

Keywords:

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Vaginal deliveries occurred in 198 anemic women (93.4%) pregnant women. This rate is a bit lower than that of 8.6% reported by some authors [7]. as against 186 (87.7%) in non-anemic women. The indications for emergency cesarean section in the anemic group were cephalopelvic disproportion (CPD) (6 cases), acute fetal distress (AFD) (4 cases), severe pre-eclampsia and placenta praevia (one case each). Mean gestational age at delivery was similar amongst anemic and non-anemic pregnant women ($P=0.07$), but anemic pregnant women were more at risk for premature deliveries (RR 3, 95%CI 0.6-14.6), though the difference was not statistically significant. The indications for emergency CS in the anemic group were CPD (7 cases), AFD (5 cases), placenta praevia (3 cases) and placenta abruptio (one case). The indications for elective CS were scarred uterus in the anemic group (2 cases), while in the non-anemic group, the indications were scarred uterus (7 cases) and praevia myoma (2 cases). This stress stimulates the synthesis

Main indications for episiotomy were imminent perineal tears and instrumental delivery while those for instrumental deliveries were mainly prolonged second stage of labor and poor maternal compliance when pushing.

Birth weight distribution among both groups is shown in Table 3. In relation to fetal sex, mean birth weight for boys was 3427.6 ± 533.1 g among initially anemic pregnant women ($n=101$) as against 3304.6 ± 359 g among non-anemic pregnant women ($n=99$) ($P=0.006$), while mean birth weight for girls was 3237.1 ± 444.2 g among initially anemic pregnant women ($n=111$) as compared to 3189.6 ± 289.5 g among non-anemic pregnant women ($n=113$) ($P=0.013$).

Among women who were anemic at booking, mean birth weight of babies delivered by women ($n=18$) whose 36 weeks Hb <9 g/dl was 2742.1 ± 585 g as against 3439.6 ± 439.9 g for babies delivered by women ($n=170$) whose 36 weeks Hb ≥ 10 g/dl ($P<0.0001$). Mean birth weight of babies delivered by women ($n=18$) whose 36 weeks Hb <9 g/dl was lower than that of babies delivered by women of the non-anemic group (Hb ≥ 11 g/dl) (2742.1 ± 585.1 g vs 3243.5 ± 328.2 g, $P=0.002$).

Mean birth weight of babies delivered by initially anemic women ($n=170$) whose 36 weeks Hb ≥ 10 g/dl was higher (3439.6 ± 439.9 g) than that of babies delivered by women of the non-anemic group (3243.5 ± 328.2 g) ($P<0.0001$).

Placental weights varied between 225 and 820 g with a mean of 499.7 ± 101.4 g among anemic pregnant women as against a range of 301 to 520 g with a mean of 408.5 ± 45.2 g among non-anemic pregnant women ($P<0.0001$). No maternal death was observed during the study period.

Discussion

Hb concentration <10 g/dl was observed in 5.66% of our anemic

episiotomies and instrumental deliveries have already been noticed by some authors especially when booking Hb was <7.5 g/dl [6].

Mean birth weight was significantly increased among the initially anemic pregnant women ($P=0.039$), with a difference in mean of 85 g. This was observed among both male fetuses ($P=0.006$), and female fetuses ($P=0.013$). This increase in birth weight can be explained by the increased placental weight observed among initially anemic women. The placenta is the organ through which there is transfer of nutrients and oxygen to the fetus [18,19]. This transfer is maximized when the placenta is well developed. This transfer of nutrients is associated with an increased transfer of oxygen, when anemia has been corrected. A maximum transfer of nutrients is associated with an increased fetal growth, hence, with an increased birth weight, as observed in pregnancies complicated by gestational diabetes [19]. Moreover, higher doses of iron and folic acid in our study, as observed in the anemic group, might have led to rapid correction of anemia in some cases and, therefore, increased birth weight. The increase in mean birth weight among the anemic pregnant women who received iron during pregnancy has been documented by others [20-22].

Nevertheless, there was an increased risk of LBW (RR 7, 95%CI 1.6-30.4, $P=0.003$) among anemic pregnant women, especially when Hb was <9g/dl at 36 weeks gestation, as observed elsewhere [4,9,10]. This might be explained by the fact that, despite the increased placental weight, anemia was so severe that the oxygen transfer to the fetus was limited. Indeed, some researchers think that low birth weight observed among anemic women might be due to decreased oxygen supplementation to the fetus [23]. Women with Hb <9g/dl should either be transfused or receive parenteral iron for a rapid correction of the Hb concentration [24], before 32 weeks for instance, to improve fetal growth. More studies should be carried out to confirm this.

Conclusion

Anemia corrected before term with iron and folic acid was associated with a significant increase in birth weight. Hb still <9g/dl at 36 weeks gestation was associated with an increased risk of LBW. At Hb 9g/dl there were few fetal and maternal complications observed. Nevertheless, we should not allow women to have Hb <10 g/dl at term, since studies have shown that anemic women are at a higher risk of dying from post partum hemorrhage [10].

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