Postpartum Anemia - Still a Major Problem on a Global Scale

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Postpartum (PP) anemia is a persistent and serious problem in many parts of the World, being frequent in developing countries and still being an important issue in developed countries, despite recommended prophylactic/therapeutic recommendations by the World Health Organization (WHO) [1] and national health authorities and obstetric societies [2]. There is no consensus on the definition of PP anemia, due to lack of prospective studies, but so far the WHO hemoglobin cut-off value of <100 g/L has been employed. In the vast majority of women, PP anemia is basically classified as an anemia due to iron deficiency, although in few women other causes may also apply.

There are two main causes involved in the development of PP anemia - the first is the iron status of the pregnant woman prior to delivery and the second is the magnitude of the peripartum blood losses [3]. A poor prepartum iron status with depleted iron reserves, iron deficiency (serum ferritin <15-20 µg/L) or even iron deficiency anemia will definitely pave the road for subsequent PP anemia - considering the inevitable blood losses associated with delivery. PP hemorrhage with high blood losses exceeding 500 ml will likewise predispose to subsequent anemia (anaemia due to acute bleeding) even though iron status may appear adequate.

The frequency of PP anemia is poorly elucidated. There is a lack of randomized, prospective studies addressing this issue even in developed countries. It is evident that in developing countries with a high frequency of prepartum iron deficiency anemia, e.g., in South East Asia [4] having a frequency of more than 40% in third trimester, the frequency of PP anemia will be even higher, probably about 50-60%. So in developing countries the overall frequency is high, 50-80%. In small selected series in developed countries the frequency of anemia 24-48 hours after delivery is ranging from 22 to 50%. A retrospective study from Germany reported that PP anemia occurs with a high frequency of 22% [5].

The consequences and side-effects of PP anemia all have a negative influence on the quality of life and well-being especially of the mother, but also on her baby and on the interactive mother-baby relationship. The physical consequences of PP anemia on the mother are those of iron deficiency anemia in general - such as fatigue, decreased physical working capacity, shortness of breath at exercise, increased heart rate, dizziness, impaired function of epithelial tissues, impaired endocrine function, impaired regulation of temperature, increased frequency of infections, restless legs, etc. [3]. An important issue is that PP anemia impairs lactation and thus the natural physiological nutrition of the baby [6]. The psychical and behavioural consequences comprise impaired cognitive functions, increased frequency of instability, irritability, distress, dysphoria and postpartum depression [7]. Furthermore, PP anemia impairs mother-infant interactions [8]. Anemic mothers are less responsive and less controlling of their infants - and their response is improved following treatment with iron. In addition, infants of anemic mothers are developmentally delayed 9 months after birth.

The best way to avoid PP anemia is to institute an effective iron prophylaxis. Implement measures to avoid iron deficiency and iron deficiency anemia during pregnancy, ensuring that iron status at delivery will be adequate to prevent PP anemia when blood losses are within normal range [9]. Likewise, obstetric measures should be taken to reduce the frequency of PP hemorrhage and ensure that adequate medical treatment (methylene, oxytocin, misoprostol) and surgical treatment to reduce/stop bleeding can be available [1].

PP anemia should be treated promptly in order to improve the quality of life for both mother and child as soon as possible during the “precious time” PP period. At low-grade anemia, high-dose oral iron may be sufficient; importantly, the efficiency should be checked by measuring the increase in hemoglobin after two weeks of treatment. If not efficient, oral iron should be replaced by intravenous iron. At medium-grade and severe anemia, intravenous iron with third generation iron formulas (total dose infusion) should be considered to obtain a fast and sustainable effect.

Future perspectives should include increased awareness to prevent and diagnose PP anemia including screening of women at risk. Assessment of iron status (hemoglobin, ferritin) prior to delivery will help to define women at risk for PP iron deficiency and anemia. Measurement of hemoglobin 24-48 hours after delivery will delineate women with anemia who are in need of treatment with iron.

References


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