was firm and extended 7 cm. below the costal margin. The spleen was firm and palpable 9·5 cm. below the left costal margin. A typical tuberculoma was present in the right optic fundus. The right ear was discharging purulent material. Lumbar puncture was not done. Mantoux test 1: 1000 was negative. Hb 6·5 g./100 ml.
and both had congenital tuberculosis. From the ear discharge Staphylococcus pyogenes was cultured, sensitive to cloxacillin, but no culture for tubercle bacilli was made.

Treatment was continued with isoniazid, streptomycin, PAS, and prednisone (2 mg./kg.). Cloxacillin was also given for the otitis media. The anaemia was corrected with a blood transfusion.

In the following days her condition gradually improved and 5 weeks later she was discharged from hospital, but was followed closely until therapy was completed. She received in all, prednisone for 3 months, streptomycin for 6 months, isoniazid and PAS for one year. We saw her for the last time aged 13 months when she was a healthy normal baby. Chest x-ray was clear, and liver and spleen were not palpable. Mantoux test 1:1000 had by then become positive.

The family showed a high incidence of tuberculosis. The mother had never been x-rayed before pregnancy, but after the diagnosis in the baby had been confirmed her chest x-ray showed that she had right pleurisy, without evidence of ‘open’ tuberculosis. The maternal grandfather and uncle had also had pleurisy in the past, and both had been treated for tuberculosis for an unknown period of time. Their chest x-rays a few years previously had been clear. The father was healthy. All these members of the family lived in the same house.

Comments

Though our patient only partly fulfils Beitzke’s criteria, the evidence for the tuberculosis being congenital is strong. The tuberculous nature of the lesions in the liver was proved both histologically and bacteriologically. Though the baby was not separated from the mother after birth, neither she nor any other member of the household had ‘open’ tuberculosis. The clinical picture provided strong evidence that the primary complex was in the liver. The infant’s illness started with abdominal distension due to hepatosplenicomegaly, while at that time there were no clinical signs in the lungs. At the time of the initial admission, the chest x-ray showed a bronchopneumonic picture, but this was not severe, and the main attention was focused on the huge enlargement of the liver and spleen; the miliary lesions in the lungs developed only later.

It is well known that the lungs and liver are the main organs where tubercle bacilli are readily found following haematogenous spread, wherever the source of that spread is sited. Though tubercles are present in the liver in almost every case where there are miliary lesions in the lungs, extensive lesions of the liver, such as tuberculous hepatitis or cold abscesses, are rarities (Choremis et al., 1963). The severe involvement of the liver in our case was therefore unlikely to be secondary to haematogenous spread from the lungs.

The fact that the mother was in good health during the pregnancy does not exclude intrauterine infection of the fetus, since cases have been reported where the mother had only ‘slight’ or ‘mildly’ active disease.

The clinical picture of congenital tuberculosis has been described by Hudson (1956). Our patient did not develop jaundice, though this has been a prominent feature in other cases with severe hepatomegaly, where the jaundice is thought to be

WBC 11,500/cu. mm., normal differential; reticulocytes 6·6%; platelets plentiful; ESR 120 mm./hr. Chest x-ray showed mottling of both lung fields, typical of miliary tuberculosis. From the ear discharge Staphylococcus pyogenes was cultured, sensitive to cloxacillin, but no culture for tubercle bacilli was made.
due to biliary obstruction from enlarged portal
glands.

Confirmation of the diagnosis during life has been
made by histological examination of material from
an infected mastoid, a cervical lymph node, or
tibial bone-marrow (Amick, Alden, and Sweet,
1950). To the best of our knowledge, our patient
is the first case of congenital tuberculosis diagnosed
by liver biopsy.

Summary

A case of congenital tuberculosis presented with
hepatosplenomegaly during the first month of life
is reported. Diagnosis was confirmed by liver
biopsy. The baby was treated with streptomycin,
isoniazid, PAS, and prednisone, and survived
without sequelae.

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Hypoprothrombinaemic Bleeding
in Infants Associated with
Diarrhoea and Antibiotics

Report of Two Cases

Hypoprothrombinaemic bleeding in infants asso-
ciated with diarrhoea and antibiotics is an interesting
and little-known clinical condition. The purpose of
this paper is to draw attention to the disorder and to
the extremely good response of bleeding to vitamin
K administration.

Case Reports

Case 1. A female infant, 6½ months old, was ad-
mitted to the hospital with a history of fever, vomiting,
and diarrhoea for 7 days. She had been treated at home
with chloramphenicol by mouth for 6 days and was given
only fluids and diluted milk until the day of her admission.
She was breast-fed during the first 4 months, when
solids, meat, and vegetables were added. On examina-
tion severe dehydration was detected. Every attempt
to withdraw blood resulted in huge haematoma and
prolonged bleeding.

Escherichia coli type O41B12 and proteus were recovered
from the stool.

Prothrombin time was 90 seconds (control 12 seconds).
Factor II 3·5% (control 100%), factor VII 1% (control
100%), factor IX 2% (control 100%), factor VIII
(antihaemophilic globulin) 100% (control 100%), clot
retraction normal, fibrinogen 185 mg./100 ml. (normal
values 200–400 mg./100 ml.), platelets 300,000/
cu. mm.
The patient was given 4 mg. vitamin K intramuscularly
and 6 hours later she stopped bleeding from the skin
punctures. On the following day prothrombin time was
14 seconds (control 13 seconds), and the patient was
discharged 10 days later in excellent condition.

Case 2. A male infant, 4½ months old, was admitted
to the hospital because of fever, diarrhoea, and cough for
12 days. He had been treated at home with penicillin
intramuscularly and chloramphenicol by mouth for
10 days, and was given oral fluids and diluted milk. He
was exclusively breast fed until the day of his illness.
He bled for hours from various skin punctures. When
femoral vein puncture was attempted a huge haematoma
developed within a few seconds. The patient became
suddenly very pale, the haemoglobin dropped to 4·5
g./100 ml., and he was urgently transfused.

Escherichia coli type O111B1 was cultured from the
stool.

Prothrombin time was 100 seconds (control 13
seconds). Factor II 4·5% (control 100%), factor VII
less than 1% (control 100%), factor IX 1% (control
100%), factor VIII 100% (control 100%), clot
retraction normal, fibrinogen 195 mg./100 ml., platelets 350,000/
cu. mm.
The patient was given 4 mg. vitamin K intramuscularly
and on the following day prothrombin time was 20
seconds (control 13 seconds) and the patient had stopped
bleeding. Another 2 mg. vitamin K was given daily for
2 days. Two weeks later his prothrombin time was
15 seconds (control 12 seconds).

Discussion

The bleeding episodes in our two cases probably
resulted from the simultaneous occurrence of
destruction of normal intestinal flora by chloram-
phenicol and interference with absorption of
vitamin K as a result of diarrhoea. Low vitamin K
in the diet may have played another important role
in the second patient who had been exclusively
breast-fed. Though this condition is evidently
rare, there have been similar reports (Rapoport
and Dodd, 1946; Burgio and Vaccaro, 1966; Goldman
and Deposito, 1966). Vitamin K supplements
should be given to patients with long-lasting diar-
rhoea treated with antibiotics.