Impact of Late Prenatal Care on Anemia Prevalence and SGA Outcomes

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Introduction

- Inadequate prenatal care is associated with an increased risk of adverse maternal and neonatal outcomes due to the potential delays in identifying and addressing pregnancy complications during routine prenatal visits.
- Anemia is a common laboratory finding that is detected during prenatal screenings.
- However, without adequate prenatal care, anemia may be undiagnosed and untreated, leading to complications such as small for gestational age (SGA) infants.
- Therefore, when patients establish prenatal care late in pregnancy, the early detection and management of conditions such as anemia is essential to reduce the risks associated with SGA and ensure optimal maternal and fetal health outcomes.

Methods

- A retrospective cohort study was implemented to investigate deliveries at Touro Infirmary from 2018- 2021.
- Hemoglobin and hematocrit levels were recorded upon presentation to establish prenatal care and at admission for delivery.
- Late prenatal care was defined as intake into prenatal care after 26 weeks of gestation.
- Anemia was defined as a hemoglobin level of ≤10.5 g/dL.
- SGA was classified by neonatal birth weight <10% for gestational age.
- Descriptive statistics were employed.

Objectives

1. Quantify the prevalence of anemia in a cohort of women presenting to establish late prenatal care after 26 weeks of gestation.
2. Investigate the rate of SGA outcomes in anemic patients.
3. Determine if the treatment of anemia during the third trimester of pregnancy effects neonatal birthweight.

Results

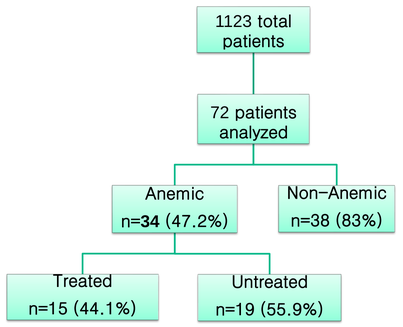

Figure 1 – Study population
This flowchart illustrates a breakdown of the population used for this study. The patient population was firstly divided into an anemic and non-anemic group. The anemic group was further divided based on whether the patients were treated or untreated for anemia. The treated anemic, untreated anemic, and non-anemic groups were compared.

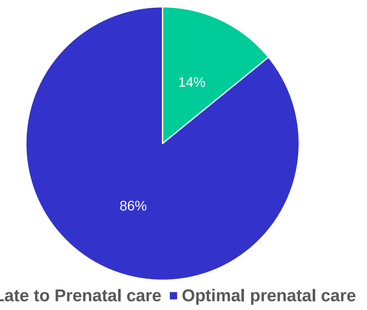

Figure 2 – Prevalence of late prenatal care
This chart illustrates the percentage of patients that presented to establish late prenatal care versus optimal prenatal care.

	LPC	OPC
Age	29	30
Parity	2.8	3.6
Government Insurance	69.8%	82.9%

Table 1 – Demographics of anemic patients
The table illustrates the average age, average parity, and the percentage of patients that have government insurance for the late prenatal care versus the optimal prenatal care group.

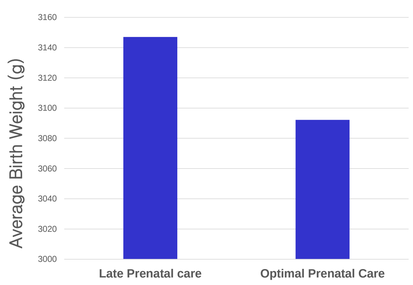

Figure 3 – Average birth weights
Comparison of the average birth weights between patients with late prenatal care and optimal prenatal care.

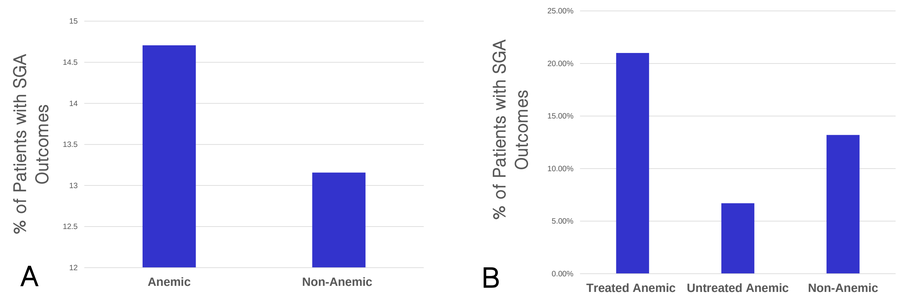

Figure 4 – Prevalence of SGA outcomes among late prenatal care patient groups
(A) Comparison of the prevalence of SGA outcomes between the anemic and non-anemic group.
(B) Comparison of the prevalence of SGA outcomes between the non-anemic, untreated anemic, and treated anemic group.

Discussion

- 1123 total charts were reviewed. Of these, 72 patients had hemoglobin and hematocrit levels collected initially for prenatal care after 26 weeks of gestation and at the time of delivery.
- Average hemoglobin at intake into prenatal care was 10.6, and the average hemoglobin at the time of delivery was 11.5.
- 47.2% patients (n=34) were anemic upon intake into prenatal care. There were similar rates of SGA neonatal outcomes between the anemic and non-anemic patients, at 14.7% and 13.2%, respectively.
- Interestingly, patients that were initially anemic upon intake to prenatal care and were treated by the time of delivery had poorer SGA outcomes (21%).
- Conversely, patients with untreated anemia had better SGA outcomes (6.7%) than patients with treated anemia and patients without anemia.

Conclusion

- This study highlights a high prevalence of anemia in this population of patients at Touro Infirmary.
- We will continue to gather data to further investigate the efficacy of anemia management during the third trimester and the impact of anemia on SGA outcomes.

Future Considerations

- We will continue to collect data to increase the sample size.
- Further investigation of additional risk factors that effect SGA outcomes in this patient population.
- Which anemia treatments are patients being recommended (PO iron versus IV iron)? How does this affect patient adherence to treatment?