

Labour Induction in pregnant women with GDM on diet control- An audit

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INTRODUCTION

Gestational diabetes mellitus is one of the most common obstetrical complications of pregnancy; with its prevalence varying substantially worldwide from 1.8% to more than 31.0%, which continues to increase. Glycaemic management is the main measure to reduce the occurrence of GDM complications in pregnant women. The optimal time and mode of delivery for patients with GDM is primarily based on glycaemic control. Recommendations for women with medication treated GDM are consistent across multiple clinical. However, various guidelines for diet controlled GDM do not provide clear recommendations for optimal delivery time.

AIMS AND OBJECTIVES

To identify the proportion of women undergoing untimely induction of labor for gestational diabetes mellitus on diet control.
To identify common contributors in decision involving early or late inductions.
To reduce the neonatal risks associated with early term births
To reduce the probability of failed inductions and subsequent cesarean sections associated with early inductions.

STANDARDS

As per the recommendations of NICE guidelines women with gestational diabetes should be advised to give birth no later than 40 weeks plus 6 days. Offer elective birth by induced labour or (if indicated) by caesarean section to women who have not given birth by this time.

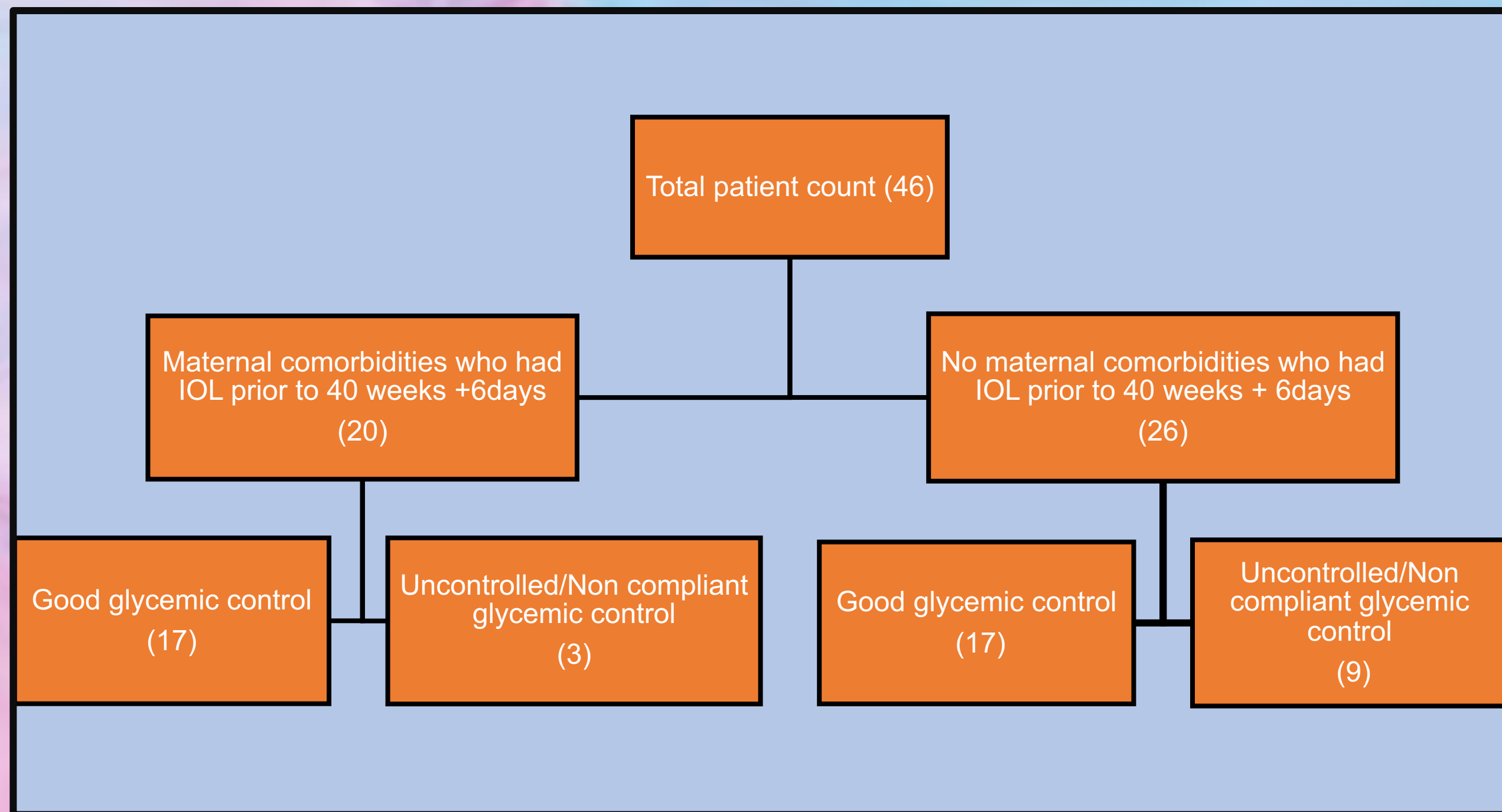
METHODOLOGY

Retrospective analysis of Data collected from electronic medical record using Cerner from 1st August 2021 –31st January 2022 in Tawam hospital.
Included 387 pregnant women who were inpatient with the diagnosis of GDM on diet control.
Exclusion: All women with type 1 and type 2 diabetes mellitus and women with gestational diabetes treated with metformin and insulin, women with previous 2 or more cesarean for elective cesarean, women coming in labor or with Spontaneous rupture of membrane.

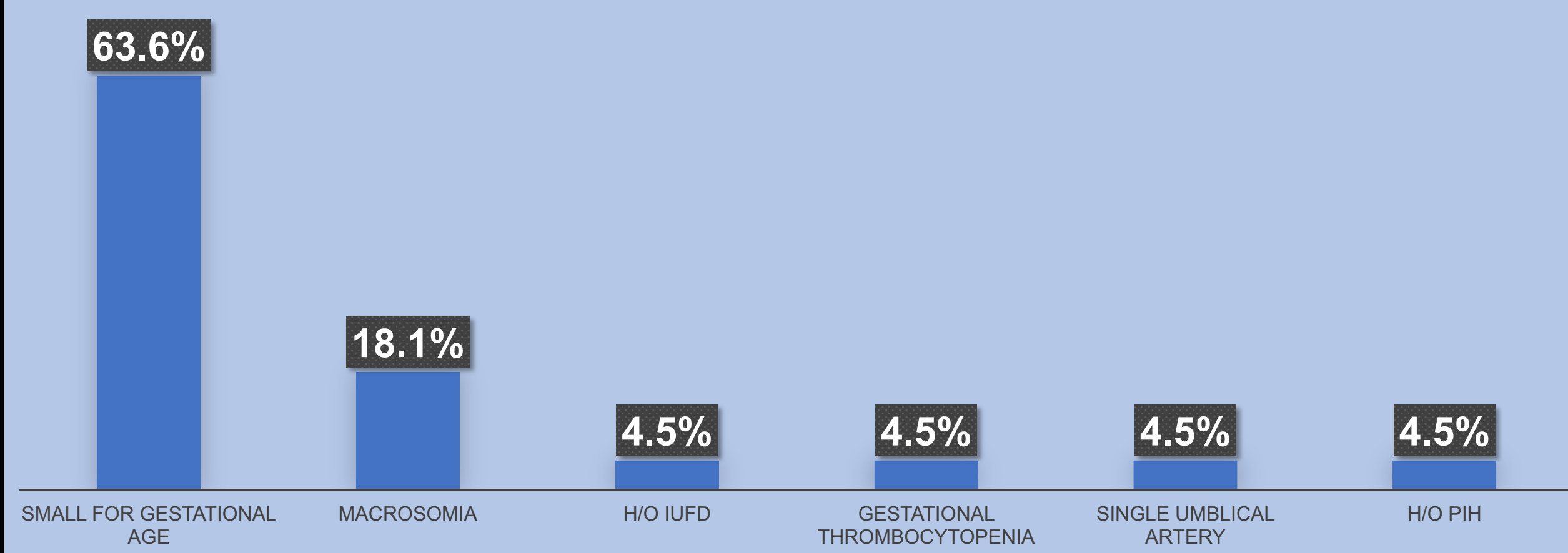
RESULTS

Our data reported a 46 out of 360 patients were solely GDM on diet control who underwent induction of labour. All of the GDM on diet patients were brought for induction of labor before 40 +6 weeks. Data analysis reveled that 20(43%) of them were GDM on diet with maternal comorbidities and 26(56%) were GDM on diet with no maternal comorbidities. Among the 26 patients ,17(65%) patients have good glycemic control, and the remaining 9(34%) were noncompliant and uncontrolled glycemic control . A 23.5% GDM on diet patients were induced before 40+6 with no maternal comorbidities who had a good glycemic control ended in cesarean section. Only 3.8% which is one patient had postpartum hemorrhage and 3(17.6 %) of the neonates required NICU admission. On the other hand, the group of GDM on diet with maternal co-morbidities, patients were brought for an earlier induction of labor were mainly for; Small for gestational age baby Macrosomia, pregnancy induced hypertension ,history of IUFD.

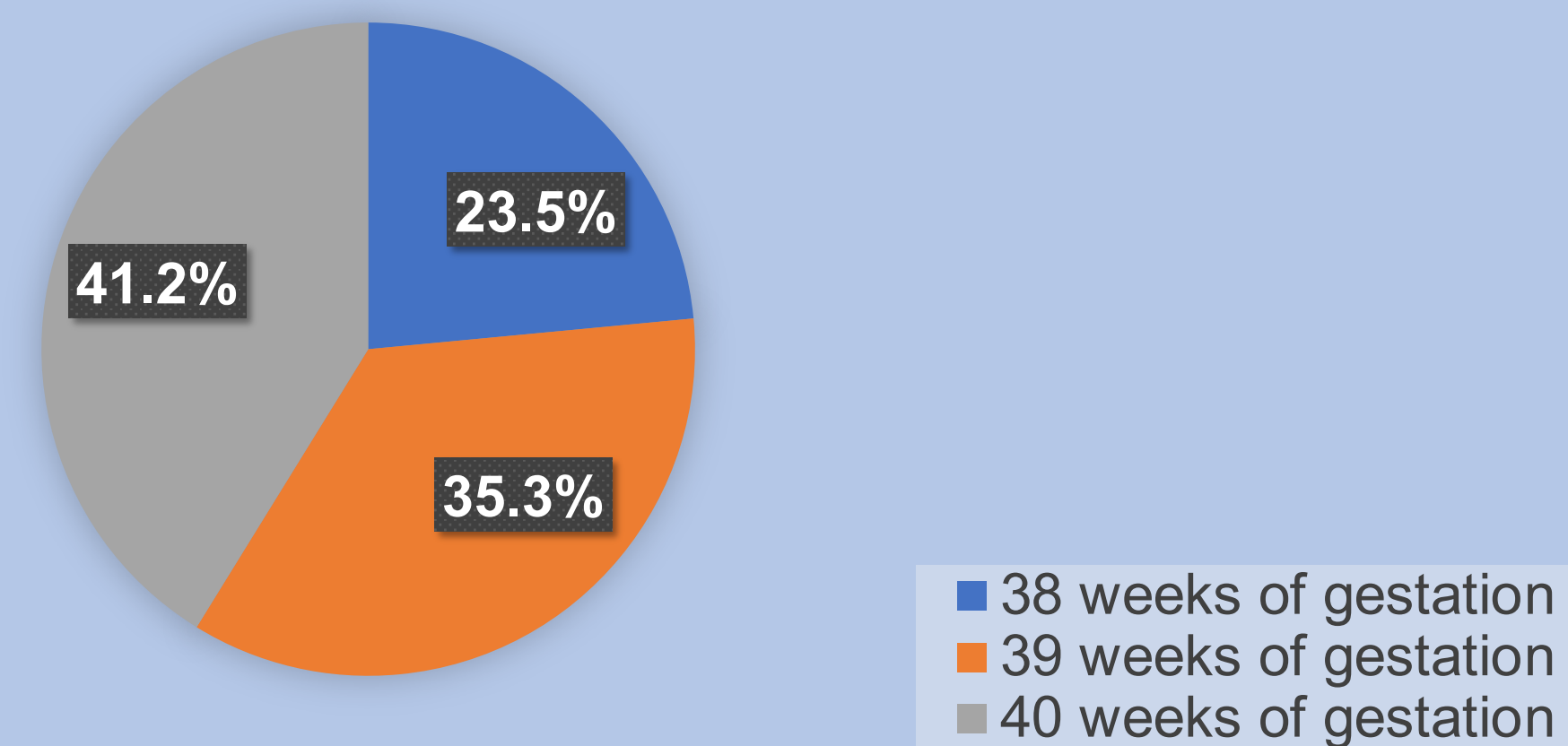
Data analysis Dashboard



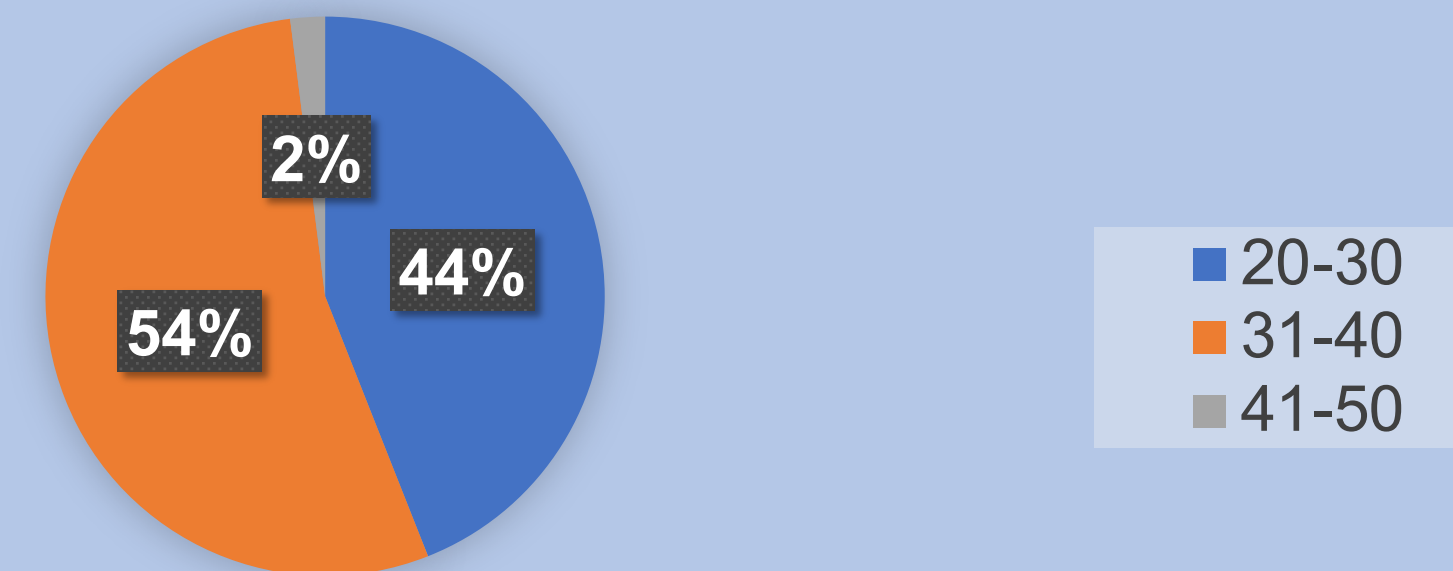
Maternal comorbidities (N- 22)



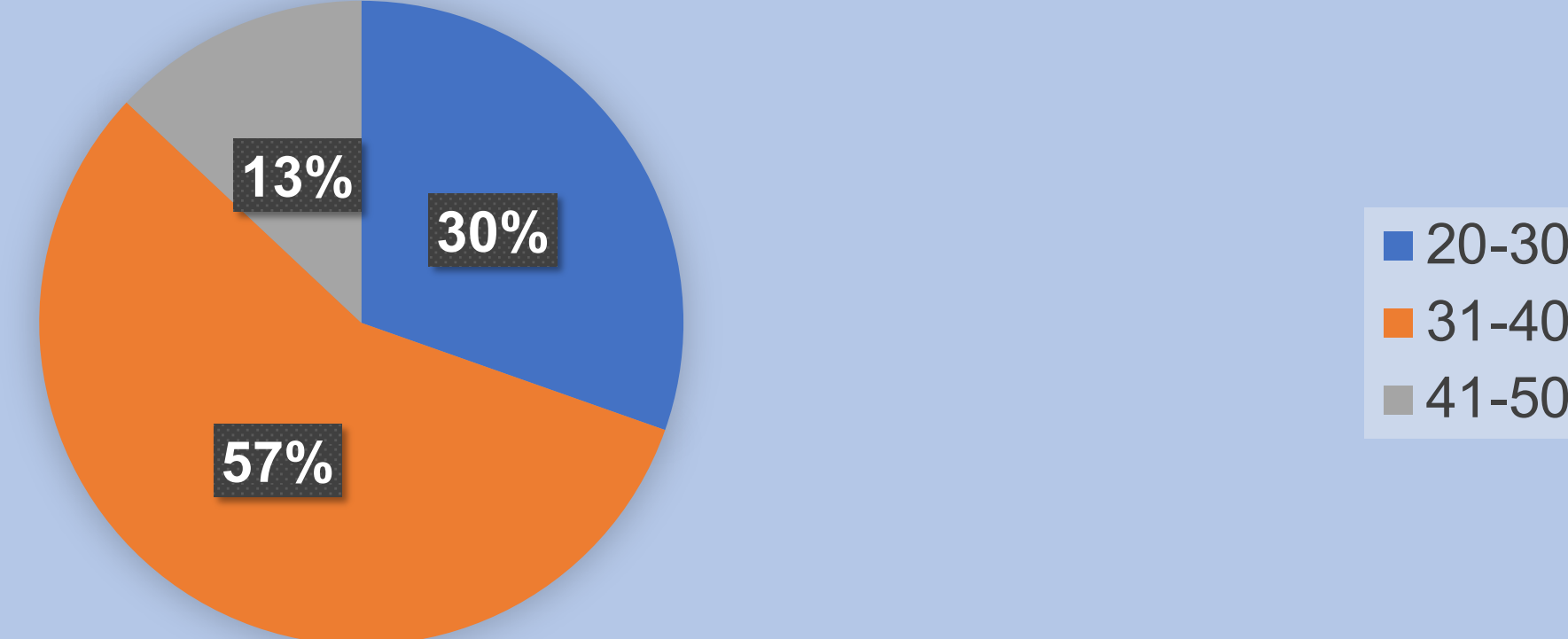
Gestational age at delivery of Women with No maternal comorbidities and Good glycemic control (N- 17)



BMI of selected patients (in Kg/m2)



Age of selected patients (In years)



DISCUSSION

All GDM on diet patients were brought in before the recommended time as per NICE for induction of labor. Guidelines suggest that commonly cited reasons: macrosomia , hypothyroidism , gestational thrombocytopenia ,single umbilical artery are not appropriate indications for early induction of labour before 39 weeks.

In a study of 719 women with diet-controlled GDM, It was observed that the best neonatal outcomes were at 40 weeks regardless of the mode of delivery. IOL at 39 weeks was inferior to expectant management due to increased risk of neonatal hypoglycemia and unfavorable trend for higher rates of cesarean section following IOL. Delaying active management to 40 weeks improved neonatal outcomes that were comparable to those of expectant management. Additionally, induction at 40 weeks was associated with lower odds of fetal macrosomia. Thus, it was concluded that in women with diet-treated GDM, the optimal time for labor induction is 40 weeks.

The Bishop score of patients should be assessed at 39–39 + 6 weeks of gestation, and for those with a Bishop score below 4, iatrogenic intervention is not recommended. Waiting for spontaneous labour is a safer choice.

CONCLUSION

To summarize , Induction of labour for women with GDM on diet ,well controlled with no bad obstetric history and having optimal fetomaternal health can be delayed upto 39 weeks and beyond. Assesment of bishop score can be done at 39 weeks 6 days ,if bishop score above four, the patient can be considered for induction of labour and if bishop score below 4 , awaiting spontaneous labour until 40 weeks 6 days is considered safe.

REFERENCES

- 1)Establishing the Optimal Time for Induction of Labor in Women with Diet-Controlled Gestational Diabetes Mellitus: A Single-Center Observational Study Patrik Šimják 1 , Hana Krejčí 1,2, Markéta Hornová 1 , Miloš Mráz 3 , Antonín Pařízek 1 , Michal Kršek 2 , Martin Haluzík 3 and Kateřina Anderlová 1,2,*Journal of clinical medicine 2022, 11, 6410
- 2)Yin, Z., Li, T., Zhou, L. *et al.* Optimal delivery time for patients with diet-controlled gestational diabetes mellitus: a single-center real-world study. *BMC Pregnancy Childbirth* 22, 356 (2022).
- 3)NICE guideline on diabetes in pregnancy –management from preconception to the postnatal period