

Obstetric outcomes in pregnancies following a stillbirth: a retrospective, multicentre, observational study

Camilla Selleri¹, Martina Benuzzi¹, Antonio Saddò¹, Sara Verra¹, Gloria Guariglia¹, Beatrice Melis¹, Silvia Cozzolino², Silvia Alongi², Paola Camponovo², Laura Avagliano³, Anna Locatelli², Benedetta Baggio⁴, Benedetta Gabrielli⁴, Caterina Serena⁵, Ariane Jeanne Odette Kiener⁶, Stefania Fieni⁶, Fabio Facchinetti¹, Isabella Neri¹, Antonio La Marca¹, Francesca Monari¹

¹Obstetrics and Gynecology Unit, Mother-Infant and Adult Department of Medical and Surgical Sciences, University of Modena and Reggio Emilia, Modena, Italy.

²Obstetrics and Gynecology Unit, Fondazione IRCCS San Gerardo dei Tintori, Monza, Italy.

³Obstetrics and Gynecology Unit, University of Milan, Milan, Italy.

⁴Obstetrics and Gynecology Unit, Department of Experimental and Clinical Biomedical Sciences, University of Florence, Florence, Italy.

⁵High Risk Pregnancy Unit, Department for Women and Children Health, Azienda Ospedaliero Universitaria Careggi, Florence, Italy.

⁶Obstetrics and Gynecology Unit, Mother-Infant and Adult Department, University of Parma, Parma, Italy.

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Objective. To evaluate outcomes of pregnancies occurred after stillbirth (SB > 22 weeks) in the previous pregnancy in relation to different treatments prescribed.

Materials and Methods. A retrospective, observational, multicentre study was conducted between 2014 and 2022 in 4 Italian University Hospitals. The main outcome was adverse neonatal outcome (ANO), including perinatal death, foetal growth restriction, APGAR < 7 at 5' and need of resuscitation. The secondary outcome was adverse maternal outcome (AMO), including postpartum haemorrhage, emergency C-sections and operative vaginal delivery. Causes of SB were classified according to RE.CO.DE after extensive investigations. Outcomes of subsequent pregnancies were stratified according to the cause of previous death and type of treatments prescribed in the subsequent pregnancies *i.e.*, low dose

aspirin (LDA) and/or low molecular weight heparin (LMWH).

Results. Out of 321 babies, 52 (16.2%) had an ANO, including 4 SB, and 84 (26.1%) an AMO. Analysing the effects of the therapies, we did not observe differences in ANO or AMO, except for cases where maternal vascular malperfusion was the cause of previous foetal death. In these cases, LDA+LMWH reduces the risk of ANO (OR 0.22; 95%CI 0.05-0.95; $p = 0.042$). In all other conditions (*i.e.*, unexplained SB, infection), LDA+LMWH did not improve the outcomes and, sometimes, was associated with worse effects.

Conclusions. Administration of therapy in pregnancies after previous SB should follow a rigorous investigation of the cause of death. To avoid any side effects, LDA and/or LMWH should be prescribed only in cases with evidence of vascular abnormalities as cause of death.