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Audit

Audit on antenatal care of obese pregnant patients as per protocol

Farheen Khan*, Seema Bagtharia

Department of Obstetrics and Gynecology, Basildon and Thurrock University Hospital, Basildon, England

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***Correspondence:**
Dr. Farheen Khan,
E-mail: farheenkhan_27@yahoo.com

ABSTRACT

Obesity in pregnancy is associated with increased risks for both the mother and the fetus, including complications such as gestational diabetes mellitus (GDM), hypertensive disorders, and venous thromboembolism (VTE). The Royal College of Obstetricians and Gynaecologists (RCOG) has issued the Green-top Guideline No. 72: 2018 on "Care of Women with Obesity in Pregnancy" to provide evidence-based recommendations. Audit was undertaken at the Basildon and Thurrock University Hospital, between July to August 2024 to evaluate the antenatal care of obese pregnant patients as per the guideline. Retrospective data collected of 40 patients from Medway and antenatal notes of the patients. Study revealed that, for 100% patients VTE score was assessed and they were prescribed anticoagulant, if needed. Need for aspirin was assessed in 100% patients, and patients were prescribed aspirin as per the score.100% patients were screened for GDM between 24-28 weeks, howsoever, only 50% patients were reweighed in third trimester. Audit revealed strengths in majority of areas, such as VTE assessment, GDM screening at 24-28 weeks, prescribing inhixa and assessing need for aspirin. However, gaps were noted in the reweighing process in the third trimester.

Keywords: VTE, Aspirin, GDM, Reweighing

INTRODUCTION

Incidence of obesity has increased to 16-19% in 2000 (9-10% in 1990).

Obesity is classified as - class I: BMI 30-34.99, class II: BMI 34.99-39.99, and class III: BMI ≥40.[1]

Conducting an audit on adherence to green - top/trust grade guidelines is essential to ensure that pregnant women with obesity receive optimal care, reducing the likelihood of adverse outcomes. Obesity in pregnancy increases the risk of several complications.

VTE

Obese women are at higher risk for VTE, necessitating careful risk assessment. Prophylaxis with low molecular weight heparin is given as per the VTE score. Risk assessment should be individually discussed, assessed and documented at the first antenatal visit, during pregnancy (if admitted or develop intercurrent problems) and postpartum. Antenatal and post-birth thromboprophylaxis should be considered in accordance with the RCOG GTG No. 37a.[2]

High risk/intermediate risk patients started on LMWH immediately, low risk ≥4 risk factors: LMWH started from 1st trimester, and ≥3 risk factors: LMWH started from 28 weeks.[2]

Hypertensive disorders

Incidence of pre-eclampsia is 2-4 times higher in obese pregnant women, and guideline recommends aspirin for women at risk.[3]

Women with BMI ≥35, plus 1 moderate risk factor (first pregnancy, maternal age of more than 40 years, family history of pre-eclampsia and multiple pregnancy) may

benefit from taking 150 mg aspirin daily from 12 weeks of gestation until birth of the baby.[3]

Women who develop hypertensive complications should be managed according to NICE CG 107.[3]

An appropriate size of cuff should be used for blood pressure measurements taken at the booking visit and all subsequent antenatal consultations. The cuff size used should be documented in the medical records.[4]

Gestational diabetes mellitus

The likelihood of GDM increases with obesity, necessitating timely screening at 24-28 weeks and management in accordance with the diabetic team.[4]

Intrapartum/postpartum complications

Reweighing women, particularly those with a body mass index (BMI) >35, is crucial for managing risks associated with labor and delivery, to assess difficulty in intrapartum fetal monitoring, caesarean section, safe workload of equipments and transportation access.[4]Anaesthetic assessment done for all patients with BMI >35.Women with BMI >40, should have venous access established in early labour.[4]

METHODS

Audit was undertaken at the Basildon and Thurrock University Hospital, between July to August 2024 to evaluate the antenatal care of obese pregnant patients as per the guideline. Retrospective data collected of 40 patients from Medway and antenatal notes of the patients.

Sample size

The sample size was 40 patients.

Data collection strategy

It was s retrospective study.

Method used

Data collected from Medway/antenatal notes of patients with BMI >30, coming to out-patient clinics and admitted in Cedar (post-natal ward).

RESULTS

VTE score assessment

All 40 patients were assessed for VTE. Out of these 40 patients,13 patients were found to need Inhixa and all of these 13 patients were prescribed Inhixa (Figure 1).

Aspirin need assessment

All 40 patients were evaluated for need of aspirin. Out of these 40 patients, 12 patients were found to need aspirin and all of these 12 patients were prescribed aspirin (Figure 2).

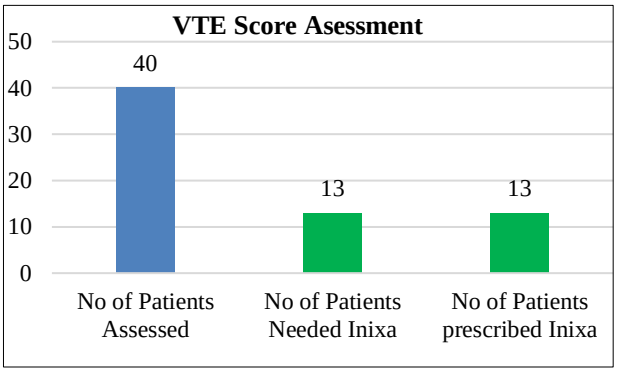

Figure 1: VTE score assessment.

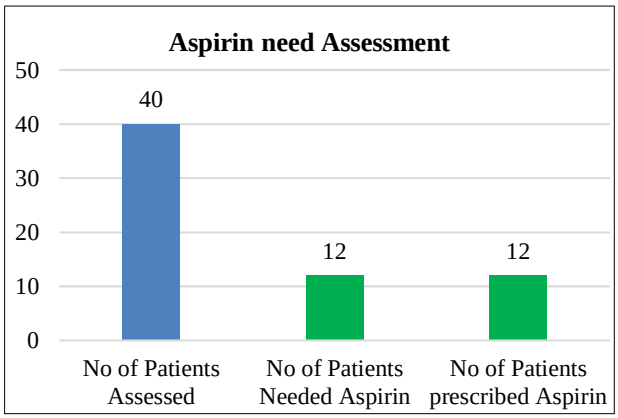

Figure 2: Aspirin need assessment.

GDM screening at 24-28 weeks

All 40 patients were screened for GDM between 24-28 weeks (Figure 3).

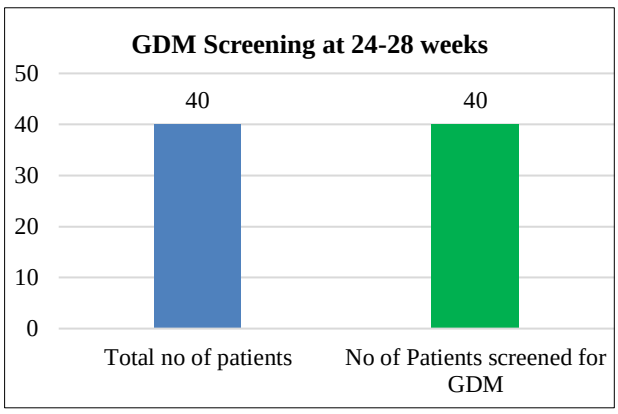

Figure 3: GDM screening at 24-28 weeks.

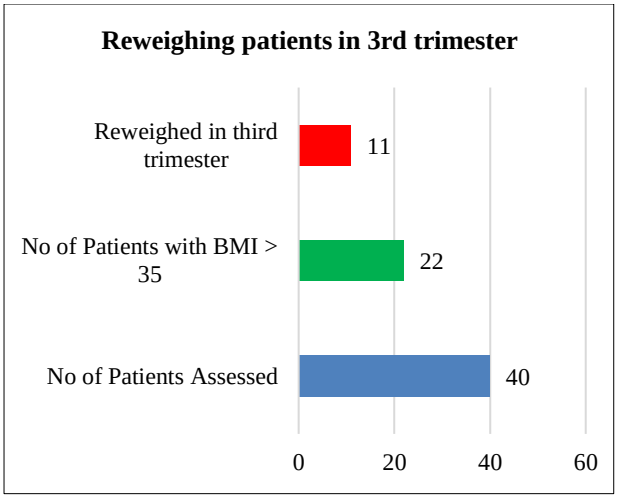

Figure 4: Reweighing patients in third trimester.

Reweighing in the third trimester

Out of 40 patients, 22 patients had BMI >35. Out of these 22 patients (BMI >35), only 11 were reweighed in the third trimester (Figure 4).

DISCUSSION

The audit on antenatal care of obese pregnant patients as per protocol, revealed notable adherence to clinical guidelines in several key areas, while identifying some gaps in care that warrant attention.[7]

VTE score assessment and management

All 40 patients i.e. 100% patients were appropriately assessed for venous thromboembolism (VTE) risk, a critical step in preventing potentially life-threatening complications during pregnancy. This is in accordance with the standard set by the green top guideline on preventing thromboembolism.[5] Out of these 40 patients, 13 were identified as needing anticoagulation therapy with inhixa, and all 13 patients received the prescribed treatment. This demonstrates excellent compliance with VTE prophylaxis guidelines, indicating a strong understanding and adherence to risk assessment protocols within the clinical team.

Aspirin need assessment

Similarly, all 40 patients i.e. 100% patients were evaluated for the need for aspirin, a preventive measure often employed in pregnant women at risk for preeclampsia. The result met the standards set by the NICE guideline.[6] Out of these, 12 patients were found to require aspirin, and all 12 were appropriately prescribed the medication. This 100% compliance rate reflects a well-coordinated effort to manage the risks associated with hypertensive disorders in pregnancy, suggesting a proactive approach to patient safety and complication prevention.

Gestational diabetes mellitus (GDM) screening

Screening for gestational diabetes mellitus (GDM) between 24-28 weeks of gestation is a recommended practice for obese antenatal women as per the trust and GTG guideline.[7] In this audit, all 40 patients, i.e.100% patients, were screened within the appropriate window, indicating strong adherence to screening protocols. This is crucial as timely identification and management of GDM significantly reduces maternal and neonatal morbidity, and the high compliance in this area reflects effective implementation of guidelines.

Reweighing in the third trimester

However, an area of concern highlighted in the audit is the reweighing of patients in the third trimester, particularly in those with a BMI over 35. Out of the 22 patients with a BMI greater than 35, only 11 were reweighed, around 50%. Given the increased risk of complications, including gestational hypertension and macrosomia, in patients with a high BMI. The failure to consistently reweigh in this high-risk group is a gap in care. Weight monitoring in the third trimester is crucial for managing risks associated with labor and delivery, to assess difficulty in intrapartum fetal monitoring, caesarean section, to assess safe workload of equipments and transportation access.[7] Anaesthetic assessment is done for all patients with BMI $\geq$35.Women with BMI $\geq$40, should have venous access established in early labour.[7] Adjusted BMI in third trimester is also a key factor in deciding the timing of induction, women with BMI $\geq$40, are offered induction around 40 weeks and those with BMI $\geq$45 are recommended to get induced by 39 weeks, in view of increased risk of intrauterine fetal death.[7] Therefore, non-compliance in this area is a matter of concern and requires clear action plan for safety of these patients.

CONCLUSION

The audit revealed strengths in majority of areas, such as VTE assessment, GDM screening at 24-28 weeks, prescribing inhixa and assessing need for aspirin. However, gaps were noted in the reweighing process in the third trimester. This area of non-compliance indicates a need for further education and system improvements.

Recommendations

Training

Create awareness of staff on the importance of reweighing in third trimmest.

Reinforce protocol

Reinforce antenatal care protocols to ensure adherence to guideline recommendations.

Re-audit

Conduct re-audit 12 months to monitor improvements and ensure sustained compliance with the guideline.

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