ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 11 | November - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

WONDER IN WORLD OF OBSTETRIC CARE: A CASE REPORT ON LSCS IN BMI 62.32KG/M2

Obstetrics & Gynaecology

Diti Anand* Senior Resident, Dept. of Obstetrics and Gynaecology, GMCH Chhatrapati Sambhajinagar, Chhatrapati Sambhajinagar, Maharashtra- 431001, India. *Corresponding Author

Vijay Y. Kalyankar Associate professor, Department of Obstetrics & Gynecology, GMCH Chhatrapati Sambhajinagar, Chhatrapati Sambhajinagar, Maharashtra- 431001, India

Shrinivas N. Gadappa Professor and Head of department, Department of Obstetrics & Gynecology, GMCH Chhatrapati Sambhajinagar, Chhatrapati Sambhajinagar, Maharashtra- 431001, India.

ABSTRACT

Background: The prevalence of obesity has reached pandemic proportions across nations. Morbid obesity has a dramatic impact on pregnancy outcome. Cesarean section in these women poses many surgical, anesthetic, and logistical challenges[1]. GMCH Chhatrapati Sambhajinagar encountered such case of G2P1L1 at term with previous 1 LSCS with GDM with BMI of 62.32kg/m^2 which is highest BMI operated case in India as per our extensive research and knowledge. **Case:** A 26 yrs old G2P1L1 at term with previous one LSCS with gestational diabetes with super obesity (BMI of 62.32kg/m^2) was admitted under IP care to ensure optimal outcome and delivered by caesarean section. Multidisciplinary measures were taken to ensure feto-maternal wellbeing, anaesthetic preparations, OT preparations and uneventful post operative phase. **Conclusion:** Prevalence of obesity is increasing among pregnant women. Obesity is a disorder associated with multiple risks and comorbidities. Despite all odds, our case with morbid obesity underwent successful caesarean section with good feto-maternal outcome. Hence, considering the peripartum implications of obesity, morbidly obese patients can be successfully managed with a combined efforts of multidisciplinary team of obstetricians, anaesthetists, neonatologists, physicians even at low resource setting with adequate planning and preparation.

KEYWORDS

Morbid obesity, super obesity, caesarean section, body mass index

INTRODUCTION

Obese mothers have an increased risk of pregnancy complications such as hypertensive disorders of pregnancy, preeclampsia, gestational diabetes mellitus and insulin requirement, induction of labour, caesarean section post induction, prolonged labour, caesarean sections and postpartum haemorrhage [6]. Apart from these adverse maternal outcomes, obese women have an increased risk of adverse neonatal outcomes [7,8]. Thromboembolic disease is also more frequent in obese women.[9,10] CEMACH (Confidential enquiries into maternal and child health) reported that there is a 50% higher maternal mortality rate among obese mothers than non-obese mothers [11]. Hence, this case represents comprehensive strategies need to be taken while handling such cases.

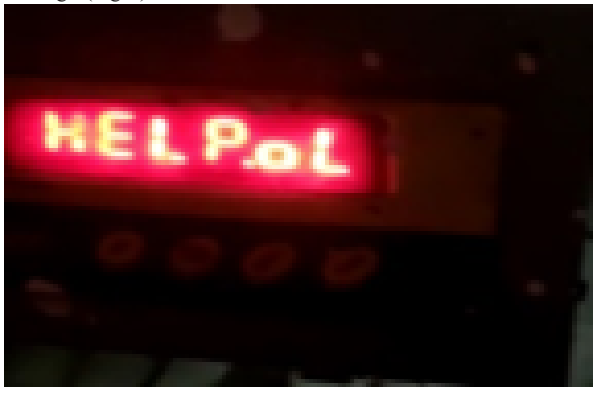
CASE REPORT

A 26 yrs old G2P1L1 at term with gestational diabetes with previous one LSCS with morbid obesity (BMI of 62.32kg/m2) was admitted under IP care to ensure optimal outcome. In view of anticipated macrosomia and CPD with previous LSCS, elective caesarean delivery was planned.

Following measures were taken to handle this challenging case:

I) To ensure maternal wellbeing:

1. i) Body indices measurement: most of weighing machines available were unable to measure patient's weight, used to show overload message. (Fig. 1)



Hence, special weighing machine was arranged for weight measurement which came out to be 155.6kg.

Abdominal girth measured: 144cm

Height : 158cm

BMI: 62.32kg/m2

ii) Arrangement of special instruments and equipment including custom made large cuff of BP apparatus: as normal BP apparatus cuff used to fall short to encircle patient's arm.

2. Superspecialist consultation:

i) Endocrinologist: being a case of diabetes, an endocrinologist consultation was taken and blood sugar levels were kept under control.

ii) Cardiologists: ECG, 2 D Echo (normal) followed by cardiologist opinion taken to ensure healthy heart, as heart diseases are common with obesity and DM.

iii) Pulmonologists: pulmonary function test (normal) followed by pulmonologist opinion taken.

3. Specialist opinion:

i) Dermatologist: patient had extensive skin fungal infection covering lower abdomen, back and thighs.

ii) Ophthalmologists: fundus examination done to rule out any changes due to diabetes.

iii) Dietician consultation was taken and recommended diet plan was followed.

4. Control of blood sugar levels and 6 hourly BSL monitoring.

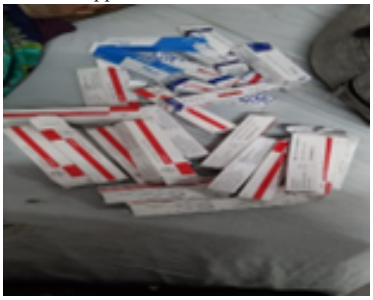
5. Spirometry exercises to improve lung capacity: around 100 cycles of spirometry multiple times a day.

6. Steam inhalation and nebulization to keep upper airway clear.

7. 8 hourly vitals monitoring.

8. Ensuring daily physical activity.

9. Antifungal ointment application on infected area.

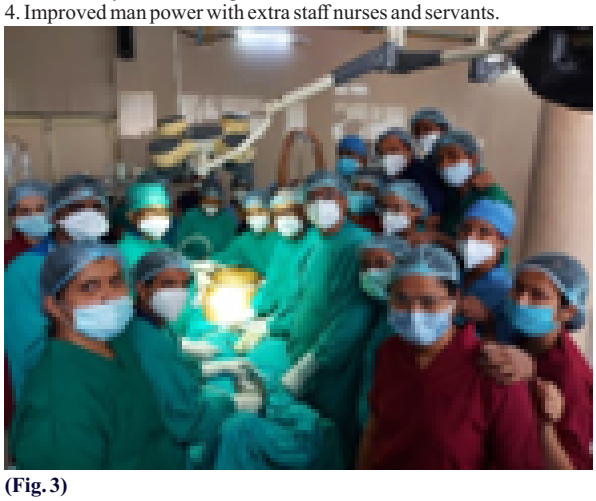


(Fig 2: antifungal ointments during the course)

II) To ensure fetal wellbeing:
1. Daily Non Stress Test: to ensure early intervention if fetal assurance is not good.
2. DFMC: daily fetal movement count by mother
3. Left lateral position to mother
4. Thrice a day fetal heart rate monitoring.
5. Daily Folate administration.

III) Anaesthetic preparations:
1. Availability of senior anaesthetist and team.
2. Pre-op spinal USG to judge spinal needle size and length.
3. Combined Spinal Epidural anaesthesia with all preparation for general anaesthesia
4. Prevention of spinal hypotension by lateral abdominal pressure and tredelenberg position.

IV) OT preparations:
1. Pre-op operative table size measurement and joining of 2 tables.
2. Longer and larger operative instruments
3. Availability of senior surgeons and team.
4. Improved man power with extra staff nurses and servants.



(Fig. 3)

5. Special size OT gown sewn for the patient: usual available gowns didn't fit patient, hence body measurement were taken and a special gown was tailored.
6. Special trolleys made available for shifting patient from one place to other.

V) Special measures during surgery:
1. Cephalad retraction of abdominal panniculus
2. Baby delivered by forceps delivery in caesarean section. A male child of 3.5kg was born, cried well.

VI) Special measures taken in Post operative period:
1. NICU care given to baby
2. Post-op ICU care given to mother.
3. Antibiotics doses were titrated according to BMI: her BMI demanded higher doses of antibiotics to be effective
4. Early ambulation: for DVT prevention. Patient was ambulated post op day 2 onwards. Post op spirometry and required physiotherapy was given.
5. Thromboembolic prophylaxis: with titrated dose of heparin along with stockings.
6. High protein diet, vitamin C supplementation and wound hygiene: to ensure proper and early wound healing.
7. Discharge advice:
i) endocrinologist opinion and consultation.
ii) Weight reduction and treatment of obesity.
iii) Contraception: all suitable options were explained.

DISCUSSION

WHO says the world is facing 'global epidemic' of obesity [2]. The prevalence of overweight married women (15–49 years) rose from 11 to 15% in 2005–2006 as per National family Health Survey (NFHS) 3 and further to 20.6% as per NFHS 4 [3].

Maternal obesity not only affects the mother but foetus is also adversely affected and perinatal outcomes are also jeopardized. Obese mothers have an increased risk of pregnancy complications such as anemia, hypertension, pre-eclampsia, preterm delivery and gestational diabetes[4]. Kutchi et al (2020) shows there was a significant increase in risk among obese mothers compared to non-obese mothers for foetal and perinatal complications like miscarriages, shoulder dystocia, large for gestational age, hyperbilirubinaemia and neonatal intensive care unit admissions [6]. These are addition to the complications general population with obesity deal. Weiss et al [5] demonstrated that obesity significantly increases the rate of cesarean section.

In this report, the patient was a case of 2nd gravida at term with previous LSCS with controlled gestational diabetes mellitus and extensive skin infection, managed by comprehensive strategies and multidisciplinary approach. Ghaffari, Neda et al. found that multidisciplinary care reduced maternal and neonatal complications in obese pregnant women [13]. Daily maternal and fetal monitoring was done to ensure feto-maternal wellbeing. Society for Maternal-Fetal Medicine (SMFM) recommends similar surveillance strategies for high-risk pregnancies [14]. Multiple specialist consultation done for associated risks and advises were followed. According to Pereira et al comorbidities must be thoroughly addressed and optimized by appropriate specialty consultants when relevant [15]. Obesity and its associated comorbidities, such as diabetes, dyslipidemia and hypertension, are risk factors for coronary artery disease and a preoperative consultation with a cardiologist may be advisable [16]. Hence, cardiologist opinion was also taken. Special measure were taken with respect to apparatus and manpower to improvise efficiency and accuracy as stated in report. In morbidly obese parturients where abdomen retraction may impair proper ventilation and oxygenation, it is proposed that a vertical and cephalad suspension of the panniculus may alleviate maternal hypoxia and hypotension [17]. Hence, cephalad retraction was provided intraoperatively. Targeted post operative care was given. This comprises a comprehensive strategy which lead to an uneventful feto maternal outcome.

However, interventions directed at weight loss and prevention of excessive weight gain must begin in the pre-conception period, and must include counselling by obstetrical care providers regarding the risks and complications conferred by obesity.

CONCLUSION

Obesity is a systemic disorder associated with multiple comorbidities [12]. Despite all odds, our case with morbid obesity underwent successful caesarean section with good feto-maternal outcome. Hence, considering the peripartum implications of obesity, morbidly obese patients can be successfully managed with a combined efforts of multidisciplinary team of obstetricians, anaesthetists, neonatologists, physicians even at low resource setting with adequate planning and preparation.

DECLARATIONS

Funding: None

Conflict Of Interest: None declared

REFERENCES:

1. Machado LS. Cesarean section in morbidly obese parturients: practical implications and complications. N Am J Med Sci. 2012 Jan;4(1):13-8. doi: 10.4103/1947-2714.92895. PMID: 22393542; PMCID: PMC3289484.
2. World Health Organization. Obesity: Preventing and managing the global epidemic. Geneva: World Health Organization, 2000. [Google Scholar]
3. National Family Health Survey 2, 3, and 4., India Fact Sheet, Ministry of Health and Family Welfare Government of India, http://rchiips.org/NFHS/pdf/NFHS4/India.pdf
4. Cedergren MI. Maternal morbid obesity and the risk of adverse pregnancy outcome. Obstet Gynecol. 2004;103:219–24. [PubMed] [Google Scholar]
5. Weiss JL, Malone FD, Emig D, Ball RH, Nyberg DA, Comstock CH, et al. FASTER Research Consortium.Obesity, obstetric complications and cesarean delivery rate–a population based screening study. Am J Obstet Gynecol. 2004;190:1091–7. [PubMed] [Google Scholar]
6. Kutchi I, Chellammal P, Akila A. Maternal Obesity and Pregnancy Outcome: in Perspective of New Asian Indian Guidelines. J Obstet Gynaecol India. 2020 Apr;70(2):138-144. Doi: 10.1007/s13224-019-01301-8. Epub 2020 Jan 13. PMID: 32255952; PMCID: PMC7109213.
7. Sebire NJ, Jolly M, Harris JP, Wadsworth J, Joffe M, Beard RW, et al. Maternal obesity and pregnancy outcome: A study of 287,213 pergnancies in London. Int J Obes Relat Metab Disord. 2001;25:1175–82. [PubMed] [Google Scholar]
8. Bo S, Menato G, Gallo ML, Bardelli C, Lezo A, Signorile A, et al. Mild gestational hyperglycaemia, the metabolic syndrome and adverse neonatal outcomes. Acta Obstet Gynecol Scand. 2004;83:335–40. [PubMed] [Google Scholar]
9. Perlow JH, Morgan MA. Massive maternal obesity and perioperative cesarean morbidity. Am J Obstet Gynecol. 1994;170:560–5. [PubMed] [Google Scholar]
10. Edwards LE, Hellerstedt WL, Alton IR, Story M, Himes JH. Pregnancy complications and birth outcome in obese and normal weight women: effects of gestational weight change. Obstet Gynecol. 1996;87:389–94. [PubMed] [Google Scholar]
11. Lewis G. Why mothers die 2000–2002 the sixth report of the confidential enquiries into maternal deaths in the United Kingdom. http://www.hqip.org.uk/assets/NCAPOP-Library/CMACE-Reports/33.-2004-Why-Mothers-Die-2000-2002-The-Sixth-Report-

of-the-Confidential-Enquiries-into-Maternal-Deaths-in-the-UK.pdf. Published November 2004
12. C. R. Taylor, J. E. Dominguez, and A. S. Habib, "Obesity and obstetric anesthesia: current insights," Local and Regional Anesthesia, vol. 12, pp. 111–124, 2019.
13. The multidisciplinary approach to the care of the obese parturient. Ghaffari, Neda et al. American Journal of Obstetrics & Gynecology, Volume 213, Issue 3, 318 – 325
14. American College of Obstetricians and Gynecologists. Indications for outpatient antenatal fetal surveillance. Committee Opinion No. 828. Obstet Gynecol. 2021 Jun;137(6):e122-e133. doi: 10.1097/AOG.0000000000004434.
15. PEREIRA, LEONARDO MD, MCR. Surgery in the Obese Pregnant Patient. Clinical Obstetrics and Gynecology 52(4):p 546-556, December 2009. | DOI: 10.1097/GRF.0b013e3181bedf5d
16. ACOG Committee Opinion number 315, September 2005. Obesity in pregnancy. Obstet. Gynecol. 106(3), 671–675 (2005).
17. Whitty RJ, Maxwell CV, Carvalho JC: Complications of neuraxial anesthesia in an extreme morbidly obese patient for cesarean section. Int. J. Obstet. Anesth. 16(2), 139–144 (2007)