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RESEARCH

Emotional Effect of the Loss of One or Both Fetuses in a Monochorionic Twin Pregnancy

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ABSTRACT

Objective: To examine the psychological effect on women of the loss of one or both fetuses during a monochorionic twin pregnancy and to identify associated protective and risk factors.

Design: Descriptive, cross-sectional, correlational study.

Setting: Maternity unit of the Vall d'Hebron University Hospital in Barcelona, Spain.

Participants: Twenty-eight White Spanish women who lost one or both fetuses during a monochorionic twin pregnancy.

Methods: In an individual interview with each participant, we collected sociodemographic information, psychiatric history, and clinical data regarding the pregnancy. Participants also completed the following questionnaires: Spanish Short Version of the Perinatal Grief Scale, Impact of Event Scale–Revised, Beck Depression Inventory, and the State–Trait Anxiety Inventory.

Results: Greater levels of grief after fetal loss during a monochorionic twin pregnancy were associated with increased symptoms of depression, anxiety, and posttraumatic stress. The intensity of grief did not depend on the number of weeks of pregnancy at which the loss occurred, a history of miscarriage, the survival of one of the twins, the presence of living children, or any of the sociodemographic variables considered.

Conclusion: Fetal loss in a monochorionic twin pregnancy has a considerable emotional effect and leaves the mother vulnerable to psychological problems. The survival of one of the twins or the presence of living children is no guarantee that the grieving mother's mental health will be less affected.

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Approximately 20% to 25% of all twin pregnancies are *monochorionic,* which means that the fetuses share the same placenta. If abnormal blood vessel connections form in the placenta, blood may flow disproportionately from one twin to the other, resulting in severe complications associated with greater morbidity and mortality. The most common complications are twin-to-twin transfusion syndrome and selective intrauterine growth restriction, which, unless treated, will likely lead to the death of one or both fetuses (Carreras et al., 2012; Ruano et al., 2013).

When complications arise in a monochorionic gestation, fetal surgery can enable at least one of the fetuses to survive in 80% to 90% of cases or both fetuses in 52% to 75% of cases, although there is a risk of neurologic impairment in 3% to 5% of neonates who survive treatment (Akkermans et al., 2015). There also is a risk of spontaneous preterm birth, immature birth before 24 weeks gestation (considered the limit of viability in our setting), or premature birth at 24 to 37 completed weeks gestation. The rate of prematurity in twin gestation is fivefold greater than in singleton pregnancies (Goldenberg, Culhane, Iams, & Romero, 2008).

The death of a child is one of the most distressing and traumatic psychological events a woman may experience. When such a loss occurs during pregnancy, it takes on particular connotations because the woman's identity, hopes, and expectations about future parenting are interrupted by multiple losses: the loss of a normal pregnancy, of a healthy newborn, and of future parenting (Beauquier-Maccotta et al., 2016; Bennett, Ehrenreich-May, Litz, Boisseau,

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Perinatal loss can have an enormous psychological effect on women and leave them vulnerable to psychological problems.

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& Barlow, 2012). Consequently, the grief associated with such a loss also has particular characteristics that make it an especially complex experience. However, this kind of grief is often dismissed, ignored, or underplayed. In many cases it will be neither publicly expressed nor socially recognized, and cultural rituals that usually form part of the grieving process, such as funerals, are not conducted by most families who experience a perinatal loss (Kersting & Wagner, 2012). Together, these factors can make it difficult to work through the grieving process, and the mother may require professional help to prevent complicated grief and the emergence of psychological disorders or to treat any such problems that she is already experiencing (Ellis et al., 2016; Hutti, Armstrong, Myers, & Hall, 2015; Lisy, Peters, Riitano, Jordan, & Aromataris, 2016).

Researchers found that the intensity of grief after perinatal loss was not related to whether one fetus in a multiple pregnancy survived (McGrath, Butt, & Samra, 2011; Richards, Graham, Embleton, Campbell, & Rankin, 2015). In fact, grief may be more intense among mothers who lose fetuses in a multiple pregnancy than in those who lose singletons (McGrath et al., 2011; Swanson, Kane, Pearsall-Jones, Swanson, & Croft, 2009; Swanson, Pearsall-Jones, & Hay, 2002). Research findings are inconsistent about the influence of having living children before the perinatal loss on maternal grief. Some findings indicated that childlessness confers vulnerability to psychological problems after pregnancy loss (Burden et al., 2016; McSpedden, Mullan, Sharpe, Breen, & Lobb, 2017), whereas other findings did not support an association between these two factors (Swanson et al., 2002). Research is also inconclusive with regard to the effect of previous miscarriage. Although the weight of evidence suggested that women who previously lost fetuses were more likely to develop anxiety and depression symptoms (McCarthy et al., 2015), some authors found no relationship between these variables (Bennett, Litz, Maguen, & Ehrenreich, 2008). Consensus is also lacking about the effect of gestational age at the time of fetal loss on psychological symptoms.

Although some authors found that fetal loss at an advanced stage of pregnancy was associated with greater levels of distress and grief than when a fetus dies at earlier stages (Burden et al., 2016; Lasker & Toedter, 1991), other researchers found no relationship between psychological distress and gestational age (Bennett et al., 2008; Kersting & Wagner, 2012). The mother's previous mental health and personality characteristics were identified as vulnerability factors with respect to psychological problems after the loss of a fetus. Kersting and Wagner (2012) noted that neurotic personality traits and a history of psychological and/or psychiatric problems were reported to predict an intense grief reaction after such a loss. However, sociodemographic factors such as maternal age have not been associated with the intensity of grief after fetal loss (Hutti et al., 2017; McSpedden et al., 2017).

There is broad research consensus on the association between the availability of social and/or family support and the ability to effectively process grief (Kersting & Wagner, 2012). Indeed, acknowledgment by the social and family network of the loss and validation of the emotions it has generated can play key roles during the mourning process (Burden et al., 2016). However, as already noted, the experience of perinatal grief is often dismissed, ignored, or underplayed; it is neither publicly expressed nor socially recognized (Heazell et al., 2016; Pastor, 2016). For instance, when one fetus in a monochorionic twin pregnancy survives, it may be falsely assumed that the mother's mental and emotional health will be less affected than if neither survives. As attention becomes focused on the well-being of the surviving twin, the lost twin may easily be forgotten within the mother's family and social context, and friends and relatives may treat the pregnancy as if it were a singleton gestation from the onset. This denial of the reality of loss can make it more difficult for the mother to work through her grief and to develop an adequate bond with the surviving newborn (McGrath et al., 2011; Richards et al., 2015).

When a fetus dies during a multiple pregnancy, grief, including feelings of anxiety and depression, is a common and normal response that generally diminishes after a year or so. However, the aforementioned factors and the inherently complex nature of such an event mean that this grief often becomes complicated and chronic, and the symptoms of anxiety and depression may persist and reach levels that indicate a