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Case Report

Pregnancy with super-obesity: an emerging pandemic

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ABSTRACT

Pregnancy associated with obesity is an upcoming challenge in high risk obstetrics management. Ironically, in India though half the population is under the malnutrition zone, it is known as the diabetic capital. This is attributed to the changing lifestyles which have led to a steep rise in medical disorders like hypertension, diabetes and obesity, especially in metropolitan cities. A case of pregnancy in a super obese woman with a successful outcome is presented here.

Keywords: Pregnancy, Super-obesity, Delivery

INTRODUCTION

India ranks third in the obesity pandemic, just behind US and China.¹ The WHO classifies obesity into three subclasses. Class I (30-34.5 kg/m²), Class II (35-39.9 kg/m²) and Class III (>40 kg/m²) whereas a BMI >50 kg/m² is known as super-obesity.² Management of pregnancy in super obese women is a challenge with respect to its complications and co-morbidities. It requires a holistic approach involving a team of obstetricians, paediatricians, anaesthetics, nutritionists and physicians in order to provide a good pregnancy outcome.

CASE REPORT

A 24 year old G2A1, was referred to our tertiary level institute at 41 weeks with the chief complaints of headache since 1 day and lower limb swelling since one week. On examination, her general condition was fair, pallor and icterus were absent. Bilateral lower limb

oedema of grade 3 was present along with gross right lower limb cellulitis. Pulse was 110/minute, blood pressure was 180/110 mmHg, cardiovascular and respiratory system examination was within normal limits. Urine albumin was 3+ and bilateral knee jerks were normal. Her height was 155cm, weight 142kg (229 pounds), hence BMI 59.16 kg/m². The total weight gain during pregnancy was 14kg. On per abdomen examination, uterus was full term, and gross abdominal wall oedema was present along with panniculus (Figure 1). The presentation could not be appreciated due to the gross oedema, foetal heart sounds were localized on Doppler. On per vaginal examination, cervical os was closed; no show or leak was present. An ultrasound was done in labour room which showed breech presentation.

All laboratory investigations including complete blood count, liver and kidney function tests including total protein and albumin, fasting and post prandial blood sugar and serum TSH were within normal limit. Antihypertensive therapy was started to control blood

pressure. Inj magnesium sulphate 5gm intramuscular on alternate buttocks was given prophylactically, in view of severe premonitory symptoms. A decision for lower segment caesarean section was taken in view of severe pre-eclampsia with breech presentation.

Lower segment caesarean section was done under spinal anaesthesia. A team of 4 people were scrubbed in. A Pfannenstiel incision was preferred. Two assistants retracted the panniculus along with two vulsellum placed to retract the subcutaneous fat (Figure 2). She delivered a healthy female child of 3kg by breech presentation which was uneventful. A subcutaneous drain was kept in-situ.



Figure 1: Severe abdominal wall oedema with panniculus in a full term pregnant super obese women.



Figure 2: Abdominal wall retracted using two vulsellum with sling attached to anaesthesia trolley.

Post-operatively, the patient was encouraged for early mobilisation. Glycerine magnesium sulphate and crepe bandage were applied for the lower limb cellulitis. Injection low molecular weight Heparin was given 60 mg subcutaneously for seven days as thrombo-prophylaxis. Higher generation intravenous antibiotics were given. Subcutaneous drain was removed on day 5. Complete suture removal was done on day 14; the wound was healthy with no evidence of pus or discharge. The patient was discharged on day 14 postoperatively.

DISCUSSION

Obesity is a curse of modern day lifestyle, which has far reaching effects beyond the present pregnancy into the next generation in the form of childhood and adult obesity.

Super-obese women are at significantly increased risk of pregnancy complications, even compared to other obese and morbidly-obese women like gestational hypertension (7.7%), preeclampsia (11.5%), gestational diabetes (15.4%), caesarean delivery (50%), and macrosomia (42.3%), recurrent pregnancy loss, Shoulder dystocia, anesthetic complications, Post-Partum hemorrhage, deep venous thrombosis and wound infection.³ Pre-conceptional counseling is the ideal starting point. The patient needs to be given strict dietary and exercise regimens. Timely screening for congenital anomalies, gestational diabetes and pre-eclampsia, aids in providing better healthcare.

In a term pregnant women with super obesity, planned caesarean section does not appear to reduce maternal and neonatal morbidity compared with induction of labour. The increasing maternal BMI exerts a progressive adverse effect on vaginal delivery rates for both primigravida and multigravida women. Once obese women reach the second stage they deliver quickly, which implies that the risk of prolonged labour is restricted to the first stage of labour. This can be primarily due to dystocia which may be in the form of inadequate uterine contractions, fetal macrosomia or excess soft tissue deposition in the maternal pelvis.⁴

The route of anaesthesia can vary with the patient profile. Spinal anaesthesia is advised for use in our environment not just because of cost effectiveness, but because the incidence of post-dural headache may be reduced in obese patients.^{5,6} General anaesthesia poses the challenges of difficult intubation and sleep apnea. Regional anaesthesia requires appropriate delineation of landmarks, adequate patient positioning prior to and after performing the block, choosing a needle of sufficient length and the appropriate dose of local anaesthetic.⁷

Low transverse skin incisions and transverse uterine incisions are definitely superior and must be the first option. Closure of the subcutaneous layer is recommended, but the placement of subcutaneous drains remains controversial. Morbidly obese women are at increased risk of postpartum infections.⁸

Post-operatively the patient should be encouraged for early mobilization. Pneumatic compressive devices and low molecular weight heparin have use for thromboprophylaxis.⁹ Weight reduction in the postpartum period and thereafter must be strongly encouraged for optimal future pregnancy outcomes and wellbeing.

Hence the need for timely referral to a tertiary centre is necessary in order to ensure optimum management facilities to the patient.

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