



A Pregnant Lady Undergoing Bariatric Surgery

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Abstract

The patient was a 34-year-old morbidly obese woman, a proper candidate for bariatric surgery, with a BMI of 49.5 (135 kg weight, and 165 cm height). All the routine blood tests, done prior to the surgery, were within the normal range, and her blood β -hCG was particularly negative before the surgery.

Sleeve gastrectomy was performed successfully and she was discharged three days later under acceptable medical conditions. Due to the lack of menstruation three months after the operation, Blood β -hCG level was checked and turned out to be positive. Ultrasound examination confirmed a pregnancy at 14 weeks of gestational age, implying that the patient had been pregnant during the bariatric surgery.

Keywords Pregnant lady · Morbid obesity · Bariatric surgery

Introduction

The prevalence of obesity has increased dramatically over the past several decades [1]. Obesity further complicates pregnancies with higher numbers of miscarriages, malformations, fetal growth problems, hypertension, gestational diabetes, and cesarean sections [2]. Bariatric or weight loss surgery is considered as the most successful treatment for morbid obesity [3].

Because the most weight loss occurs in the first 12–18 months following surgery, many researchers and authori-

ties have recommended waiting at least 12 months prior to conception [4]. This is based on the theory that a pregnancy occurring during malnutrition leads to adverse outcomes such as low birth weight or malformations. Delaying conception, on the other hand, can place limitations on those who are either older or suffer from infertility [5]. In this article, we report a case in the early stage of pregnancy undergoing bariatric surgery.

Case Report

The patient was a 34-year-old morbidly obese woman, a proper candidate for bariatric surgery, with a BMI of 49.5 (135 kg weight, and 165 cm height). All the routine blood tests, done prior to the surgery, were within the normal range, and her blood β -hCG was particularly negative before the surgery.

Sleeve gastrectomy was performed successfully and she was discharged 3 days later under acceptable medical conditions. Due to the lack of menstruation 3 months after the operation, Blood β -hCG level was checked and turned out to be positive. Ultrasound examination confirmed a pregnancy at 14 weeks of gestational age, implying that the patient had been pregnant during the bariatric surgery. Following extreme reservations regarding the baby's health and well-being, a multidisciplinary team comprised of perinatologists, internists, nutritionists, and bariatric surgeons diligently examined

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the condition; they decided not to terminate the pregnancy as no abnormal embryonic growth signs were observed in screening tests as well as the frequent ultrasound scans.

Being a known case of pulmonary thromboembolism on rivaroxaban for 2 years prior to surgery, rivaroxaban was continued up to 3 months post surgery, until pregnancy was diagnosed. Therefore, rivaroxaban was replaced by warfarin, which was further changed to LMWH approximating the end of the pregnancy course. During the period of her pregnancy, the patient was under close constant medical observation and nutritional support.

Five months into her pregnancy, the patient began to suffer from a left-sided pelvic pain; the orthopedic surgeon prescribed high doses of vitamin D and calcium supplement with the impression of hypocalcemia until the end of pregnancy. After delivery, the patient's pelvic pain was relieved.

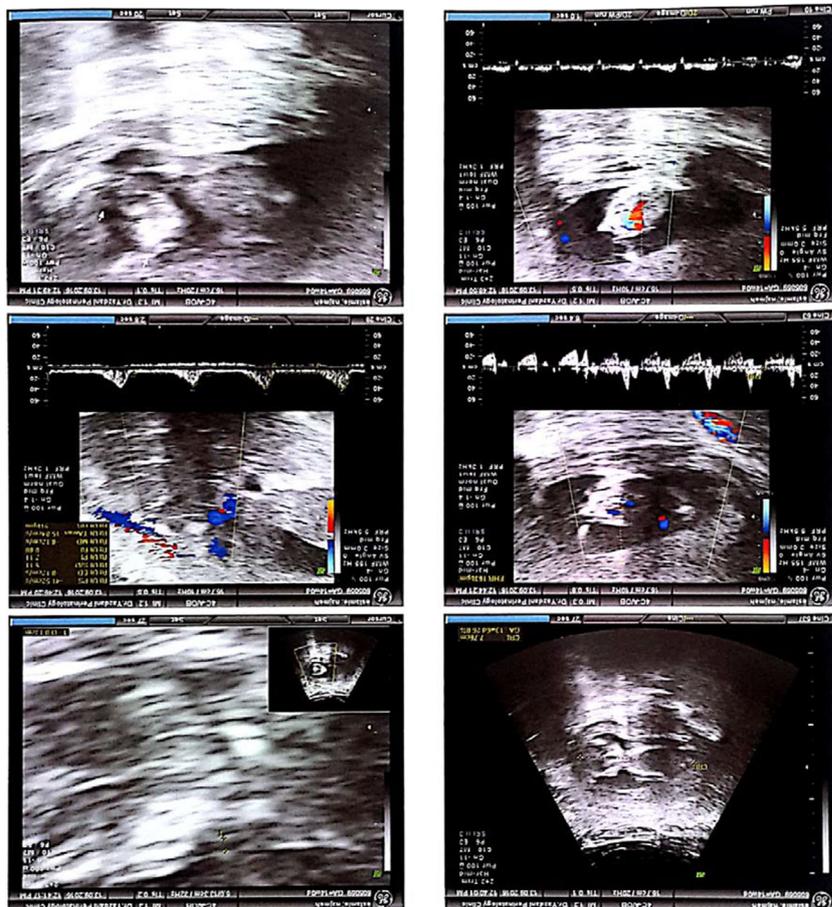
In spite of 33 kg weight loss during pregnancy, the child was born, after a full-term pregnancy by cesarean section, with 1980-g birth weight. The baby was admitted in NICU for 10 days due to respiratory distress and hypocalcemia. Ronika (the baby) is now 1.5 years old and is under pediatric follow-up with a normal growth and developmental patterns (Fig. 1).

Discussion

Women who become pregnant shortly after bariatric surgery, run higher risks in their pregnancies due to the ongoing weight loss caused by operation; however, with prompt detection and appropriate management of the pregnancy, patients can have a good prognosis [6]. A survey carried out by Wittgrove et al. showed a lower incidence of macrosomia, GDM, and cesarean section in pregnant patients undergoing bariatric surgery in comparison to other morbidly obese pregnant patients [6]. Although the general consensus for a safe pregnancy period is 12 to 18 months following bariatric surgery, researchers such as Basbug A, reported that the interval between sleeve gastrectomy and conception did not impact maternal or neonatal outcomes [7].

One of the most significant concerns of pregnancy post bariatric surgery is nutritional deficiency which can threaten fetal growth and cause birth defects, hence the fact that such patients should be under close follow-up for the evaluation of essential nutrient supplementation in pregnancy; on the other hand, nutritional deficiency or supplemental intake recommendations in these pregnant women have not been well

Fig. 1 OB sonography



investigated [8]. Based on our pulmonologist's advice, rivaroxaban was administered post surgery until the time of pregnancy was diagnosed. Despite the reports, however minor, regarding embryo-fetal safety, the high incidence of miscarriages, and the 4% rate of anomalies with the use of rivaroxaban [9], our patient was fortunate enough to deliver a healthy baby.

Despite considerable weight loss during pregnancy, and anticoagulation usage, our patient had a normal child delivery with acceptable fetal growth and development. It is important to note that due to the decrease in intestinal absorption after bariatric surgery, using non-oral, long-acting contraceptives is preferred in women undergoing such types of operations [10].

In conclusion, we propose that pregnancies occurring shortly after bariatric surgery be managed safely by implementing an interdisciplinary treatment team consisting of perinatologists, nutritionists, psychologists, surgeons, and coordinating nurses. Additionally, clarifying the significance and efficiency of the expert medical surveillance during the pregnancy period for the patient, would be much reassuring regarding her concerns over a normal pregnancy and successful child delivery.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval Statement For this type of study, formal consent is not required.

Consent Statement Informed consent was obtained from individual participant included in the study.

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