Reviewer’s report

Title: A twin pregnancy with acute respiratory failure due to non-fatal amniotic fluid embolism. A step-by-step diagnosis of exclusion: A case report

Version: 3 Date: 5 March 2008

Reviewer: Christian Lycke Ellingsen

I am familiar with the literature and believe that this case meets one of the 9 criteria for evaluation in the journal: An unexpected event in the course of observing or treating a patient

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: No

Does the case report have diagnostic value?: No

Will the case report make a difference to clinical practice?: No

Is the anonymity of the patient protected?: Yes

Comments to authors:

I am grateful for the opportunity to review this manuscript.

It clearly illustrates the need to have this rare, but often serious condition in mind when a pregnant woman suddenly develops cardiorespiatoric collaps. AFE is essentially a clinical diagnosis and a diagnosis of exclusion.

However, I have some comments:

In recent, larger studies (e.g. the study reported by Kramer et al in Lancet 2006; 368:1444-48) it is convincingly shown that the fatality rate is much lower than previously estimated, as low as 13%. In several papers, there is a trend suggesting the higher the reported incidence is, the lower is the fatality, probably due to publication bias.

There is also a tendency (albeit not always significant) towards increased risk for developing AFE in elderly primigravida, multipara and by intrumental delivery. This lady had all these risk factors.
The pathophysiology of AFE is not completely understood. As most authors now have abandoned the hypothesis that AFE is caused by mechanical obstruction of the pulmonary vessels, I would suggest that the authors mention alternative explanations relating to biologically active substances in the amniotic fluid (tissue factor, endothelin, histamin, prostaglandins, complement activation...).

I think that many of the international readers would prefer that the results of the blood gas analysis was reported in SI units (kPa) instead of mmHg.

Concerning the coagulopathy, it would be interesting to know if the level of fibrin degradation products was measured (D-dimer test).

Some odds and ends:
The authors state that dyspnoea is a common symptom during late pregnancy. I suggest that the sentence should start "Mild dyspnoea is a common symptom..."

CRP was only mildly elevated.

It is stated that "CT scanning confirmed the above findings...", "supported" is perhaps a better word.

I feel that "Duplex scanning" could be more precisely mentioned as "Duplex ultrasound scanning".

On page 7: "AFE appears to be initiated after maternal intravascular exposure to fetal tissues and usually occurs during pregnancy..." The authors surely mean "during labor".

There are some minor grammatical errors that should be corrected in the final proof-reading. (There at least three different spellings of "caesarean".)

There are no references from later than 2003. The authors might add one or two from the last years.

What next?: Accept after minor revisions

Quality of written English: Needs some language corrections before being published