

Detecting fetal anomalies during late pregnancy ultrasound: incidental finding or targeted screening?

Running Head: Response to BJOG-20-2178

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26 **Letter**

27 We appreciate the letter by Claudia Massarotti and colleagues¹; their observations and the
28 results of our systematic review and meta-analysis² are relevant to the health care of pregnant
29 women and their babies worldwide.

30 In most settings, the rationale for third-trimester ultrasound - whether universal or selective -
31 is aimed at identifying fetuses at risk of adverse perinatal outcome due to growth restriction³,
32 abnormal Doppler studies⁴, macrosomia⁵ or non-cephalic presentation⁶.

33 As discussed by Massarotti et al¹, there has been limited focus on the evaluation of fetal
34 abnormalities in the third trimester. While our systematic review and meta-analysis helps to
35 understand the clinical effectiveness of such third trimester screening², it is important to
36 highlight that the study was not designed to answer whether routine third-trimester ultrasound
37 should be undertaken for the detection of fetal anomalies. Despite the advantages of detection
38 of fetal abnormalities even late in pregnancy outlined by Massarotti et al¹, a recommendation
39 for implementing such routine screening should only be made after an assessment of screening
40 performance (including the likelihood and implication of false positive diagnoses), and cost
41 effectiveness analysis.

42 Rather, the clinical question that motivated our work was simple: if we are to implement
43 universal third-trimester ultrasound, for the usual aim of detecting growth abnormalities, how
44 often will we be faced with the scenario of finding an abnormality late in pregnancy? And what
45 type of abnormalities will we find? The answer is that, in pregnant populations with previous
46 screening, a previously unrecognised congenital abnormality will be found at a routine third-
47 trimester scan in 3.68 (95% CI 2.72–4.78) per 1000 scans. This was higher in the pooled
48 analysis of the seven studies whose protocol was to undertake a repeat anomaly scan (4.20,

3.81–4.61 per 1000 scans) compared to the two studies that specifically undertook only a growth scan (2.76, 1.91–3.75 per 1000 scans). Renal pelvic dilatation and other genitourinary anomalies, ventriculomegaly and other brain anomalies and cardiac defects were the most commonly detected anomalies. This information is useful for pre-test counselling of mothers who are having a "growth scan"; for sonologists undertaking such scans; and for those leading centres and health systems to help plan appropriate referral pathways when offering routine third-trimester ultrasound.

Disclosures

ATP is a Senior Advisor of Intelligent Ultrasound. All authors declare no competing interests.

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