



PERINATAL TUBERCULOSIS IN PREMATURE NEWBORN: A CASE REPORT

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INTRODUCTION

Tuberculosis (TB) infection is very common all over the world and it is estimated to involve 1/3 of the world population. TB incidence in pregnancy is about 4,2/100000 in industrialized countries. Congenital TB is a rare disease, probably underestimated and associated with a high mortality rate; it is acquired by aspiration or ingestion of infected amniotic fluid or by hematogenous spread. Signs and symptoms in neonates usually occur in the second and third weeks of life, but also at birth, and they are often non specific, thus this condition can be misdiagnosed. TB should be suspected especially in mother immigrated from country where TB is prevalent, with unexplained fever and premature labor.

We report a case of perinatal tuberculosis in premature infant, born from mother emigrated few years before from India, a high TB incidence country.

CASE REPORT

The neonate was born in Italy from caesarian section at 32 weeks of gestation for premature labor and breech position (BW 2030g, Apgar score 9/10) in an indian pregnant woman with recent onset of fever.

MATERNAL HISTORY

Since the last week before delivery the mother presented unexplained persistent fever, therefore she was transferred to Infectious Disease Department for suspected TB disease: the first smear for Acid fast Bacilli in gastric- and broncho-aspirates were negative and only after three weeks both cultures confirmed the *M. tuberculosis* growth. Placenta was not examined.

NEWBORN HISTORY

The post-natal period was regular until day 16 when the male infant presented lethargy, poor feeding and respiratory distress, so he was transferred to our Neonatal Intensive Care Unit from other hospital.

On arrival the child was lethargic, hypotonic, with breathing difficulty. Chest X-ray showed bilateral infiltrates (Fig 2), while the first chest X-ray performed on the 10th day of life was normal (Fig 1).

Further investigations performed are shown in Table 1.

Table 1: Investigations performed in the male infant.

| Investigations | |
|-------------------------------------|------------|
| White Blood Count | 11.080/mmc |
| Neutrophil Count | 7.756/mmc |
| C-reactive Protein | 2,26 mg/dl |
| HIV, HBV and HCV serologies | Negative |
| Rectal, pharyngeal, auricular swabs | Negative |
| Blood, CSF and urine culture | negative |

Gastric aspirate examination by combined smear for Acid fast Bacilli and Polymerases Chain Reaction was positive for *Mycobacterium tuberculosis*.

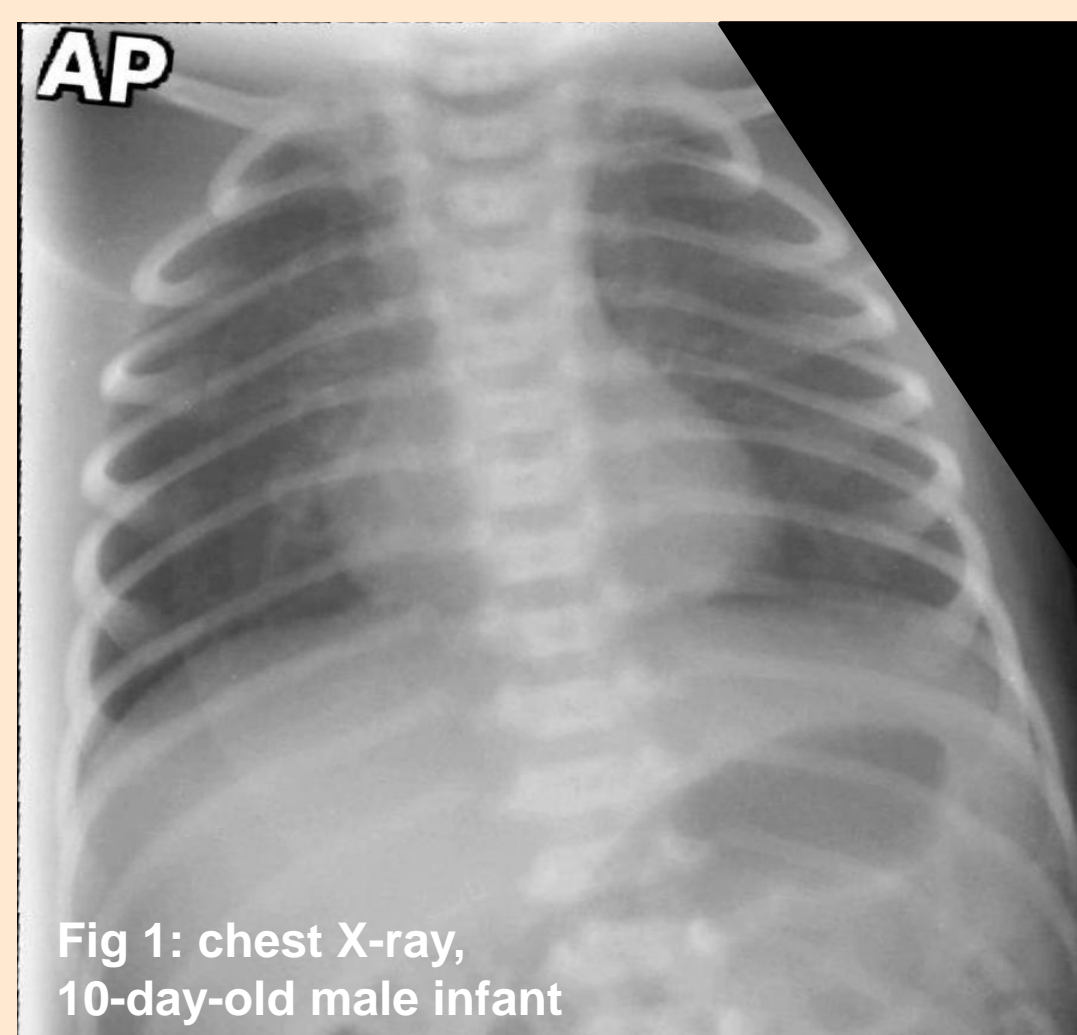


Fig 1: chest X-ray, 10-day-old male infant

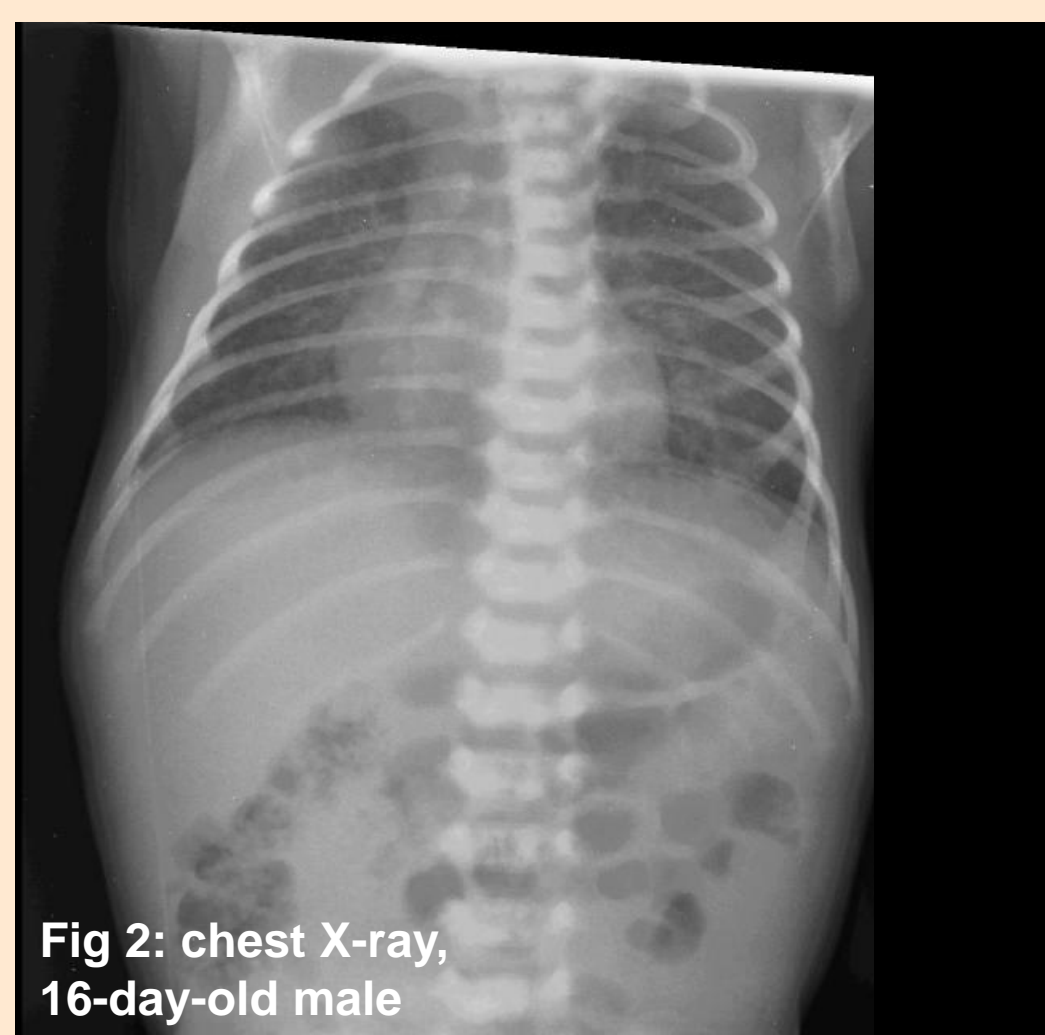


Fig 2: chest X-ray, 16-day-old male

The infant was treated with HFNC (2-4 l/min FiO₂ 21%) for four days and antitubercular therapy with intravenous isoniazid, rifampicin, aminoglycoside, and oral pyrazinamide was started. Afterwards the culture showed the growth of *Mycobacterium complex* susceptible to isoniazid and rifampicin. Complete recovery was achieved with a 9-month treatment of isoniazid-rifampicin associated with pyrazinamide for the first 2 months.

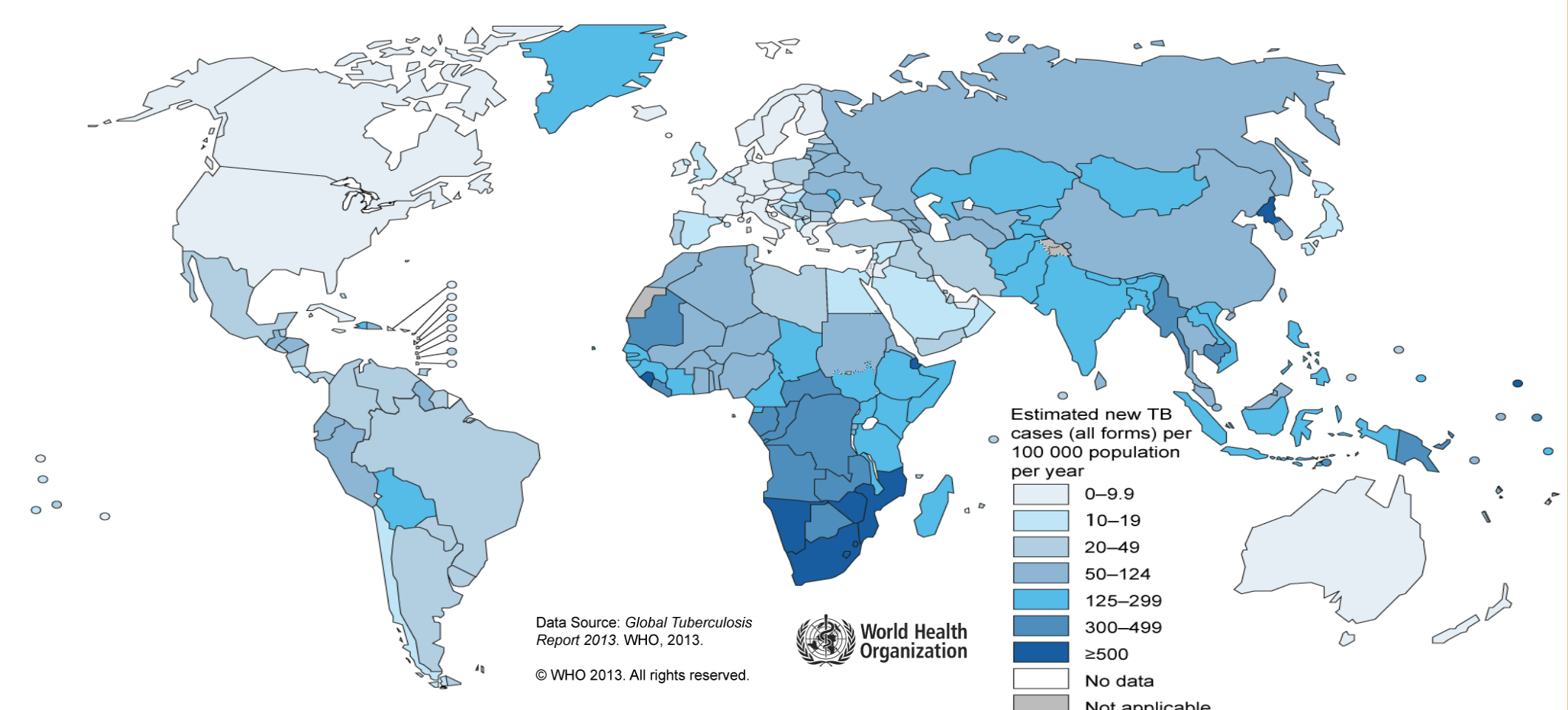
The baby was closely monitored to determine response to therapy and drug toxicity: a good outcome has been achieved.

CONCLUSION

Neonatal TB can mimic bacterial sepsis and it is fatal in half the cases especially if untreated.

TB suspicion is important in performing proper investigations and prompt initiation of treatment. Sensitization of neonatologists and obstetricians in order to perform attentive anamnesis and screening for TB in women with high risk provenance are necessary to prevent congenital TB.

Estimated TB incidence rates, 2012



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