

Hyperechoic amniotic fluid in a term pregnancy

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ABSTRACT

The presence of highly echogenic amniotic fluid (AF) is uncommon, and presence creates a dilemma in the mind of the clinician. Echogenic AF has been attributed to meconium, blood, and vernix caseosa. Many studies have shown that the presence of meconium is unlikely in most cases. We report a case of highly echogenic AF detected at 37 weeks which was managed conservatively with careful fetal monitoring for further 2 weeks expecting spontaneous onset of labor. Labor was induced due to reduced fetal movements at 39 weeks. Healthy baby weighing 3130 g was delivered by cesarean section after a failed induction with prostaglandin.

Keywords: Amniotic fluid, hyperechoic, liquor, meconium, term pregnancy

Introduction

Amniotic fluid (AF) is the liquid that surrounds a developing fetus in the amniotic sac and is usually clear to pale yellow in color. AF composition is complex with many maternal and fetal constituents. The composition of the AF changes with the gestational age with an average pH of 7.2 and specific gravity of 1.0069–1.008.^[1]

Echogenicity of AF indirectly represents the size, number, and distribution of particles in AF and in turn turbidity of AF. This could give rise to ultrasound detection of echogenic particles, also known as AF sludge or appearance of a homogeneously echogenic AF.^[2] AF “sludge” is dense aggregates of particulate matter. In the first and second-trimester ultrasound imaging, the presence of such particulate matter in AF is seen in approximately 4%.^[2] It is associated with intraamniotic bleeding and the acrania–anencephaly sequence^[3] and also observed in women with higher concentrations of maternal serum alpha-fetoprotein.^[4] By the third trimester, the incidence rises to

about 80%^[2] and have been mainly attributed to the presence of vernix caseosa and/or meconium.^[2,5] Vernix caseosa is a complex fatty substance derived from the desquamated epithelial cells and sebaceous material.^[6]

Congenital conditions associated with particulate matter in the AF include harlequin ichthyosis and epidermolysis bullosa letalis.^[2]

Homogeneously, echogenic AF is due to the presence of innumerable echogenic particles in the fluid and is an uncommon finding. In most cases this is due to the presence of vernix caseosa in AF, however, in minority of cases, this could be due to meconium.^[5,7-9]

Case Report

A 34-year-old primigravida was detected to have hyperechoic AF in a routine growth scan at 37 weeks of gestation [Figure 1]. She had an uncomplicated antenatal period. The fetal growth was satisfactory, and AF Index and the umbilical artery blood flow indices were within the normal range. Fetal movements were satisfactory, and cardiotocography was normal. In the absence

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