Cancer and pregnancy: an overview for obstetricians and gynecologists

TO THE EDITORS: We read with great interest the recent article by Salani et al[1] regarding the overview of management of cancer during pregnancy. We agree with the authors that some anticancer agents may be used with minimal risk for the fetus in the second and third trimester of pregnancy.[1] However, we disagree with the authors when they assume that platinum may be particularly used with minimal fetal consequences. Indeed, even if some ex vivo experiments have demonstrated a moderate transplacental transfer,[2,3] in vivo data are not fully reassuring and long-term follow-up is lacking. Of note, several clinical reports have evidenced a significant transplacental transfer of cisplatin. For example, the presence of cisplatin was detected in umbilical cord blood of neonates exposed to cisplatin during pregnancy.[4,5] Other reports evidenced the presence of DNA adducts in amniotic fluid, placental tissues, cord blood, and maternal blood (at delivery) following cisplatin and carboplatin adminitrations.[6,7] In addition, Marnitz et al[8] evidenced relatively high concentrations of cisplatin in amniotic fluid (10% of maternal concentration) in a twin pregnancy. At delivery, amniotic fluid concentrations of cisplatin were roughly one third of cord blood concentrations of the 2 neonates.[8]

Thus, given the lack of alternative anticancer agents in ovarian and cervical cancers, platinum is often used, but physicians have to handle these drugs with care, given the lack of long-term pediatric follow-up and given several recent concerns regarding their use during pregnancy.[9] Hence, recommendations from a very recent international experts meeting stated that renal and liver functions assessment, associated with an evaluation of neuropathy/ototoxicity should be performed during childhood for platinum-exposed fetuses.[10]

Besides, we strongly disagree with Salani et al[1] when they assume that cyclophosphamide leads to major risks for exposed neonates. Thus, cyclophosphamide is now widely used during the second and third trimesters of pregnancy, and recent data, including long-term follow-up,[11,12] have indicated that the safety profile seemed to be very acceptable.

Finally, we would like to pinpoint that other anticancer agents such as trastuzumab, widely used in nonpregnant women, have to be avoided during pregnancy given their potential adverse fetal outcomes.[12]

We believe that physicians should be aware of these practice-guiding data. Additional clinical reports are warranted to better delineate the optimal use of anticancer agents during pregnancy. ■

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Dr Mir reports having served as a board member for Roche and Pfizer and as consultant for Roche, Pfizer, Bayer, Servier, and Novartis. No other potential conflict of interest relevant to this letter was reported.

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