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Revisiting Decreased Fetal Movements After 28 Weeks Gestation—An Important Obstetric Symptom and Surrogate Associated With Placental Insufficiency

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Decreased fetal movements (DFM) as a symptom reported by expectant mothers raises alarm bells in obstetricians and midwives as a possible harbinger of that most dreaded of adverse outcomes, stillbirth. While there is no shortage of guidelines on dealing with DFM, there is a lack of consensus among professional bodies regarding its appropriate management. Even the high-quality AFFIRM study[1] assessing the impact of a clinical guideline and written information for women failed to demonstrate a statistically significant reduction in stillbirth rates from 24 weeks gestation, in spite of the increased intervention rates of induction of labor, cesarean delivery, and preterm birth.

The study by Turner et al[2] is a welcome and interesting addition shedding new light on an already crowded field populated by many studies of low grading of evidence addressing DFM. A retrospective analysis of more than 100 000 women in Australia's largest tertiary-level maternity hospital spanning 11 years, the study by Turner et al[2] showed that DFM, when managed according to a clear management algorithm, was not associated with an increased risk of stillbirth. However, there was a significant association with fetuses who were small for gestational age and a composite of severe adverse perinatal outcomes, including stillbirth and neonatal death, as well as increased rates of early term births and operative deliveries. Moreover, women with 2 or more recurrent presentations of DFM had increased odds of stillbirth.[2]

Of note is the observation that the absolute number of women reporting DFM increased steadily throughout the 11 years of the study period. Interestingly, there was no corresponding increased rate of stillbirth.[2] Partly attributed to increased awareness among women about reporting DFM, another key factor cited by Turner et al[2] was the implementation of a clear management guideline incorporating the use of electronic fetal monitoring, which in 2016 was further augmented by a Kleihauer Betke test and ultrasonographic assessment of fetal growth and well-being. However, it is worth pointing out that Turner et al[2] excluded 33 maternal reports of DFM for which a confirmed intrauterine death was subsequently found from their analysis. The authors argue that in these cases, DFM is a symptom of fetal demise, a fait accompli; hence, their inclusion would overemphasize any association with stillbirths, which could perhaps explain the contrarian results found in earlier studies investigating DFM and stillbirth.[2]

The most important finding from this paper is the association of DFM with the birth of an infant who is small for their gestational age, with the symptom of DFM being a reflection of the fetal response to a hypoxic milieu generated by placental dysfunction. The inclusion of a considered ultrasonographic fetal growth and well-being assessment into their clinical algorithm after 2016 reflects this thinking and indeed should lead clinicians to review their existing protocols managing DFM to consider including this additional assessment. The use of ultrasonographic assessment is hardly novel; the 2011 Royal College of Obstetricians and Gynaecologists Green-top Guideline[3] on managing reduced fetal movements already has as a level B recommendation that ultrasonographic assessment be included in the preliminary assessment of reduced fetal movements after 28 weeks gestation, even in the presence of a normal cardiotocograph if DFM persists or if there are other risk factors for SGA and stillbirth. The guideline[3] cites a large Scandinavian study[4] in which ultrasonographic assessments were performed in 94% of mothers reporting DFM and in whom ultrasonographic anomalies were found in 11.6%. The increased rate of pathological fetal cardiotocography, meconium-stained liquor, and operative delivery, including emergency cesarean

delivery, for presumed fetal compromise found by Turner et al[2] in women reporting DFM, as well as the association with a composite of severe adverse perinatal outcomes, lend further strength to the hypothesis of underlying placental dysfunction.

It is also important that we do not mistakenly infer from the conclusions by Turner et al[2] that DFM was not associated with an increased stillbirth rate that we may henceforth lower our guard. That this study was conducted in a tertiary center with adherence to a clear clinical guideline are crucial caveats that prevent generalizability to DFM in other settings. The price to pay for not having an increased stillbirth rate is the increased intervention rate that comes with an algorithm looking specifically for evidence of placental insufficiency. The association of DFM with fetuses who were small for their gestational age, which was in turn associated with placental insufficiency, and having a targeted clinical algorithm in place to identify mothers at risk and subsequently flagging them for timely iatrogenic delivery may explain the observed stillbirth rate not being increased. Indeed, this arguably brings us full circle back to what all organizations and guidelines concerned with stillbirth prevention have always advised: that DFM is a symptom that women should report and clinicians should investigate, especially if recurrent. A case of the more things change, the more they stay the same.

ARTICLE INFORMATION

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