

EKSTREMNA GOJAZNOST I TOTALNA LAPAROSKOPSKA HISTEREKTOMIJA - PRIKAZ SLUČAJA

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CASE REPORT

EXTREME OBESITY AND TOTAL LAPAROSCOPIC HYSTERECTOMY – CASE REPORT

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SAŽETAK

Uvod: Laparoskopski pristup se ranije nije razmatrao za gojazne osobe, upravo zbog povećanog rizika od operativnih i postoperativnih komplikacija. Poslednjih godina, međutim, pristup se promenio u korist minimalno invazivnih procedura kojima se izbegava laparotomija, koja je kod gojaznih osoba najčešći uzrok komplikacija, u vidu sporijeg i otežanog zarastanja rana, krvarenja i infekcija na mestu laparotomije. I dalje je, u hitnim situacijama, ekstremna gojaznost praćena višestrukim komorbiditetima pravi izazov za endoskopsku hirurgiju, endoskopskog hirurga i kompletan hirurški i anesteziološki tim.

Prikaz slučaja: Predstavljamo slučaj šezdesetjednogodišnje, ekstremno gojazne pacijentkinje, koja je hitno primljena u bolnicu, zbog produženog vaginalnog krvarenja i anemije. Nakon preoperativne pripreme, pacijentkinja je operisana – izvršena je totalna laparoskopska histerektomija sa bilateralnom salpingo-ooforektomijom.

Zaključak: Gojaznost je veliki problem u savremenom društvu. Osim što direktno utiče na zdravlje, prekomerna telesna masa kod pacijenata veoma otežava izvođenje hirurških zahvata. Debljina trbušnog zida i prateći zdravstveni problemi predstavljaju kontraindikaciju za laparoskopske operacije. U ovakvim slučajevima, za izvođenje hirurških operacija, posebno laparoskopskih, potrebno je imati stručno obučeni tim i odgovarajuću tehničku opremu. Laparoskopska hirurgija ima sve veću zastupljenost, čak i u najtežim slučajevima. Prikazom ovog slučaja želimo da pokažemo da je moguće uspešno uraditi totalnu laparoskopsku histerektomiju kod ekstremno gojaznih pacijentkinja sa brojnim komorbiditetima, čak i u hitnim situacijama.

Ključne reči: ekstremna gojaznost, histerektomija, endoskopska hirurgija

ABSTRACT

Introduction: Previously, the laparoscopic approach was not considered for obese people, because of the increased risk of operative and postoperative complications. In recent years, however, the approach has changed in favor of minimally invasive procedures that avoid laparotomy, which, in obese people, is the most common cause of complications, in the form of slower and aggravated wound healing, bleeding, and infections at the laparotomy site. In emergency situations, extreme obesity accompanied by multiple comorbidities still remains a real challenge for endoscopic surgery, the surgeon and the entire surgical and anesthesiology team.

Case report: We present a case of a 61-year-old, extremely obese patient, who was admitted to hospital as an emergency case, due to prolonged vaginal bleeding and anemia. After preoperative preparation, the patient underwent surgery – laparoscopic total hysterectomy with bilateral salpingo-oophorectomy.

Conclusion: Obesity is a major problem in modern society. In addition to directly affecting health, excessive body weight in a patient makes it very difficult to perform surgical procedures. The thickness of the abdominal wall and accompanying health problems are a contraindication for laparoscopic operations. In such cases, performing surgery, especially laparoscopic procedures, requires a trained team of professionals and appropriate equipment. Laparoscopic surgery is more and more present, even in the most difficult cases. In presenting this case, we aimed to demonstrate that it is possible to successfully perform total laparoscopic hysterectomy in extremely obese patients with associated health problems, even in emergency situations.

Keywords: extreme obesity, hysterectomy, endoscopic surgery

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UVOD

Gojaznost je ozbiljan zdravstveni problem modernog društva. Gojazne žene su pod većim rizikom od određenih ginekoloških oboljenja, uključujući tu i hiperplaziju endometrijuma i karcinom endometrijuma [1]. Takođe, prekomerna telesna masa otežava izvođenje operativnih zahvata kod ovakvih pacijenata, te predstavlja neposredni izvor povećanog rizika od komplikacija, i tokom operacije, ali i kasnije, u postoperativnom toku [2]. Normalan indeks telesne mase (engl. *body mass index* - BMI) kreće se u rasponu od 25 – 29,9 kg/m². Vrednost BMI iznad 30 kg/m² predstavlja indeksprekomerne telesne mase. Gojaznost je hronična bolest, koja je snažno povezana sa povećanjem mortaliteta i morbiditeta, uključujući dijabetes melitus, hipertenziju, kardiovaskularna oboljenja, invalidnost, moždani udar, i ostala hronična oboljenja [3]. Sva ova stanja, posebno insulin zavisni dijabetes melitus (engl. *insulin dependent diabetes mellitus* – IDDM), takođe su povezana sa povećanim rizikom od intraoperativnih i postoperativnih komplikacija [4,5].

Do nedavno, laparoskopski pristup se smatrao pogodnim samo za vitke ljude, baš zbog povećanog rizika [6]. Poslednjih godina, međutim, došlo je do promene stava u korist minimalno invazivnih hirurških zahvata kojima se izbegava laparotomija, koja kod gojaznih ljudi predstavlja najčešći uzrok komplikacija, u obliku sporijeg i otežanog zarastanja rane, krvarenja, te infekcija na mestu hirurškog reza [7].

Ipak, ekstremna gojaznost udružena sa višestrukim komorbiditetima i dalje predstavlja ozbiljan izazov u endoskopskoj hirurgiji, kako za hirurga tako i za ceo hirurški i anesteziološki tim, posebno u hitnim stanjima.

PRIKAZ SLUČAJA

Šezdesetjednogodišnja pacijentkinja primljena je u bolnicu, kao hitan slučaj, usled dugotrajnog vaginalnog krvarenja i teške anemije. Dva meseca pre toga, kod ove pacijentkinje su uspešno izvedene endometrijalna polipektomija i frakcionisana eksplorativna kiretaža. Histopatološki nalaz je ukazao na endometrijalnu hiperplaziju sa atipijom. Ova pacijentkinja je ujedno imala i kardiovaskularne probleme, insulin zavisni dijabetes melitus i hipotiroidizam.

Na prijemu, njena telesna masa je bila 132 kg, dok je njena visina bila 172 cm (BMI = 44,62 kg/m²); krvni pritisak je iznosio 170/90 mmHg; glikemija je bila 4,2 mmol/l. Rezultati laboratorije su potvrdili tešku anemiju: broj eritrocita = $2,4 \times 10^6$; hemoglobin = 61,0 g/l; Hct = 18,7.

Anemija je kod pacijentkinje korigovana transfuzijama krvi (3 doze). Učinjene su pripreme za hirurško lečenje. Pre operacije, nakon što je pacijentkinja provela tri dana u našoj bolnici, njen internistički status se popravio – krvni pritisak je bio 140/80 mmHg, dok su rezultati

INTRODUCTION

Obesity is a serious health problem of modern society. Obese women are at higher risk of developing certain gynecological diseases including endometrial hyperplasia and endometrial carcinoma [1]. In addition, excessive body weight makes it difficult to perform surgical procedures in such patients and represents an immediate source of increased risk of complications during surgery and later, during postoperative recovery [2]. Normal body mass index (BMI) values range from 25 - 29.9 kg/m². A BMI over 30 kg/m² is an indication of excess body weight. Obesity is a chronic disease, which is also strongly associated with an increase in mortality and morbidity, including diabetes mellitus, hypertension, cardiovascular disease, disability, stroke, and other chronic diseases [3]. All these conditions, especially insulin dependent diabetes mellitus (IDDM), are also associated with a higher risk of intraoperative and postoperative complications [4,5].

Until recently, the laparoscopic approach was considered only for slender people, precisely because of the increased safety risk [6]. In recent years, however, the approach has changed in favor of minimally invasive procedures that avoid laparotomy, which, in obese people, is the most common cause of complications, in the form of slower and aggravated wound healing, bleeding, and infections at the laparotomy site [7].

Nevertheless, extreme obesity accompanied by multiple comorbidities remains a real challenge for endoscopic surgery, the endoscopic surgeon and the entire surgical and anesthesiology team, especially in emergency situations.

CASE REPORT

A 61-year-old patient was admitted to hospital, as an emergency case, due to prolonged vaginal bleeding and severe anemia. Endometrial polypectomy and fractional curettage procedures had successfully been performed two months previously. The histopathological finding indicated endometrial hyperplasia with atypia. This was a cardiovascular patient with insulin-dependent diabetes mellitus and hypothyroidism.

On admission, the patient's body weight was 132 kg, while her height was 172 cm (BMI = 44.62 kg/m²); her blood pressure was 170/90 mmHg; her glycemia was 4.2 mmol/l. Laboratory blood test results confirmed severe anemia: red blood cell count = 2.4×10^6 ; hemoglobin = 61.0 g/l; HCT = 18.7.

The patient's anemia was corrected with blood transfusions (3 doses). Preparations were made for surgical treatment. Before the operation, after spending three days in our hospital, the patient's overall status was improved – her blood pressure was 140/80 mmHg,

laboratorije krvi bili značajno bolji: broj eritrocita = $4,06 \times 10^6$; Ht = 32,5; hemoglobin = 104,0 g/l. Međutim, vaginalno krvarenje se održavalo, uz promenljivi intenzitet.

Pacijentkinja je podvrgnuta hitnoj operaciji – totalna laparoskopska histerektomija sa bilateralnom salpingooforektomijom. Operacija je prošla bez komplikacija, trajala je 110 minuta, uz gubitak krvi od 152,7 ml.

Postoperativno, pacijentkinja je nastavila da prima internističku terapiju, kao i antibiotike. Finalni histopatološki nalaz je bio – atipična endometrijalna hiperplazija. Pacijentkinja se oporavila bez komplikacija i otpuštena je iz bolnice trećeg postoperativnog dana.

DISKUSIJA

Gojaznost je ozbiljan, rastući problem, koji pogađa zdravlje ljudi širom sveta. Broj žena čiji je BMI iznad 40 dostigao je skoro 7,5% u Sjedinjenim Američkim Državama [8]. Osim što direktno utiče na zdravlje, prekomerna telesna masa kod pacijenata značajno otežava izvođenje hirurških zahvata. Debljina trbušnog zida i prateći zdravstveni problemi predstavljaju kontraindikaciju za laparoskopske operacije [6]. Takođe, morbidna gojaznost predstavlja ozbiljan problem kada je u pitanju ventilacija, pošto smanjuje respiratornu komplijansu, povećava pritisak u disajnim putevima, i slabi srčanu funkciju [9].

U ovom trenutku, hirurzi su još uvek nedovoljno upoznati sa laparoskopskim operacijama na pacijentima čiji je BMI > 40, možda zbog inicijalnog ulaza trokara, plasmana porta, kontrole hiperkapnije ili zbog više stope konverzije u otvorenu operaciju. Ipak, laparoskopske operacije su sve prisutnije čak i u najtežim slučajevima [10]. Podrazumeva se da je za izvođenje hirurških operacija, posebno laparoskopskih, potrebno imati stručno obučeni tim i odgovarajuću tehničku opremu. Vreme trajanja naše operacije, kao i gubitak krvi kod pacijentkinje, komparabilni su sa podacima iz literature koji se odnose na gojazne ali i na pacijente normalne telesne mase [10]. Pacijentkinja je otpuštena iz bolnice trećeg postoperativnog dana, što je za jedan do dva dana duža hospitalizacija od standardnog protokola za pacijentkinje sa normalnom telesnom masom koje se podvrgavaju totalnoj laparoskopskoj histerektomiji. Međutim, u obzir se moraju uzeti i brojni komorbiditeti, te ozbiljna anemija koja je bila prisutna kod pacijentkinje. Na koncu, pacijentkinja je otpuštena iz bolnice četiri dana ranije nego što bi to bio slučaj da je izvršena otvorena operacija, a sama intervencija je prošla bez ikakvih postoperativnih komplikacija.

Prikazom ovog slučaja želeli smo da pokažemo da je moguće uspešno izvesti laparoskopske operacije kod ekstremno gojaznih pacijenata sa brojnim komorbiditetima, čak i u hitnim situacijama.

Sukob interesa: Nije prijavljen.

while the blood test results were significantly better: red blood cell count = 4.06×10^6 ; HCT = 32.5; hemoglobin = 104.0 g/l. However, the vaginal bleeding remained constant, with varying intensity.

The patient underwent emergency surgery – laparoscopic total hysterectomy with bilateral salpingo-oophorectomy. The procedure was without complications, lasting 110 minutes, with a blood loss of 152.7 ml.

Postoperatively, the patient continued to receive the necessary therapy, including antibiotics. The final histopathological finding was – atypical endometrial hyperplasia. The patient recovered without experiencing any complications and was dismissed on the third postoperative day.

DISCUSSION

Obesity is a major and increasing problem that affects people's health worldwide. The number of women with a BMI over 40 has increased to nearly 7.5% in the United States [8]. In addition to directly affecting health, excessive body weight in the patient makes it very difficult to perform surgical procedures. The thickness of the abdominal wall and accompanying health problems are a contraindication for laparoscopic operations [6]. Also, morbid obesity is a significant challenge with respect to ventilation, as it decreases respiratory compliance, increases airway pressure, and impairs cardiac function [9].

At present, surgeons are still unfamiliar with laparoscopic operations on patients with a BMI > 40, possibly due to initial trocar entry, port placement, management of hypercarbia or a higher rate of laparotomy conversions. Nevertheless, laparoscopic surgery is more and more present even in the most severe cases [10]. It goes without saying that surgery, especially laparoscopic procedures, requires a trained team of professionals and appropriate equipment. Our operation time and blood loss were comparable with literature data for obese as well as for normal weight patients [10]. The patient was discharged on the third postoperative day, which is a day or two longer than the standard protocol for normal weight patients undergoing total laparoscopic hysterectomy. However, the patient's numerous comorbidities and significant anemia before the operation also need to be taken into consideration. Ultimately, the discharge was four days earlier than it would have been if open surgery had been performed, and the procedure was performed without any postoperative complications.

In presenting this case, we aimed to demonstrate that it is possible to successfully perform laparoscopic procedures in extremely obese patients with multiple comorbidities, even in emergency situations.

Conflict of interest: None declared.

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