



Global Advanced Research Journal of Medicine and Medical Sciences (ISSN: 2315-5159) Vol. 6(9) pp. 192-196, September, 2017
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Case Report

Maternal Morbid Obesity Complications. A Case Report

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Accepted 29 September, 2017

Obesity is a global burden. Pregnancy in morbid obese women has major surgical complication we describe a case of pregnant women, morbidly obese underwent elective cesarean section then had a wound complication managed as describe

Keywords: Obesity, Morbid, Incisions Pregnancy

INTRODUCTION

Obesity is a global burden (WHO, 2017). by definition, obesity is having a BMI of 30 or greater (Lutsiv et al., 2015) Morbid Obesity is defined by the World Health Organization (WHO) as BMI>40 kg/ m² (WHO, 2017).

Overall, in Saudi Arabia, the prevalence of obesity and overweight among females age 15 or older, is 65.9%, as reported by WHO the highest in the Eastern Mediterranean Region. It is projected to increase to 78% by the year 2022 (Al-Quwaidhi et al., 2014). However, the prevalence of maternal obesity in Saudi Arabia estimated at 44–52 % (Wahabi et al., 2014).

Above all, obesity in pregnancy is a significant and frequent risk factor for developing maternal complications such as anemia, hypertension, pre-eclampsia, preterm delivery, gestational diabetes, and significantly increased rate of cesarean delivery (Cedergren, 2004; Machado, 2012)

Additionally, elevated BMI in pregnancy has a dramatic impact on the neonatal outcome that includes a higher rate of congenital anomalies, stillbirths, macrosomia, apart from that five-minute Apgar scores less than 7, and intrauterine growth restriction (Cedergren, 2004).

This case report examines one of the complications (wound infection) in a morbidly obese pregnant woman.

CASE DESCRIPTION

A 23 years old primigravida G1P0 at 37 weeks gestation Chadian woman. Known case of Gestational diabetes mellitus (GDM) and morbid obesity. On August 6, 2016, a patient admitted to the delivery Room at King Abdulaziz University Hospital (KAUH) for an elective cesarean section. She presented with mild to moderate rated 5 as per the numeric rating scale, contracting with on and off pain going for 19 hours, and was not associated with alleviating or relieving factors, neither vaginal bleeding or loss of fluid.

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Figure 1. The clinical picture of perioperative management of a morbidly obese patient. (Spinal and Epidural Anesthesia)



Figure 2. Showing, the positioning of a morbidly obese for bladder catheterization

She did not have any other complaints, and no associated gastrointestinal, or urinary symptoms. Her medical history was of gestational diabetes mellitus (GDM) on Metformin (Glucophage), had no history of hypertension, and her bronchial asthma well controlled with on and off Albuterol (Ventolin).

Her past gynecological and surgical history was unremarkable. On exam, her height 159 cm, weight 219 and her calculated body mass index (BMI) was measured to be 86.6 kg/m². Generally, well pulse rate was 95 and blood pressure was 140/90. Chest and heart no abnormality detected Abdomen soft, not tender very

obese but unremarkable. Pelvic examination, vulva, and vagina normal cervix closed with high presenting part fetal heart tracing were reassuring during the non-stress-test. Ultrasound findings a single viable fetus, transverse lie, head to the left side with oligohydramnios.

The treatment plan was to prepare her for the elective cesarean section after preoperative prophylactic antibiotics, and DVT prophylaxis. On August 11, 2016, Cesarean section performed on under spinal and epidural anesthesia. Figure 1 ... catheterization was difficult for two reasons morbid obesity and female genital mutilation figure 2



Figure 3. Showing, patient in supine position of a morbidly obese patient during cesarean delivery.

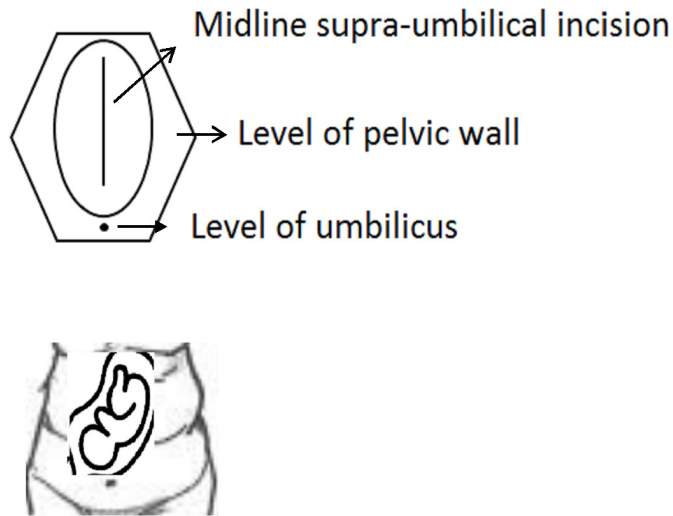


Figure 4. illustration of Midline supra-umbilical incision
Level of pelvic wall
Level of umbilicus
Midline supra-umbilical incision

The patient was placed in supine position, figure 4 midline supra-umbilical incision was done, uterus was found tilted to the right side. Uterus opened lower segment cesarean section. A viable male infant weighing 3.57 kg was delivered in cephalic presentation and handed to the pediatrician immediately crying, Apgar scores were 6 and 10 at one and five minutes.

The Uterus was sutured in 3 layers and replaced into the abdomen which was closed in layers, and skin closed

using clips. Postoperatively hemoglobin level was 10.8 g/dL and estimated blood loss was 800 ml. both mother and infant did well postoperatively. On August 15, 2016 day four post-surgery patient was discharged on antibiotics, painkiller medication, and Enoxaparin Na (Clexane).

One-week post-surgery patient presented to the emergency room (ER) on August 18, 2016 complaining of open suture wound of the abdominal wall. Decision for an

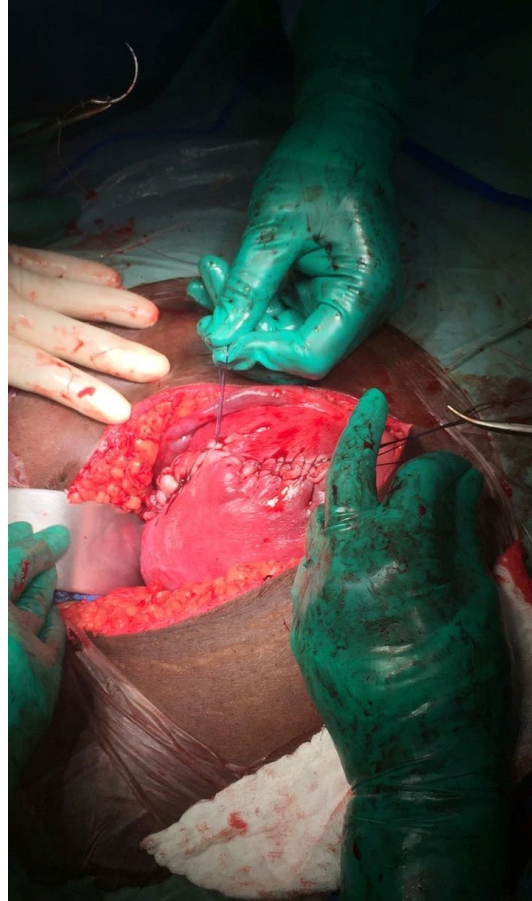


Figure 5. Uterine closure in the cesarean delivery of a morbidly obese patient.

elective surgery was made to repair the fascial dehiscence. Cleaning and suturing of the exposed fascia, fat, and skin was performed and successfully treated. On August 21, 2016, the patient was discharged. One month later, the patient was seen for a follow-up appointment and labelled as stable.

DISCUSSION

This case report presents the management of morbidly obese pregnant women. Morbid obesity has many reported risks in pregnancy that include an overall increase in cesarean delivery (Cedergren, 2004). Owing to the oligohydramnios, CS was the chosen mode of delivery in this case. Also, obese women compared to women with normal BMI have double the incidence of primary cesarean delivery, emergency cesarean delivery, wound infection, and additional risks of anaesthesia (Lutsiv et al., 2015).

In a retrospective study found that morbidly obese women had a lower rate of vaginal delivery than women in the control group (Neumann et al., 2017). Moreover, a systematic international review analysed e obesity and

mode of delivery; an increased risk of non-elective C-sections (Poobalan et al., 2009). Not only that cesarean delivery doubles the risk of venous thromboembolism, but also obesity placed patients at high risk for VTE and was found to be associated with a relative risk of 2.50 for deep vein thrombosis (DVT) compared to nonobese patients (Kither and Whitworth, 2012; Machado, 2012) In our case, this complication successfully prevented by applying DVT prophylaxis measures.

Another key point, patients with BMI > 40 kg/m² take longer operative time and exhibit an increase in total time from skin incision to delivery (Machado, 2012). In the current case, the operation took more time as expected. During the cesarean section, our patient was placed in supine position, as it's important to a position of the table tilted left side at a 10 to 15 degree to reduce maternal hypotension and its consequences (Machado, 2012).

The transverse abdominal incision made under the panniculus fold with a warm moist anaerobic environment would increase bacterial content, and promote infection, and though Pfannenstiel incision could be challenging in obese patients, it should be considered (Kither and Whitworth, 2012). In contrast, other studies revealed that vertical abdominal incisions had a higher rate of cesarean

wound complications in severely obese women compared with transverse incisions, and transverse incision should be encouraged (Mehasseb and Shafi, 2013). In this case of our patient had midline supra-umbilical incision which was more applicable. As wound separations increase with BMI \geq 50 compared to a lesser degree of morbid obesity, this case demonstrates wound separation (Mehasseb and Shafi, 2013).

In morbidly obese pregnant women with huge amounts of belly fat, supraumbilical incisions give the surgeon an easier access to the uterus. Easier for the O.R. staff, who have to hold the pannus away from the lower uterine segment. Supraumbilical scars do not give enough exposure, and clinically it is not superior to transverse incision (Tixier et al., 2010). In a study to compare the type of incision for morbidly obese pregnant women between, subumbilical and supraumbilical. The lower uterine segment section to deliver the baby was simple, easy to learn using supraumbilical incision (Stirrat et al., 2015). Two cases of fat necrosis of the abdominal pannus following caesarean section with Pfannenstiel incision were reported in two morbidly obese patients and postulated that the aetiology might be secondary to pressure applied to the retracted pannus during surgery (Mathai et al., 2013).

The surgeon's convenience is the key to choosing the type of incision. Supraumbilical, there may occasionally be useful, in a pregnant woman with extreme obesity and huge and droopy belly and should not be done routinely, even in high-BMI women, and should be kept for sporadic cases where they are truly needed (Tixier et al., 2010).

Moreover, the rate of wound infection was found to double with every five-unit increment of BMI (Poobalan et al., 2009). Hence, antibiotics (Cefuroxime, and Cefalexin) were administered to avoid the risk of wound infection. Overall, the neonatal and maternal outcome was considered to be good.

CONCLUSION

This case emphasises the management and impact of morbid obesity on pregnancy, and the importance of educating women with an elevated BMI who is planning a pregnancy about the increased risks and inevitable complications.

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