Diagnosis of Antiphospholipid Syndrome and Thrombophilia after Fetal Death

Abstract

Introduction: Fetal death represents more than a half of perinatal deaths in developed countries. There are multiple causes of fetal death, but about a quarter of them remain unexplained.

Objectives: To evaluate the incidence of thrombophilia and antiphospholipid syndrome (APS) as causes of fetal death in our hospital during a three year period between 2012 and 2014.

Methods: We reviewed all late pregnancy losses further 24 weeks of gestation. We only included fetuses that dead in utero, excluding those who died during labour or after delivery. We reviewed patients’ medical registers to find out the final diagnosis of fetal death: unexplained death, fetal abnormalities, umbilical cord accident, placental insufficiency (IUGR or preeclampsia), chorioamnionitis, thrombophilia, APS and miscellaneous. For diagnosis of thrombophilia and APS patients were tested for Factor V Leiden, deficiencies of antithrombin, protein C and S, prothrombin G20210A polymorphisms, lupus inhibitors, antcardiolipin antibodies and anti-beta2 glycoprotein 1 antibodies.

Results: 8323 deliveries were attended in our hospital during the studied period. Among these, 16 cases of fetal death were observed (0.19% of deliveries). We found 2 cases of umbilical cord accident (12%) and 2 cases of chorioamnionitis (12%). One case of thrombophilia, specifically protein S deficit (6%), and two cases of APS (12%) were diagnosed. One of the cases of APS was associated to intrauterine growth restriction. Miscellaneous included one case of placental abruption non-associated to thrombophilia or APS (6%), one case of type 1 diabetes mellitus with suboptimal metabolic control and fetal macrosomia (6%).

No cases of fetal abnormalities were observed. In 7 cases (43%) the cause of fetal death remained unexplained.

Conclusion: There are multiple possible causes of fetal death, but not all of them are known. Thrombophilia and APS are not infrequent causes, and when diagnosed they are potentially treatable with antithrombotic therapy in following pregnancies to prevent adverse outcomes. As supported by evidence, there is a strong association between APS and fetal death. With respect to the relationship between thrombophilia and fetal death, heterogeneous results are found in literature, with a clear positive association in case of protein S deficit but unconsistent results for the rest of diseases. It is especially important to diagnose all these diseases that are potentially treatable, such as thrombophilia and antiphospholipid syndrome (APS), for prevention of adverse outcomes in subsequent pregnancies.