



Case Study

Breast feeding Brucellosis: A Case Study

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A B S T R A C T

Keywords

Neonate,
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Treatment

A 25 year old lady visited us with fever, perspiration and pain. Brucellosis was diagnosed and therefore underwent pharmaceutical treatment with Co-trimoxazole and Rifampin. After 1.5 months, she visited to treat her 3 months old infant who was suffering from fever and lethargy and poor feeding; and also Brucellosis was diagnosed for infant. The lady stated that her child had only been fed breast milk since birth and had not drunk water even once. Co-trimoxazole syrup and Rifampin oral drops were administered on the infant. After 2 months the infant recovered general health and became negative for Brucellosis and at following 4 months, also negative for Brucellosis. The infant also reached the normal weighting level and all of his/her symptoms went away.

Introduction

Brucellosis is a zoonosis transmittable to humans (1) and virtually all infections derived from exposure to animals or ingestion of unpasteurized dairy products (2). *Brucella* is a genus of gram-negative, nonmotile, non-sporing, and non-encapsulated coccobacilli(3).

Brucellosis among family members has been reported. However, screening household members of an index case of acute brucellosis is not a routine procedure (2).

Human-to-human transmission, which is rare, has been reported in association with

blood transfusion, bone marrow transplantation, transplacental or perinatal exposure, and breastfeeding (3). Screening household members of an index case of brucellosis can expose new brucellosis cases (2). It is known that brucellosis can also be transmitted to neonates through breastmilk (4).

Cases in the first year are very uncommon and other modes of transmission are responsible at this age (1). Neonatal infection can be acquired transplacentally or during delivery (5). There are limited cases with *Brucella* infection acquired via breastfeeding in infants in the literature (6).

Case Study

A 25 year old lady visited us with fever, perspiration and pain. She was diagnosed with *Wright*= 1/160 and *Coombs Wright* = 1/320 in examinations and therefore was exposed to a pharmaceutical treatment with Co-trimoxazole and Rifampin. After 1.5 months, she visited to treat her 3 months old infant who was suffering from fever and lethargy and poor feeding. The infant was also examined and diagnosed with *Wright*= 1/320 and *Coombs Wright* = 1/640. The lady stated that her child had only been fed breast milk since birth and had not drunk water even once.

Co-trimoxazole syrup and Rifampin oral drops were administered on the infant. After 2 months the infant recovered general health and became *Wright*= 1/80, *Coombs Wright* = 1/80 and *2ME*=1/40 following 4 months, laboratory examinations was *Wright*= 1/80, *Coombs Wright* = 1/80 and *2ME*=1/20. The infant also reached the normal weighting level and all of his/her symptoms went away.

Discussion and conclusion

Neonatal infection can be acquired transplacentally or during delivery (7-9). The infection can be transmitted transplacentally or during delivery to newborns and by breastfeeding to children during the first year of life (7-9).

Due to its wide spectrum of symptoms, the diagnosis of the disease depends on laboratory tests as well as clinical symptoms (10-12).

Hematologic abnormalities reported in brucellosis include anemia, leukopenia,

thrombocytopenia, pancytopenia, bone marrow hypoplasia, and thrombotic microangiopathy(10-12).

Human-to-human transmission of brucellosis is rare (13). Transplacental transmission during pregnancy was also reported. Such transmission may be through contact with urine or feces during delivery or through swallowing the mother's blood (9).

Breast milk, as a potential source of infection, is easily overlooked (13). There are data supporting transmission through breast milk in the literature (7-9).

Al-Eissa et al. (1993) also reported a case with brucellosis transmitted via breast milk during neonatal period in Saudi Arabia (14). In Turkey, in 2011, Kose et al. (2011) reported a preterm infant with brucellosis infected via breast milk (9).

Although breastfeeding was the source of this infant's infection, there are several advantages of breastfeeding. Infants who were breastfed exclusively for 6 months experienced less gastrointestinal infection, among many other infectious conditions (Policy Statement 2012), and have better growth than infants who were breastfed for 4 on these or less (9).

If the *Wright*, *Coombs Wright* titers of mother and child was be equal, not to say that brucellosis of neonate transferred from breast milk or occurred into the uterus, but in our case, because of that, *Wright*, *Coombs Wright* titers of neonate was higher than mother; it can easily be argued that brucellosis infection in the neonate after labor and transferred through breastfeeding.

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