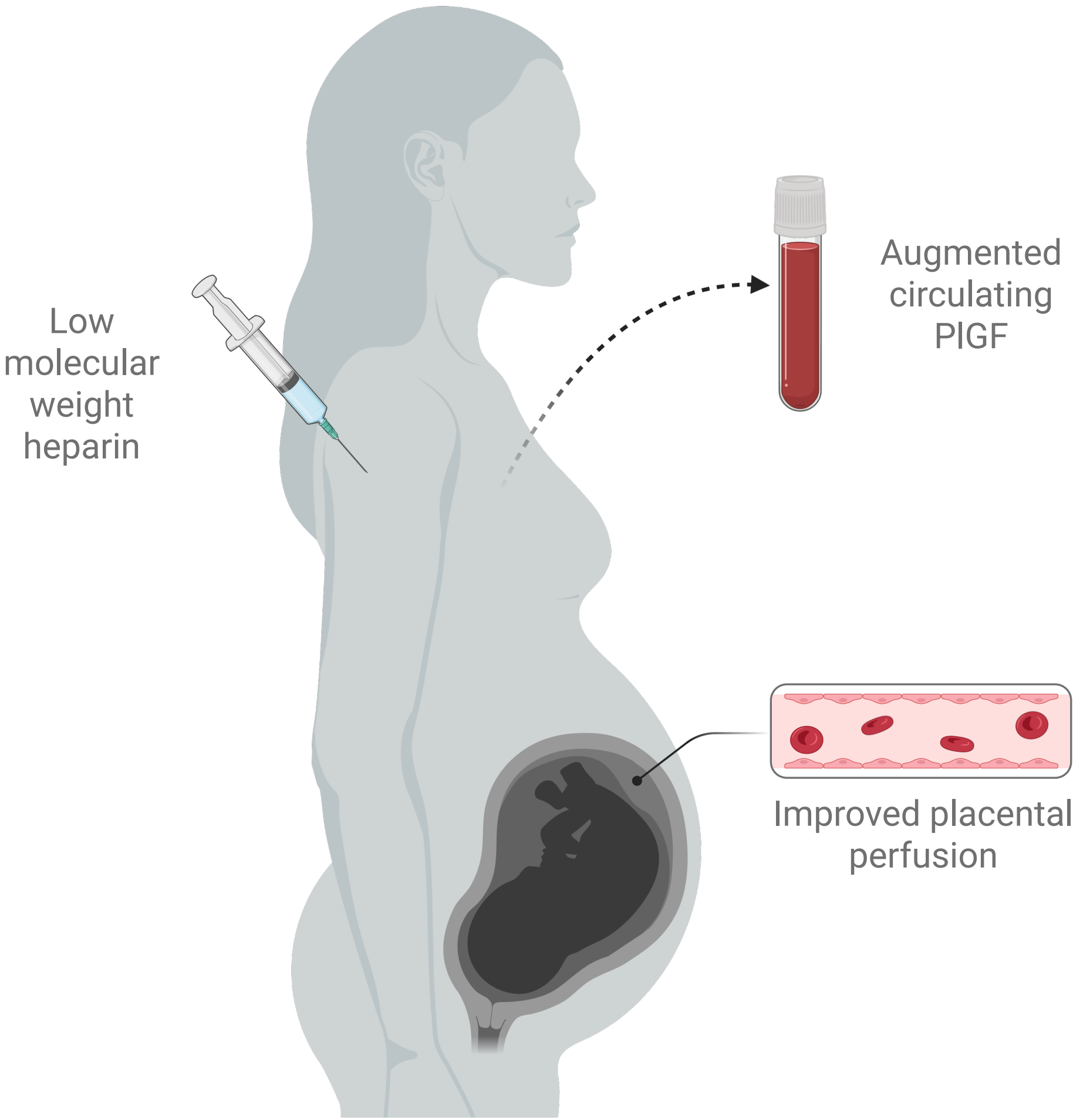


Low Molecular Weight Heparin (LMWH) on Preterm Birth (PTB) and Pre-eclampsia (PET) in patients with fetal growth restriction and placental dysfunction

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Antenatal use of **LMWH** appears to **reduce the risk** of preterm birth before 37 weeks and the onset of preeclampsia in patients with **fetal growth restriction and low PIGF levels**.



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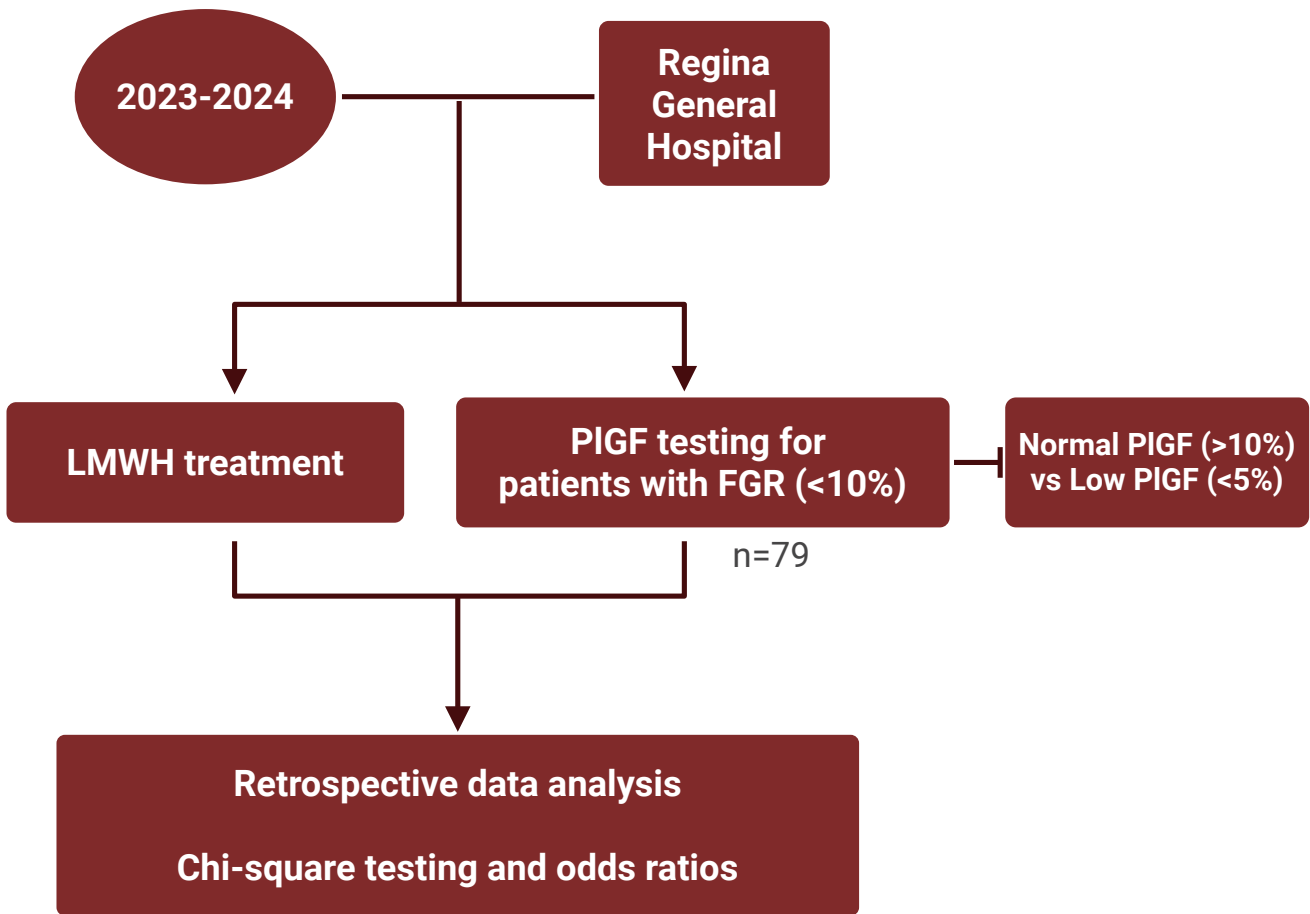


INTRO / BACKGROUND

- Preeclampsia and preterm birth are complications associated with placental dysfunction.
- Conditions related to placental dysfunction have been associated with low levels of placental growth factor (PIGF).
- LMWH is believed to augment PIGF in dysfunctional placentas with low PIGF levels (< 5%).
- The objective of this study was to evaluate the usefulness of antenatal LMWH in pregnancies with suspected placental dysfunction in growth-restricted fetuses (FGR < 10%).

METHODS

- 79 records were included in this retrospective cohort.
- The primary exposure was the use of LMWH, offered to all patients with low PIGF levels (<5%).
- The primary outcomes were PTB < 37w and the development of PET in pregnancies with FGR < 10%.
- Chi-squares (χ^2) and Odds Ratio (OR) with a 95% confidence interval (95% CI) were calculated to determine associations, significant at $p < 0.05$.



RESULTS (continued)

LMWH	Delivery > 37w	Delivery < 37w	Total	OR (CI 95%)	p
No	23	33	56	0.30 (0.09-1.00)	0.04*
Yes	4	19	23		
Total	27	52	79		

LMWH	No Preeclampsia	Preeclampsia	Total	OR (CI 95%)	p
No	41	15	56	0.33 (0.12-0.92)	0.03*
Yes	11	12	23		
Total	52	27	79		

* χ^2 with Pearson Correction

Table 1: Preterm Birth and Preeclampsia among patients with Fetal Growth Restriction (FGR < 10%) and antenatal use of Low Molecular Weight Heparin

In patients with FGR (<10%) and low PIGF (<5%):



73% lower odds of preterm birth before 37 weeks



70% lower odds of preeclampsia

CONCLUSION

- These preliminary results identified the potential protective effect of LMWH for the development of PET and the occurrence of PTB < 37w, in patients with low PIGF levels, and FGR < 10%.
- The risk of imminent preterm birth, preeclampsia and IUFD may warrant referral of patients with low PIGF levels to higher-level centers, where LMWH may be offered.
- LMWH has the potential to augment circulating maternal PIGF levels, improving perinatal outcomes.
- Further studies could explore the potential benefits in other pregnant populations.