Case report

Feasibility and Safety of Concomitant Abdominal Procedures in a Low-Resource Setting: A Surgical Case Report

ABSTRACT

When abdominal conditions such as leiomyomas (uterine fibroids), incisional hernias, and pendulous abdomen that require surgical interventions occur simultaneously in an individual, they can be managed concurrently or in stages. Combining these procedures offers theoretical advantages such as avoiding a second surgery, reducing downtime from work, minimizing anaesthetic risks, and lowering costs. Safety concerns have been raised but evidence suggests that simultaneous surgery is safe with careful planning. We present a case of a 42-year-old woman who underwent a subtotal hysterectomy, right salpingo-oophorectomy, incisional hernioplasty, and abdominoplasty concurrently with successful outcomes.

Keywords: Leiomyoma; incisional hernia; hysterectomy; hernioplasty; abdominoplasty.

1. INTRODUCTION

Women seeking elective gynaecological surgeries may also have abdominal wall issues such as a pendulous abdomen, stretch marks from repeated pregnancies and deliveries, incisional hernias, or scars from previous surgeries [1]. These problems can be a source of discomfort and self-consciousness for many patients and may have a negative impact on their quality of life. In some cases, physical symptoms like hygiene challenges, skin problems, and a higher risk of infections may also be present [2].

Dealing with combined pathologies can be especially challenging in surgical practice. Treatment may involve multiple surgical interventions staged over time or a single operation to address multiple conditions simultaneously. In today's medical landscape, both patients and surgeons are increasingly considering the option of combining multiple surgeries in a single session. This approach offers several benefits, including reduced risks associated with anaesthesia, shorter recovery and healing times, decreased hospital stays, and lower overall costs [3,4]. Patients undergoing elective intraabdominal procedures with a pendulous abdomen may benefit from adding abdominoplasty for improved aesthetic results [4].

There is a common belief that combining procedures, such as general surgery and plastic or gynaecological interventions in a single surgical session, can impact patient morbidity and postoperative hospital stay compared to performing the procedures separately [3]. However, evidence suggests otherwise. In a study by Simon et al., patients who underwent abdominoplasty along with other intra-abdominal procedures did not experience a significant rise in complications [5].

Here, we present a middle-aged woman who underwent subtotal hysterectomy, right salpingo-oophorectomy, incisional hernioplasty, and abdominoplasty in one sitting.

2. CASE PRESENTATION

A 42-year-old woman with three previous caesarean deliveries presented to our surgical outpatient clinic with a 2-year history of progressive abdominal protrusion and heavy menstrual bleeding. The protrusion was noticeable around her incision scar, gradually increasing over time, especially when standing. She did not show signs of intestinal obstruction. She had a history of wound complications in her last delivery and noticed the abdominal protrusion two years later. She also experienced increased menstrual flow, clot

passage, and occasional dizziness, with no intermenstrual or postcoital bleeding. There was no family history of ovarian or endometrial malignancy. She did not want more pregnancies and had no other medical conditions.

Upon examination, she appeared pale with a pulse rate of 86 beats per minute, respiratory rate of 20 breaths per minute, and blood pressure of 110/70mmHg. Her abdomen protruded over the pelvis with a reducible mass [Figure1].

Fig. 1. Huge incisional hernia with pendulous abdomen

A defect in the infraumbilical fascia measured approximately 8 x 8 cm through which a firm nodular pelvic mass roughly the size of a 16-week pregnancy was palpable. A diagnosis of symptomatic uterine fibroid, along with an incisional hernia and grade IV anterior abdominal wall lipodystrophy, was established.

Her packed cell volume was 22.8%, haemoglobin concentration 7.2 g/dl, and kidney function tests were normal. An abdominopelvic ultrasound scan revealed multiple uterine fibroids. After optimization with blood transfusions, she underwent laparotomy, revealing a large infraumbilical hernia, a 20 x 20 cm defect, a 16-week size uterus with multiple myomas, and a right ovarian cyst measuring 8 x 7 x 6 cm [Figure 2].

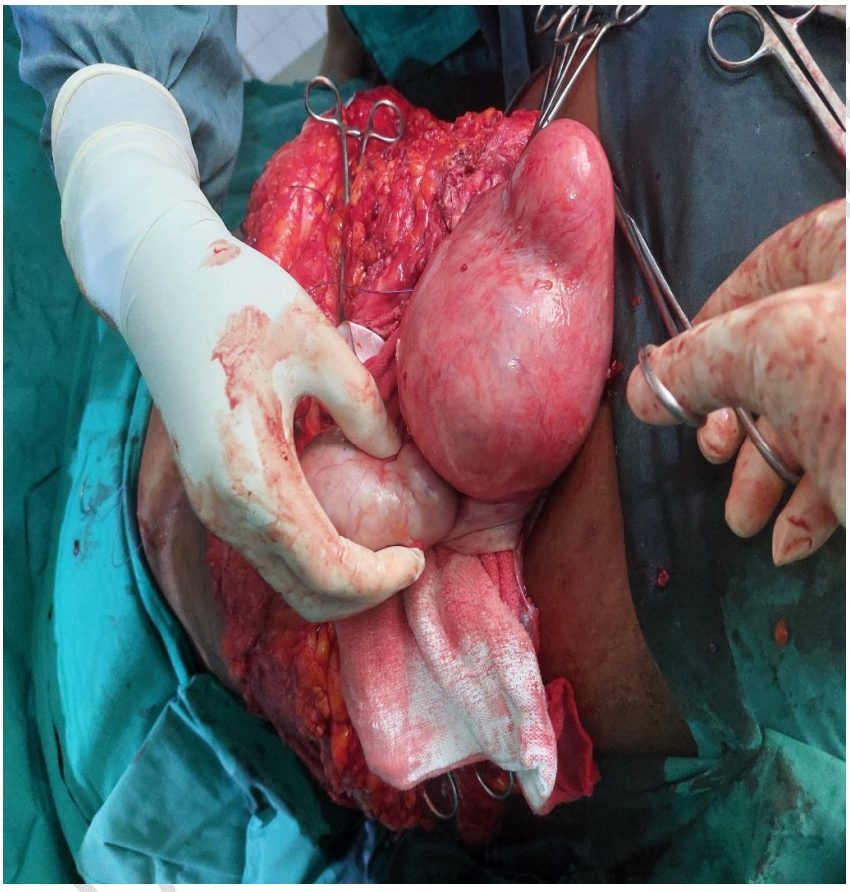

Fig. 2. Intraoperative photograph showing the uterus with myomas and right ovarian cyst

She had a subtotal hysterectomy, right salpingo-oophorectomy, incisional hernia repair with mesh, and abdominoplasty with excision of 1.4 kg of excess skin [Figures 3 and 4].

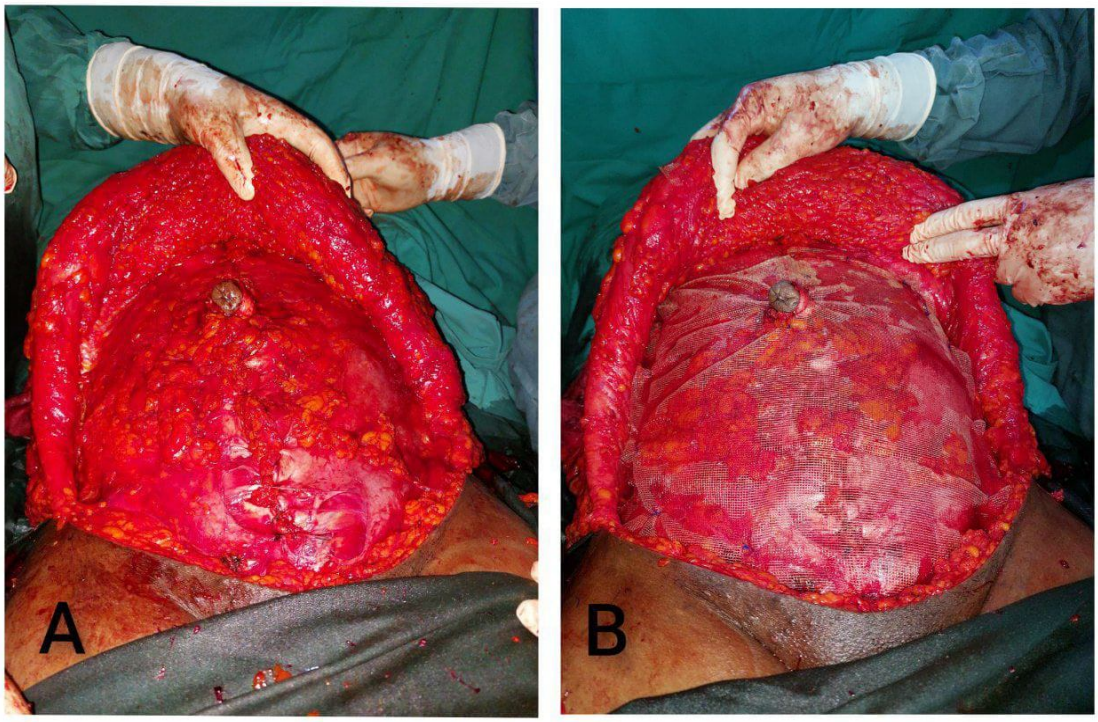

Fig. 3. Intraoperative photograph showing (A) flap elevation, and hernia defect closure, and (B) a view of the inserted mesh

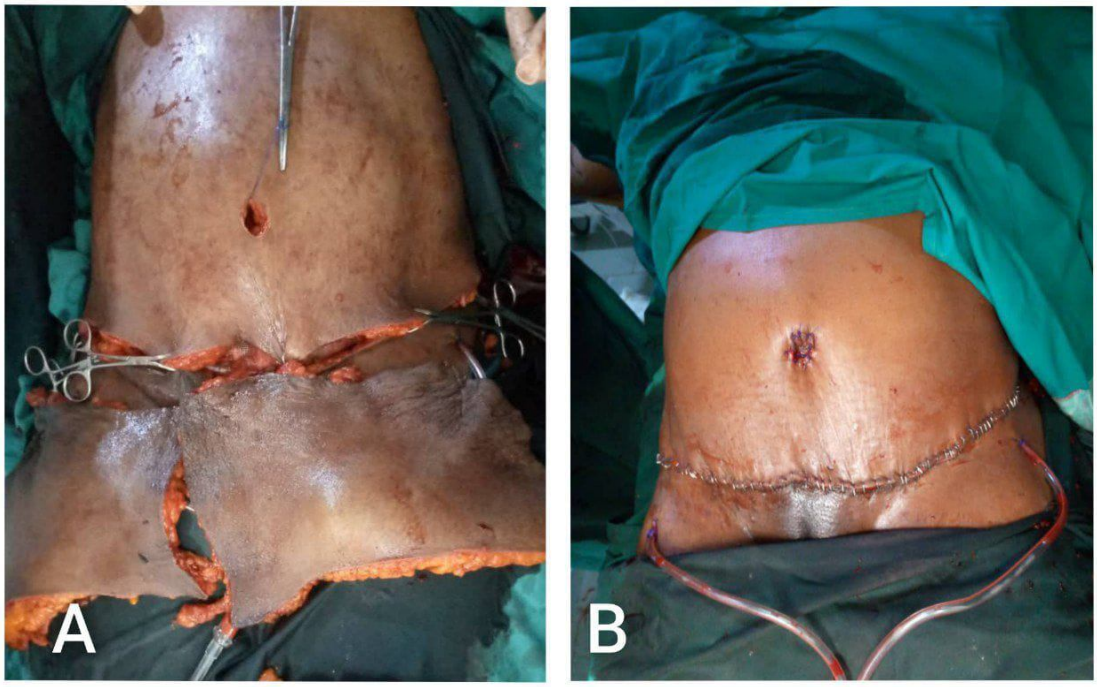

Fig. 4. (A) excised excess skin which weighed 1.4 kg and (B) the postoperative photograph after hernioplasty and abdominoplasty

She experienced minimal serous discharge from her operation wound postoperatively which resolved within five days of dressing and was discharged on postoperative day 12. She was followed up in the outpatient clinic and discharged in good condition after six months.

3. DISCUSSION

Combining abdominoplasty with other procedures, such as gynaecologic surgeries or aesthetic enhancements like breast augmentation, has garnered interest in the medical field [1,3,6]. Addressing abdominal wall defects, such as incisional hernias, during abdominoplasty is also a viable option [7].

We performed a subtotal hysterectomy, right salpingo-oophorectomy, incisional hernioplasty, and abdominoplasty in a single surgery to address our patient's issues with uterine fibroids, incisional hernia, and an embarrassing pendulous abdomen. Combining these procedures

offered several advantages, such as avoiding multiple surgeries, reducing downtime from work, and minimizing the risks associated with anaesthesia. This approach was also cost-effective for the patient. Another benefit that patients can derive when these procedures are combined is amelioration of psychological stress from having an apron belly, which will boost their self-confidence thereby improving their quality of life [4].

While the combined procedures offer potential benefits, patient safety remains the top priority for surgeons [3]. Anticipated risks include longer and more complex surgeries, higher chances of complications like infection and problem with wound healing, increased risk of blood loss and transfusions, mesh-related issues, and potential hysterectomy-related risks such as urinary tract injuries or vaginal cuff complications. It therefore means that surgeons must carefully weigh the benefits and risks of combining these procedures to ensure the best possible outcome for the patient.

Seroma is the most commonly reported complication in concomitant abdominal surgeries with a range of 0.04-38% followed by wound infection with an estimated incidence of 3.12-10.8% [7,8]. In our case, we did not observe seroma or hematoma, likely due to careful haemostasis and proper drain use. The superficial surgical site infection in the index case resolved within five days of wound dressing with povidone iodine solution. Factors such as age, comorbidity, body mass index and the experience of the surgeon have been implicated to influence complication rates [7].

Our case report aligns with the findings of other relevant reports, indicating that combining abdominoplasty with other elective abdominal procedures can be beneficial when done carefully and with the right patient selection [4,5,9].

4. CONCLUSION

Combined abdominal surgical conditions in a patient present a unique challenge in surgical practice, requiring careful considerationof the best treatment approach. This may involve staged treatment with multiple surgical interventions or a simultaneous operation to address multiple conditions at once. Patients often prefer the latter option for its combined functional andaesthetic benefits over staged surgeries. However, performing concomitant abdominoplasty and elective abdominal procedures, as discussed here, is not without risks during surgery and the postoperative period. Therefore, it is imperative to carefully select patients, use precise surgical techniques, and provide comprehensive postoperative care to minimize perioperative risks. The goal of achieving the desired outcome while reducing risk to the patient by opting for a single operation can be safely accomplished by a proficient surgical team, even in a resource-limited setting.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard, written ethical approval has been collected and preserved by the author(s).

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