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LETTER TO THE EDITOR

Fetal demise on MRI: reply to Whitby

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Sir,

We thank Dr. Whitby for her interest in our article titled "MR evaluation of fetal demise" [1] and appreciate her clarifying comments. We agree that findings such as loss of gray/white matter differentiation, presence of skin edema, pleural effusions, a small stomach or an empty bladder by themselves are certainly not diagnostic of fetal death and may be found in innumerable different pathological and nonpathological conditions of the live fetus. It is the constellation of findings we present that, together with the abnormal signal in the heart chamber, are suggestive of fetal death. Indeed, white blood in the heart chambers is a normal finding in live fetuses when the sequence is a gradient echo. However, when the heart has bright signal in half Fourier acquisition single-shot turbo spin echo (HASTE in Siemens scans), further evaluation with ultrasound is needed, as this is an abnormal finding suggestive of fetal death. Certainly, any such MR diagnosis must be confirmed by ultrasound, the gold standard of fetal imaging, before any change in management is applied.

The comment about the fetal papyrus, or fetus who died weeks prior to scanning, is well taken. In our study, we purposely excluded such cases as the recognition of fetal death in these cases is quite obvious. We were looking for cases of recent death in which recognition of demise may present more of a challenge.

Again, we would like to emphasize that all of the above MRI findings, including the "overlapping of the sutures of the skull and the total lack of extra-axial CSF space," as discussed by Whitby [2], as the "most reliable and consistent feature of fetal demise" should not be interpreted in isolation, since as noted on Figure 2 of our paper [1], a small amount of CSF is still appreciated adjacent to the left frontal lobe in this clinically and autopsy-proven deceased fetus. The MRI findings are indeed only one part in the evaluation of the fetus, which must be completed with the clinical and sonographic findings at the time of evaluation.

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