

Ureaplasma Parvum causing recurrent IUFD - A Case report

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BACKGROUND

For various reasons, the relationships between maternal infection and stillbirth are often not very clear. First, knowing exactly why a stillbirth occurred may be difficult. In addition, organisms such as mycoplasmas / ureaplasmas and certain viruses which are causal are not easily identified. Finding organisms in the placenta or on the fetus does not prove causality. Since infection may initiate a chain of events leading to stillbirth, its role might not be appreciated (e.g., parvovirus causing hydrops). The purpose of this case report is to highlight the importance of one such organism that is *Ureaplasma parvum*.

CASE REPORT

Here we present a case of a 28-year-old who had the misfortune of undergoing 2 consecutive intrauterine fetal deaths, one early miscarriage and one preterm delivery before being diagnosed.

The patient initially presented to us in 2014 in her first pregnancy at 20 weeks of gestation, she had an uneventful antenatal care, she had a normal anomaly and growth scan, OGTT was normal and negative GBS. She attended the Maternity assessment unit at 39 weeks with decreased fetal movements, She was vitally stable with no signs of infection, ultrasound confirmed IUFD.

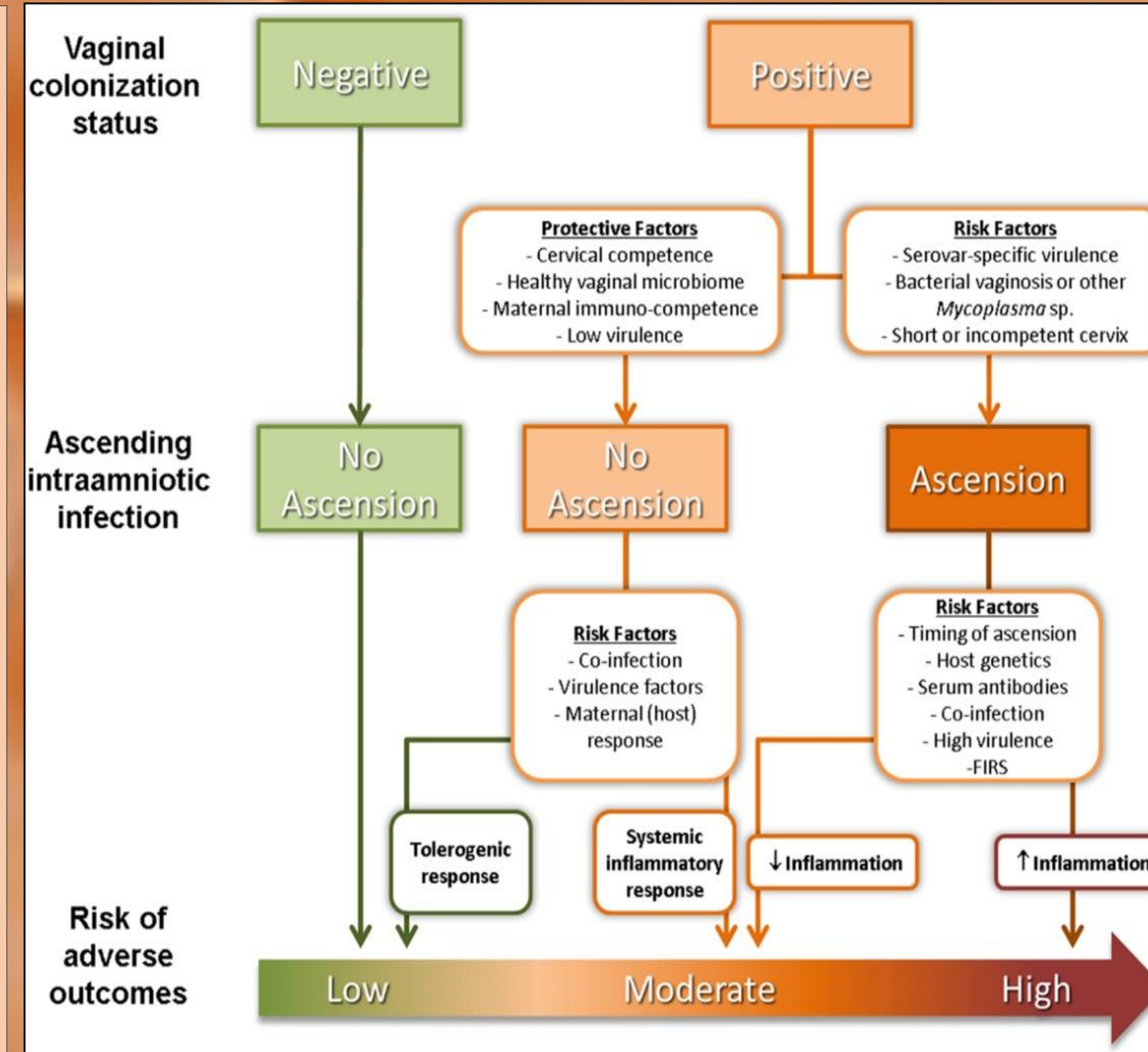
She had an induction of labor and delivered vaginally. Histopathology of the placenta revealed no pathology. During postnatal follow up anti-phospholipid antibody syndrome as ruled out. Fast forward to 2016 where she presented in her second pregnancy at 7 weeks gestation, she was commenced on 75 mg aspirin OD, She had a normal anomaly and an early growth scan. She had an uneventful pregnancy until 29 weeks when she presented to MAU with no fetal movements. Ultrasound confirmed an IUFD, After induction of labour she delivered vaginally. Histopathology revealed acute chorioamnionitis.

Extensive investigations which included thrombophilia screening, TORCH screening, chromosomal analysis, screening for antiplatelet antibodies, revealed no abnormality. She conceived again by IVF in 2018 only to end up in an early miscarriage at 7 weeks. Her 4th pregnancy in 2019 was followed up in Brussels. As per the patient's records, At 23 weeks she was screened for ureaplasma, which was positive for *U. Parvum*.

She was treated with clindamycin vaginal cream and progressed to 31 weeks gestation after which she developed fever, blood picture was suggestive of chorioamnionitis, with raised inflammatory markers. She had an emergency cesarean section for breech presentation and suspected chorioamnionitis. The baby was admitted to NICU for prematurity, the blood cultures were negative, but placental swab was positive for *Ureaplasma Parvum*.

In 2021, she had an IVF twin pregnancy with preimplantation genetic diagnosis. The pregnancy was uneventful except a positive *U. parvum* on HVS at 16 weeks. A vigilant plan was made after the MDT meeting, which included weekly CBC/CRP and serial growth scans with doppler fortnightly.

She was commenced on Aspirin, Prophylactic Enoxaparin and Azithromycin 1 gm weekly (after consultation with Microbiologist and ID consultant). She was planned for elective LSCS at 37 weeks with steroids cover in view of previous twins and previous LSCS. She was admitted to the hospital with preterm labour at 35 weeks and was taken for an emergency cesarean. Placental swab was negative for both *ureaplasma urealyticum* and *parvum*.



Discussion

This patient had 2 sudden IUFDs without any prior suspicion of anything going wrong

Ureaplasma species are the bacteria most often isolated from the amniotic cavity of women with preterm labor or preterm premature rupture of membranes; thus, the link between intrauterine *Ureaplasma* species infection and adverse pregnancy outcome clearly is established. However, because vaginal *Ureaplasma* species colonization is very common in pregnant women, the reason that these microorganisms cause ascending infections in some cases but remain asymptomatic and causing IUFD in others is not clear.

Having said that, treatment with antenatal azithromycin therapy can eradicate *U. parvum* from the amniotic fluid and key fetal organs, with subsequent prolongation of pregnancy.

Conclusion

It's a differential that does not occur in the minds of physicians investigating into the cause of an IUFD like in our case, Hence a concise knowledge of *Ureaplasma* species, and their role in pregnancy outcomes, especially preterm birth, chorioamnionitis and IUFD offers insight into the early diagnosis and appropriate antibiotic therapy to prevent long-term complications of *Ureaplasma* spp. infections. More studies are needed to be carried out to establish a relationship between *ureaplasma* infection in pregnancy causing intrauterine fetal death and a standardized approach to treat these patients is yet missing in the literature and guidelines so far.

