

CASE REPORT



## Pregnancy one month post abdominoplasty: a case report and review of literature

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### ABSTRACT

Pregnancy post abdominoplasty may ruin the aesthetic result of the operation and may harm both mother and child. This report is about a 39-year-old lady who got pregnant a month after her abdominoplasty. Her pregnancy was uneventful, and she delivered a healthy baby at the gestational age of 38 weeks.

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Abdominoplasty; pregnancy; uneventful; rectus diastasis; abdominal wall; case report

### Introduction

Abdominoplasty is an aesthetic surgery of the abdomen in which the excess skin is excised, and the abdominal muscles are tightened [1]. It is a common surgical procedure that is being performed around the world, especially with the increase in the number of bariatric and weight reduction procedures [2]. When dealing with a female candidate, the plastic surgeon should make sure that she has no desire for future pregnancies, and clearly explain the risks to her. Several aesthetic indications are there for abdominoplasty, which includes abdominal skin laxity as a result of multiple pregnancies, aging, and massive weight loss [3].



Literature data on pregnancy outcomes after abdominoplasty are not sufficient, and no pregnancy has been reported within 1 month after abdominoplasty to our knowledge in Saudi Arabia. We presented a case of a female who became pregnant after an abdominoplasty 1 month after surgery and briefly provided a relevant literature review.

### Case study

The patient in this case was a 39-year-old lady, married, and a mother of five children. She presented to the clinic seeking consultation due to skin laxity and

excess in the lower abdomen after her previous pregnancies. It was ensured that she had completed her family and was not planning for any future pregnancy. Her youngest child was 1 year and 4 months old at the time of the abdominoplasty. She was not a smoker, and her BMI was 25.9 kg/m<sup>2</sup>. She had tried physical exercises for a period of time, but with no desired improvement. Abdominoplasty was done for her under general anesthesia. Cutting was done following the preoperative marking, dissection down to the fascia, and the abdominal flap was raised to the level of the xiphisternum. She had very weak abdominal wall muscles with clear divarication, which was repaired using PDS 0 loop, with central plication. The surgery was uneventful, and the patient was discharged home on a postoperative day one.

Six weeks after the surgery, the patient came for a follow-up, and during our assessment, she reported being 2 weeks pregnant. The pregnancy was unplanned, and a pregnancy test was performed prior to her operation. She was not on oral contraceptives or an intrauterine device during that period. The pregnancy was uneventful, and the fetus growth was normal during the ultrasound (US) follow-ups. The fetal US done at 33 weeks gestation showed a single viable fetus, with normal cardiac activity, and visualized fetal

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movements. Fetal heart rate was 136 b/m, longitudinal lie, cephalic presentation, and the amniotic fluid was normal. Fetal biometry was as follows: biparietal diameter was 82 mm, head circumference was 294 mm, abdominal circumference was 280 mm, and fetal length was 67 mm. The patient's weight was sustained throughout the pregnancy, as she had gestational diabetes, which required her to follow a strict diet. The surgery scar got darker in contrast to the surrounding skin, which might be attributed to hormonal changes (Figure 1). She delivered at week 38 by elective cesarean section (CS), due to having two previous CS's. The baby girl was born healthy with a weight of 2.95 kg (25th percentile), and an Apgar score of 9 and 10 at 1 and 5 min, respectively.

The patient is now 4 months postpartum, and she is satisfied with her abdominoplasty result. She is not planning to go for a revision or another operation. Regarding her scar, it is now less dark than it was during the pregnancy, and she has used a silicone sheath for it (Figure 2).

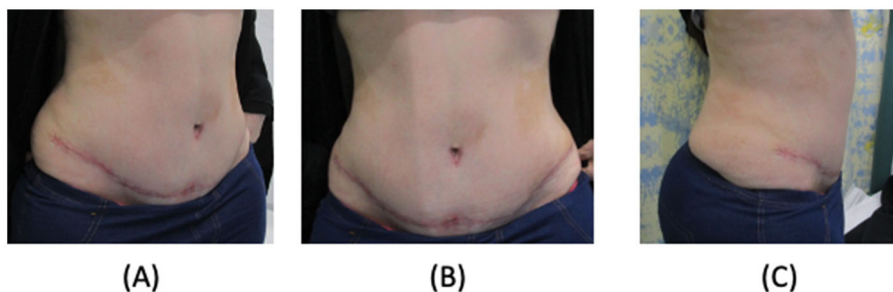
## Discussion

Abdominoplasty is an aesthetic surgery of the abdomen in which the excess skin is excised, and the abdominal muscles are tightened [1]. Nowadays, there is an increase

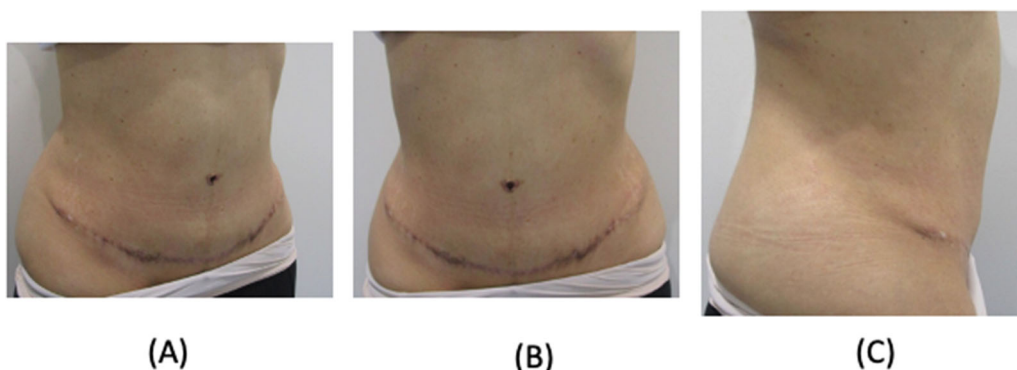
demand for abdominoplasty, especially with the increase in the number of bariatric and weight reduction procedures. Abdominoplasty can be a solution for skin laxity, skin excess, and myoaponeurotic weakening, therefore patients are seeking it [3,4]. Any candidate for abdominoplasty should be informed about the risks of having a future pregnancy. In practice, many plastic surgeons consider pregnancy post-abdominoplasty as a relative contraindication. In this paper, we present a case of a woman who became pregnant after having an abdominoplasty 1 month after the surgery, and we briefly review the relevant literature.

Divarication of rectus abdominis (DRA) is a condition where the two muscles on the side of the Linea alba separates and a distance between them is created. Pregnancy is a common risk factor for DRA, as during pregnancy, the intraabdominal pressure increase. Other than affecting the cosmetic outcomes of the abdominoplasty, pregnancy might affect the mother and the fetus's health due to impaired flexibility of the abdominal wall [5].

Three previous reported cases showed uneventful pregnancy and partus in ladies who had undergone abdominoplasty, which aligns with our case. A systemic review which was done by Alipour and Eskandarie have revealed that uneventful pregnancy and delivery can be anticipated in breast cancer



**Figure 1.** The reported patient at 2 weeks pregnant. Due to hormonal changes, the scar appears darker in comparison to the surrounding skin in the images. (A) Oblique view. (B) Frontal view. (C) Lateral view.



**Figure 2.** After four months postpartum, the patient is satisfied with her abdominoplasty results. It appears that the scars are less dark than they were during pregnancy. (A) Oblique view. (B) Frontal view. (C) Lateral view.

survivors who had undergone breast reconstruction *via* TRAM or its derivatives with minor negative effects on either the breast or the abdomen [6]. In the literature, it is suggested that the frequency of cervical prolapse and CS could be increased with abdominoplasty. However, it is not clear how it can impact the perinatal outcomes [7].

Some of the aesthetic compromises that might follow pregnancy post-abdominoplasty are new stretch marks, widened scars, excess skin, and abdominal bulging [3]. A study was conducted to compare the aesthetic compromise between candidates who had planned pregnancy and others who had it unplanned, and the results revealed that those who had a planned pregnancy had a less aesthetic compromise [3]. In our reported case, there was no aesthetic compromise other than the dark scar, which have improved after delivery. Throughout the pregnancy,

the patient reported no complications, and fetal US follow-ups showed normal fetal growth and development. However, during the postpartum follow-up, we observed abdominal bulging, which was not present before the pregnancy. This suggests that the pregnancy may have caused a weakening of the abdominal wall, leading to the bulging.

It is well known that pregnancy can have adverse effects on the abdominal wall, particularly in women who have weak abdominal muscles. In the case of our patient, despite the repair of the weak abdominal wall muscles during the abdominoplasty, the pregnancy still resulted in abdominal bulging. This highlights the importance of counseling patients thoroughly about the potential risks of pregnancy after abdominoplasty, even if they have completed their family.

The literature about pregnancy post abdominoplasty is scanty, and the majority are in the form of

**Table 1.** Demonstrate the reported case reports of pregnancy after abdominoplasty in the literature.

Autor/year	Patient age/ gravidity	Time between pregnancy after abdominoplasty (months)	Complications	Delivery route and gestational age	Birth weight	Aesthetic abdominal changes/follow-up time (months)
Peter Menz 1996 [8]	37/G4P3A1	36 months/(abortion) 60 months/(2° pregnancy)	Voluntary termination of pregnancy after medical advice	Elective cesarean section at term	'Normal'	N/D
Fabio Xerhan Nahas 2002 [4]	25/G2	30 months	None	cesarean section at 38 weeks	3250 g	Normal/15 months plication preserved
Borman Huseyin 2002 [9]	34/G3P2	2 months	None	N/D	N/D	Normal/12 months
Stephen D. Wallach 2002 [10]	24/G3P3	9 months	None	Vaginal	N/D	N/D
Ahmed Assas, et al. 2011 [11]	32/G1P0	60 months	Insufficient regional anaesthesia	Cesarean section (podalic)	N/D	N/D
I.W Darfelt; E.K Aasvang. 2014 [12]	32/N/D	24 months	Insufficient regional anaesthesia	cesarean section	N/D	N/D
Faessen JL et al. 2020 [5]	32/G3	12 months	None	Vaginal	N/D	No excess skin or striae was visible at clinical examination. No signs of rectus diastasis on physical examination or ultrasound.
Averbuch Sagie R et al. 2022 [3]**	Mean 30.1/N/D 32 patients	Mean 37.2 months Range 0–9 months	1 Miscarriage 1 Emergency C-section 5 Late preterm births	N/D	N/D	New abdominal wall hernia 6.3% New stretch marks 50% Abdominal scar expansion 28.1% Abdominal bulging 25.8% Normal aesthetics, no wall laxity
Villegas F Villegas JD 2020 TULUA case [7]	24/G2	8 months	None	Vaginal	Normal	Normal aesthetics, no wall laxity
Verónica María Pimentel † 2016 [13]	Average 33.7/2.7 99 patients	N/D	N/D	Vaginal 50.5% Cesarean section 49.5%	Similar to the general population	N/D

†n = 99 patients. \*\*32 patients; N/D: non-described.

Permission was obtained to reuse the table, reference [7].

case reports. After reviewing the literature, we provided a brief narrative review of the case reports in the literature in [Table 1](#). Further studies are required to assess the perinatal outcomes in women who got pregnant post abdominoplasty and how pregnancy can affect the results. Our study had several limitations, including: first, before abdominoplasty pictures were not available, which could have limited our ability to fully assess the impact of the initial operation on the patient's abdominal appearance. Second, although the post-pregnancy photos showed an impact on the aesthetic result, 4 months is a relatively short period to exclude the possibility of abdominal bulging.

### Conclusion

In this study, we did a comprehensive review of the literature and reported the first case in Saudi Arabia of a patient who had uneventful pregnancy after 1-month period post abdominoplasty. In addition to not having aesthetic compromise and having patient's satisfaction. The literature is scanty, and further studies are needed to assess how pregnancy post abdominoplasty can impact the perinatal outcomes.

### Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The authors have granted informed consent from the patients to use the images.

### Disclosure statement

No potential conflict of interest was reported by the author(s).

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