Vol. 116, Supplement 2, September 2021
www.revistachirurgia.ro

ISSN: 1221-9118
ISSN (online): 1842-368X

Chirurgia

SINCE 1897

Indexed in:

Medline / PubMed / Index Medicus
Clarivate Analytics - Emerging Sources Citation Index (ESCI) - Web of Science

SCIENTIFIC PROGRAM & ABSTRACTS

Editura CELSIUS

CHIRURGIA

Vol. 116 • Supplement 2 • 2021

THE XIITH NATIONAL SYMPOSIUM OF BARIATRIC AND METABOLIC SURGERY

THE IInd NATIONAL SYMPOSIUM OF ROBOTIC SURGERY

Virtual Events • 10 - 12 December • 2020

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& ABSTRACTS

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Volume 116, Supplement 2, September 2021

OFFICIAL JOURNAL OF THE

ROMANIAN SOCIETY OF SURGERY

ROMANIAN ASSOCIATION OF ENDOSCOPIC SURGERY AND OTHER INTERVENTIONAL TECHNIQUES (ARCE)

ROMANIAN SOCIETY OF THORACIC SURGERY - 1994

ROMANIAN SOCIETY OF EMERGENCY AND TRAUMATOLOGY SURGERY

"NICOLAE ANESTIADI" SURGEONS ASSOCIATION OF THE REPUBLIC OF MOLDOVA

ROMANIAN SOCIETY OF METABOLIC SURGERY

ROMANIAN SOCIETY OF BREAST SURGERY AND ONCOLOGY

Indexing:

Chirurgia journal is indexed, by MEDLINE / PubMed / Index Medicus, EBSCO, Scopus, SCImago, Emerging Sources Citation Index (ESCI) from 2018
Chirurgia journal, was indexed by the Web of Science (Journal Citation Index Expanded and Journal Citation Report), a Thomson Reuters Database, starting from 2008 until 2013 (volume 108, issue 6, November - December)

CME Credits: 10 (Romanian College of Physicians); CNCSIS Category B+ journal

CrossRef: http://dx.doi.org/10.21614/chirurgia

Chirurgia (2021) 116: S5-S14
Supplement 2, September

http://dx.doi.org/10.21614/chirurgia.116.Supplement 2.S5

The XIIth National Symposium of Bariatric and Metabolic Surgery

Joi, 10 Decembrie 2020 / Thursday, 10 December 2020

Surgical Training Institute - Sala 1 / Surgical Training Institute - Hall 1

09:30 - 09:40 **Events' Opening Ceremon**

Moderator / Chairperson:
Cătălin Copăescu (Bucharest, Romania)

09:30 - 09:32 **Mesaj de deschidere**
Welcome address
Cătălin Copăescu (Bucharest, Romania)

09:32 - 09:35 **Discurs de bun venit**
Opening guest's speech
Horațiu Moldovan (Bucharest, Romania)

09:35 - 09:40 **40 ani de chirurgie metabolicã în România**
40 years of metabolic surgery in Romania (Abstract 1-01)
Cătălin Copăescu (Bucharest, Romania)

09:40 - 10:00 **Break**

10:00 - 11:35 **Session I: Hot topics for metabolic surgery in 2020**

Moderatori I Chairpersons:
Cătălin Copăescu (Bucharest, Romania)
Ramon Vilallonga (Barcelona, Spain) sau Dan Timofte (Iași, Romania)

10:00 - 10:15 **Există loc pentru chirurgia metabolică în timpul pandemiei COVID-19?**
Is there a place for metabolic surgery in the COVID-19 pandemic times? (Abstract 1-02)
Ciprian Duță (Timișoara, Romania)

10:15 - 10:30 **Nu aparțin unui cult, ci pacientului meu - relevanța algoritmilor în chirurgia bariatrică!**
I do not belong to a cult, I belong to my patient - relevance on algorithm in bariatric surgery!
Mohit Bhandari (Indore, India)

10:30 - 10:45 **Sutura endoscopică în managementul obezității**
Endoscopic suturing in obesity management
Ravishankar Asokkumar (Singapore, Singapore), Gontrand Lopez Nava (Madrid, Spain)

10:45 - 11:00 **Un algoritm de tratament pentru un bypass ineficient**
A treatment algorithm for a failed bypass
Bruno Dillemans (Bruges, Belgium)

11:00 - 11:15 **Chirurgia bariatrică robotică - noi tendințe**
Robotic bariatric surgery - new trends
Ramon Vilallonga (Barcelona, Spain)

11:15 - 11:35 **Discussions**

11:35 - 11:40 **Break**

11:40 - 12:10 **Session II: Keynote Lecture**
Moderator | Chairperson:
Cătălin Copăescu (Bucharest, Romania)

Nicola Scopinaro - Personalitate de referință în chirurgia bariatrică
Nicola Scopinaro - A milestone in bariatric surgery
Luigi Angrisani (Milan, Italy)

Discussions

12:10 - 12:30 **Break**

12:30 - 14.00 **Session III: Rationale and results of combined procedures in 2020**
Moderatori | Chairpersons:
Ciprian Duță (Timișoara, Romania)
Rubin Munteanu (Bucharest, Romania)

12:30 - 12:45 **Endoscopia bariatrică - este aceasta puntea pe care am dorit-o între managementul medical și tratamentul chirurgical al obezității și al diabetului?**
Bariatric endoscopy - is that the bridge we wanted between medical management and surgical treatment of obesity and diabetes?
Mohit Bhandari (Indore, India)

12:45 - 13:00 **Rolul ansei biliopancreatice în RYGB și OAGB**
The role of the biliopancreatic limb in RYGB and OAGB
Gerhard Prager (Wien, Austria)

13:00 - 13:15 **Proceduri bariatrice de bandare pentru menținerea scăderii ponderale: rezultate obiective**

Banding bariatric procedures to enhance weight loss maintenance: objective data

Mathias Fobi (Indore, India)

13:15 - 13:25 **Bandajul gastric laparoscopic ajustabil după gastrectomie longitudinală ineficienta - experiența noastră cu primele 29 de cazuri**

Laparoscopic adjustable gastric band after failed sleeve gastrectomy - our experience with first 29 cases

Rubin Munteanu (Bucharest, Romania) (Abstract 1-03)

13:25 - 13:35 **Împletirea obezității cu depresia**

Obesity and depression intertwined

Daniel Timofte (Iași, Romania), Petru Soroceanu (Iași, Romania) Abstract 1-04

13:35 - 13:45 **Statusul nutrițional la pacienții cu obezitate severă, cu sau fără diabet de tip 2, înainte și după gastrectomia longitudinală**

Nutritional status of severely obese patients with and without type 2 diabetes before and after sleeve gastrectomy

Adriana Florinela Cătoi Galea (Cluj-Napoca, Romania) Abstract 1-05

13:45 - 14:00 **Discussions**

14:00 - 15:00 **Lunch break**

14:05 - 14:35 **Industry symposium Medtronic**

15:00 - 17:30 **Session IV: For better outcomes and complex bariatric surgery**

Moderatori | Chairpersons:

Dan Timofte (Iași, Romania) sau Cristian Eugeniu Boru (Rome, Italy)
Bogdan Smeu (Bucharest, Romania)

15:00 - 15:15 **Recâștigarea în greutate după gastrectomia longitudinală**

Weight regain after sleeve gastrectomy

Norbert Runkel (Einsiedeln, Switzerland)

15:15 - 15:30 **Predictorii de recâștigare în greutate după gastrectomia longitudinală: un review**

Predictors of weight regain after sleeve gastrectomy: a review Abstract 1-06

Ciprian Duță (Timișoara, Romania)

15:30 - 15:45 **Mecanismele implicate în recâștigarea în greutate după intervenția chirurgicală bariatrică**

Mechanisms involved in weight regain after bariatric surgery

Andreea Ciudin (Barcelona, Spain)

15:45 - 16:00 **Repararea concomitentă a herniei hiatale în timpul intervenției chirurgicale bariatrice: face ranforsarea diferența?**

Concomitant hiatal hernia repair during bariatric surgery: does the reinforcement make the difference?

Cristian Eugeniu Boru (Rome, Italy) Abstract 1-07

16:00 - 16:15 **Complicații chirurgicale bariatrice în pandemia COVID-19 - un scenariu de coșmar pentru chirurgii generaliști**

Bariatric surgery complications in COVID-19 pandemic - a nightmare scenario for general surgeons

Ionuț Hutopilă (Bucharest, Romania), Catalin Copaescu (Bucharest, Romania), Abstract 1-08

16:15 - 16:30 **Discussions**

SHORT COMUNICATIONS

16:30 - 16:40 **Modificări ale glicemiei și greutății după chirurgie bariatrică - Studiul experimental pe șoareci cu diabet și obezitate induse**

Metabolic and weight changes after bariatric surgery in a rat model of induced type 2 diabetes mellitus and obesity

Cristi Tarță (Timișoara, Romania) Abstract 1-09

16:40 - 16:50 **Utilizarea ICG în chirurgia bariatrică revizională**

The use of ICG in revisional bariatric surgery

Simona Filip (Bucharest, Romania) Abstract 1-10

16:50 - 17:00 **Pancreaticoduodenectomie laparoscopică după bypass gastric Roux-en-Y - prezentare de caz**

Laparoscopic pancreaticoduodenectomy after Roux-en-Y gastric bypass - case report

Silviu Tiberiu Makkai Popa (Luxembourg, Luxembourg) Abstract 1-11

17:00 - 17:10 **Infiltrația preperitoneală prin port anestezic asigură o recuperare mai bună după gastric sleeve**

Port anesthetic properitoneal infitration ensures a better recovery after gastric sleeve

Radu Scurtu (Cluj-Napoca, Romania) Abstract 1-12

17:10 - 17:30 **Discussions**

17:30 - 18:00 **ARCE Board Meeting**

The IInd National Symposium of Robotic Surgery
Day 1

Vineri, 11 Decembrie 2020 | Friday, 11 December 2020

09:30 - 09:55 **Symposium Opening Ceremony**

Moderator | Chairperson:
Cătălin Copăescu (Bucharest, Romania)

09:30 - 09:32 **Cuvânt de deschidere**
Welcome Address
Cătălin Copăescu (Bucharest, Romania)

09:32 - 09:40 **Discurs de bun venit**
Welcome guest's speech
Cristian Vlădescu (Bucharest, Romania)

09:40 - 09:55 **15 ani de chirurgie robotică în România**
15 years of robotic surgery in Romania
Irinel Popescu (Bucharest, Romania)

09:55 - 10:00 **Break**

10:00 - 11:50 **Session I: Looking for better outcomes in robotic surgery**

Moderatori | Chairpersons:
Bogdan Petruț (Cluj-Napoca, Romania)
Cristian Iatagan (Bucharest, Romania)
Deliu Victor Matei (Milan, Italy)

10:00 - 10:15 **Nefrectomia parțială robotică: rolul, gestiunea ischemiei și viitorul**
Robotic partial nephrectomy: the role, ischemia management and the future
(12-15') Deliu Victor Matei (Milan, Italy) Abstract 2-01

10:15 - 10:30 **Continență urinară după prostatectomie radicală robotică. Experiența primei părți a curbei de învățare**
Urinary continence after robotic radical prostatectomy. Experience of the first part of the learning curve
(12-15') Alin Cumpănaș (Timișoara, Romania)

10:30 - 10:45 **Adrenalectomia robotică pentru o tumoră voluminoasă de glandă suprarenală prin abord transperitoneal**
Robotic adrenalectomy for a voluminous adrenal tumor using a transperitoneal approach
Bogdan Petruț (Cluj-Napoca, Romania) Abstract 2-02

10:45 - 11:00 **Nefrectomie parțială robotică, de la zero ischemie la un caz foarte dificil**

Robotic partial nephrectomy, from zero ischemia to very challenging case

Apostolos P. Labanaris (Thessaloniki, Greece) Abstract 2-03

11:00 - 11:15 **Repararea robotică a leziunilor ureterale iatrogene din timpul histerectomiei asistate robotic**

Robotic repair of iatrogenic ureteral injury during robotic histerectomy

Cristian Blăjuț (Bucharest, Romania) Abstract 2-04

11:15 - 11:30 **Robotul Da Vinci X vs. Laparoscopia 3D în realizarea prostatectomiei radicale cu rezultate trifecta și pentafecta**

Da Vinci X robot vs. 3D laparoscopy in performing radical prostatectomy with Trifecta and Pentafecta results

Bogdan Petruț (Cluj-Napoca, Romania) Abstract 2-05

11:30 - 11:50 **Discussions**

11:50 - 12:00 **Break**

12:00 - 12:30 **Industry Symposium Rombiomedica - Robotic Surgery / Senhance - Transenterix**

Conferențiari | Speakers:

Wouter Donders (Lugano, Switzerland)

Dietmar Stephan (Siegen, Germany)

12:30 - 12:35 **Break**

12:35 - 14:35 **Session II: Upper GI and thoracic robotic surgery**

Moderatori | Chairpersons:

Cătălin Copăescu (Bucharest, Romania)

Ciprian Duță (Timișoara, Romania)

12:35 - 12:50 **Gastrectomie totală robotică**

Robotic total gastrectomy

Paolo Pietro Bianchi (Milan, Italy)

12:50 - 13:05 **Ar trebui gastrectomia robotică să devină o opțiune standard de tratament chirurgical pentru cancerul gastric?**

Should robotic gastrectomy become a standard surgical treatment option for gastric cancer?

Ciprian Duță (Timișoara, Romania) Abstract 2-06

13:05 - 13:20 **Pancreatoduodenectomie robotică prin abordare robotică sau hibridă?**

Robotic pancreatoduodenectomy by robotic or hybrid approach?

Cătălin Copăescu (Bucharest, Romania), Bogdan Dumbrava (Bucharest, Romania) Abstract 2-07

13:20 - 13:35 **Esofagectomie minim-invazivă asistată robotic**
RAMI esophagectomy
Tsvetan Minchev (Sofia, Bulgaria)

13:35 - 13:50 **Experiența noastră după primele 100 de cazuri de chirurgie robotică**
Our experience after first 100 robotic cases
Emmanouil Georgiannakis (Athens, Greece)

SHORT COMUNICATIONS

13:50 - 14:00 **Esofagectomia robotică Ivor-Lewis**
Robotic Ivor-Lewis esophagectomy
Liviu Mugurel Bosînceanu (Brașov, Romania) Abstract 2-08

14:00 - 14:10 **Rezecția primei coaste prin abord robotic**
First rib resection by robotic approach
Felix Dobrițoiu (Bucharest, Romania) Abstract 2-09

14:10 - 14:35 **Discussions**

14:35 - 15:30 **Lunch break**

15:30 - 16:10 **Session III: Keynote Lecture**

Moderator I Chairperson:
Cătălin Copăescu (Bucharest, Romania)

Repararea robotică a herniilor peretelui abdominal
Robotic repair of abdominal wall hernias
Paolo Pietro Bianchi (Milan, Italy)

Discussions

16:10 - 16:15 Break

16:15 - 18:20 **Session IV: Oncologic pelvic robotic surgery**

Moderatori | Chairpersons:
Irinel Popescu (Bucharest, Romania)
Elvira Brătilă (Bucharest, Romania)
Alexandru Florin Săvulescu (Bucharest, Romania)

16:15 - 16:30 **Exenterația pelvină anterioară robotică - în cancerul invaziv extins al vezicii urinare**
Anterior robotic pelvic exenteration - in extensive invasive bladder cancer
Mircea Onaca (Bucharest, Romania)

16:30 - 16:45 **Chirurgia robotică a cancerului de col uterin în contextul oncologic actual**
Robotic surgery for uterine cervical cancer in the current oncological context
Elvira Brătilă,Cătălin Coroleucă (Bucharest, Romania) Abstract 2-10

16:45 - 17:00 **Robotul Da Vinci X vs. Laparoscopia 3D în realizarea cistectomiei / cistoprostatectomiei radicale cu limfadenectomie pelvină și neovezică ileală total intracorporeal**
Da Vinci X robot vs. 3D laparoscopy in performing radical cystectomy / cystoprostatectomy and pelvic lymphadenectomy with totally intracorporeal ileal neobladder
Bogdan Petruț (Cluj-Napoca, Romania) Abstract 2-11

17:00 - 17:15 **Posterior microscopic anterior robotic assisted resection staged resection of dumbbell neuroganglioma**
Bogdan Smeu, Cătălin Copăescu (Bucharest, Romania) Abstract 2-12

17:15 - 17:30 **Prezentare generală a chirurgiei robotice rectale: experiența noastră**
Overview of robotic rectal surgery: our experience
Alexandru Florin Săvulescu (Bucharest, Romania) Abstract 2-13

17:30 - 17:45 **Rolul roboticii in reparaea fistulelor vezico-vaginale**
The role of robotics in the repair of bladder-vaginal fistulas
Deliu Victor Matei (Milan, Italy) Abstract 2-14

17:45 - 18:00 **TME robotizat în 12 pași sfaturi și trucuri de procedură după 150 de cazuri**
Robotic TME in 12 steps procedure tips and tricks after 150 cases
Victor Tomulescu (Bucharest, Romania), Cătălin Copăescu (Bucharest, Romania)
Abstract 2-15

18:00 - 18:20 **Discussions**

The IInd National Symposium of Robotic Surgery
Day 2

Sâmbătă, 12 Decembrie 2020 | Saturday, 12 December 2020

09:00 - 11:00 **Masterclass in robotic surgery (I)**

Moderatori | Chairpersons:
Ioan Coman (Cluj-Napoca, Romania)
Christoph Iselin (Geneva, Switzerland)

09:00 - 09:15 **Tehnici de nefrectomie parțială robotică**
Robotic partial nephrectomy techniques
Iulia Andraș (Cluj-Napoca, Romania) Abstract 2-16

09:15 - 09:30 **Robotul Da Vinci X vs. Laparoscopia 3D în realizarea nefrectomiei parțiale - analiza tehnicii chirurgicale pentru pași operatori cheie**
Da Vinci X robot vs. 3D laparoscopy in performing partial nephrectomy - analyzing surgical technique for key operatory steps
Bogdan Petruț (Cluj-Napoca, Romania) Abstract 2-17

09:30 - 09:45 **Tehnici reconstructive robotice (PP, pielo-pieloanastomoză)**
Robotic reconstructive techniques of the urinary tract (pieloplasty, pyelo-pyelic anastomosis)
Nicolae Crișan (Cluj-Napoca, Romania) Abstract 2-18

09:45 - 10:00 **Nefrectomia robotică de la donator viu**
Robotic nephrectomy from a living donor
Christophe Iselin (Geneva, Switzerland)

10:00 - 10:15 **Transplantul renal robotic**
Robotic kidney transplant
Karel Decaestecker (Ghent, Belgium)

10:15 - 11:00 **Discussions**

11:00 - 11:30 **Break**

11:30 - 14:00 **Masterclass in robotic surgery (II)**

Moderatori | Chairpersons:
Nicolae Crișan (Cluj-Napoca, Romania)
Deliu Victor Matei (Milan, Italy)

11:30 - 11:55 **Neovezica robotică intracorporeală**
Totally intracorporeal robotic neobladder
Nicolae Crișan, Ioan Coman (Cluj-Napoca, Romania) Abstract 2-19

11:55 - 12:20 **Abordul retroperitoneal robotic pentru nefrectomia parțială**
Robotic retroperitoneal approach for partial nephrectomy
Ioan Coman (Cluj-Napoca, Romania), Nicolae Crișan (Cluj-Napoca, Romania) Abstract 2-20

12:20 - 12:45 **Aplicații ale verdelui de indocianină în chirurgia minim invazivă urologică - avantajele robotului Da Vinci X**
Applications of indocyanine green in minimal invasive urologic surgery - the advantages of Da Vinci X robot
Bogdan Petruț (Cluj-Napoca, Romania) Abstract 2-21

12:45 - 13:10 **Rolul roboticii în limfadenectomia retroperitoneală pentru carcinomul testicular neseminomatos**
The role of robotics in retroperitoneal lymphadenectomy for non-seminomatous testicular carcinoma
Deliu Victor Matei (Milan, Italy) Abstract 2-22

13:10 - 13:30 **Nefrectomia Patiala asistata robotic pentru tumorile renale**
Robotic assisted nephron-sparing surgery for RCC
Kaloyan Davidoff (Sofia, Bulgaria)

13:30 - 14:00 **(30') Discussions**

14:00 - 14:30 **Closing Ceremony**

Conferențiari | Speakers:
Cătălin Copăescu (Bucharest, Romania)
Irinel Popescu (Buharest, Romania)
Ciprian Duță (Timișoara, Romania)
Victor Tomulescu (Bucharest, Romania)
Nicolae Crișan (Cluj-Napoca, Romania)

Chirurgia (2021) 116: S15-S36
Supplement 2, September

http://dx.doi.org/10.21614/chirurgia.116.Supplement 2.S15

The XIIth National Symposium of Bariatric and Metabolic Surgery (1)

1-01

40 YEARS OF BARIATRIC SURGERY IN ROMANIA

Cătălin Copăescu

GI & Bariatric Surgery Center of Excellence (SRC & IFSO-EC)
Ponderas Academic Hospital, Bucharest, Romania)

In Romania, the first bariatric surgery procedures were performed in the '70s, in Bucharest. (1) Jejunoileal bypass was the only weight-loss operation used for morbidly obese patients for more 20 years, until Vertical Banded Gastroplasty (VBG) was introduced by Florian Galea in Cluj-Napoca. More than 1100 obese patients underwent VBG for the next 20 years in Romania. Laparoscopic bariatric surgery was introduced and developed in St John Hospital: Laparoscopic Gastric Banding (2002), Laparoscopic Minigastric Bypass (2002), Laparoscopic Gastric Sleeve (2005), Laparoscopic RYGBP (2006), Laparoscopic Gastric Plication (2008). The first Robotic Assisted Gastric Sleeve was performed in Fundeni Institute (2008) by an experienced team of bariatric & robotic surgeons, from St. John and Fundeni Hospitals.
By 2020, more than 20 active bariatric surgery centers are encountered countrywide.
Eleven National Symposiums of Bariatric Surgery, were organized to-date by Romanian Association for Endoscopic Surgery (RAES) since 2009. All had international attendance, and were IFSO-Endorsed.
The community of bariatric surgeons succeeded the affiliation to IFSO in 2005, via ARCBTCO and latter set-up, the Romanian Society for Metabolic Surgery (RSMS), the IFSO representative in Romania since 2020. RSMS is carrying out ambitious programs for bariatric and metabolic surgery (BMS) in Romania

Reference:

Copaescu, C., 40 Years of Bariatric Surgery in Romania – Keeping up with the Trend. Chirurgia (2019) 114: 683-685 http://dx.doi.org/10.21614/chirurgia.114.6.683

1-02

IS THERE A PLACE FOR METABOLIC SURGERY IN THE COVID-19 PANDEMIC TIMES?

C. Duta, G. Noditi, V. Braicu, C. Lazar

Clinica II Chirurgie, Spitalul Clinic Judetean de Urgenta Timisoara, Departamentul X Chirurgie,
UMF "V. Babes", Timisoara

The ongoing "coronavirus disease 19" (COVID-19) pandemic has had a substantial effect on the delivery of surgical care worldwide. Elective surgeries have been canceled or delayed in order to reallocate resources to the treatment of COVID-19 patients. Currently, the impact of the COVID-19 pandemic on bariatric and metabolic surgical practice remains unclear.
The COVID-19 pandemic showed a strong impact on bariatric surgical practice regarding surgical and outpatient planning and personnel management. Therefore, coordinated effort from the national bariatric societies should focus on strict implementation of the current recommendations regarding precaution measures and personal protection equipment.

Many candidates for bariatric and metabolic surgery are at high risk of morbidity and mortality from comorbid conditions. For these patients, access to surgical treatment should be prioritized based on of disease-focused clinical needs rather than primarily on BMI to mitigate harm from delaying surgery.
Factors to consider in making that decision also include the local prevalence of COVID-19, the availability of testing, the available resources, including hospital beds, ventilators and personal protection equipment, as well as strategies to protect healthcare workers and patients. However, delay in the life-saving surgical treatment of obesity and its complications for many months or years is not in the best interest of our patients.
Patients suffering from the disease of obesity and its many associated severe diseases should strongly consider metabolic and bariatric surgery as a life-changing intervention that improves health, quality of life, and long-term survival. COVID-19 is the most recent of many diseases in which underlying obesity worsens the prognosis.
Before COVID-19 began, it was clear that patients with obesity were "safer through surgery." However, in the era of COVID-19, "safer through surgery" for patients with obesity may prove to be even more important than before.

1-03

LAPAROSCOPIC ADJUSTABLE GASTRIC BAND AFTER FAILED SLEEVE GASTRECTOMY - OUR EXPERIENCE WITH THE FIRST 29 CASES

Rubin Munteanu, Gabriela Zugravu, Lidia Râpeanu, Anca Ichiman, Raluca Oprea

BariClinic, Monza Hospital Bucharest

Background: Laparoscopic sleeve gastrectomy is the most frequent bariatric procedure with an increased number of cases every year because it is equally effective as gastric bypass but is more simple and easy to be done. Unfortunately, 20-25% of the patients have insufficient weight loss or weight regain. Some of these patients regard revisional bariatric surgery, and several procedures are in use now: Roux-en-Y gastric bypass, one anastomosis gastric bypass, biliopancreatic diversion with duodenal switch, re-sleeve gastrectomy, and banding sleeve. The aim of this paper is to present our experience with the first 29 cases.
Methods: A retrospective review from July 2006 to November 2020 was performed on 3281 patients who underwent sleeve gastrectomy by our team. 71 were reoperated for insufficient weight loss or weight regain. Gastric bypass (Roux-en-Y or one anastomosis) was the first option (34 patients), re-sleeve in 8 cases, and for 29 patients we choose laparoscopic adjustable banding. We placed the band in a lower position than is used for primary banding, respectively at incisura angularis of the stomach for two reasons: the amount of food at one meal is optimal (half than before but double comparative with a subcardial placement of the band) and is a simple procedure, even at patients with high BMI.
Results: The operative time was between 40 and 95 min (6 cases have associated cholecystectomy), no intraoperative incidents, hospital length of stay 24 hours, no complications at 30 days, and no deaths. Late complications were recorded in 4 cases: disconnection of port-tube system – 1 case and 3 cases required band removal for port site infection, band slippage, intractable nausea, and vomiting. In therm of weight loss 12 patients achieve their goals, 4 patients have acceptable results (no achieve the desired weight, but the improvement in life quality and co-morbidities resolution are good enough to be satisfied). Insufficient weight loss was recorded in 2 patients. The remained 6 patients have less than 6 months form the procedure but the results appear to be good until now. Gastro-esophageal reflux was noticed in 9 patients, required daily H2 blockers (2 patients), or on-demand (7 patients).
Conclusions: The adjustable gastric banding after failed sleeve gastrectomy appears to be effective, being the most straightforward re-do surgery after sleeve gastrectomy, but the experience is limited and further studies are necessary.

1-04

OBESITY AND DEPRESSION INTERTWINED

Daniel Timofte, Petru Soroceanu, Madalina Maxim

Department of Surgery, University of Medicine and Pharmacy "Grigore T. Popa" – Iasi

Obesity and depression are both pathologies with high prevalence and major significant public health implications. They tend to

co-occur in all races of populations examined by epidemiological studies, clinical trials and recent meta-analyses. Obesity is a risk factor for depressive disorder and vice versa.
In this review, our aim is to try and offer an overview of the biological mechanisms that link the two, including genetic aspects and alterations of the systems involved in energy synthesis and expenditure (hypothalamic-pituitary-adrenal axis and inflammation, neuroendocrine regulators and gut microbiota). In addition, we also evaluate the issues regarding body image perception and social stigma and the roles physical activities and bariatric surgery procedures may play in improving associated comorbidities and quality of life.
Keywords: obesity, depression, bariatric surgery, gut microbiota, inflammation.

1-05

NUTRITIONAL STATUS OF SEVERELY OBESE PATIENTS WITH AND WITHOUT TYPE 2 DIABETES BEFORE AND AFTER SLEEVE GASTRECTOMY

Adriana Florinela Cătoi Galea[1], Daniela Ciobârcă[1], Andra Diana Andreicuț[1], Ioana Pop[2], Cătălin Copăescu[3]

[1]Universitatea de Medicină și Farmacie „Iuliu Haţieganu", Cluj-Napoca, România
[2]Universitatea de Ştiinţe Agricole şi Medicină Veterinară, Cluj-Napoca, România
[3]Spitalul Ponderas, București, România

Background: Although less complicated, sleeve gastrectomy (SG) has been revealed to be accompanied by several nutritional deficiencies making vitamin and mineral supplementation mandatory. The aim of our study was to investigate the nutritional status in severely obese patients with and without type 2 diabetes mellitus (T2DM) who underwent SG and were subsequently recommended to follow nutritional supplementation.
Material and methods: 73 severely obese patients [(divided in two groups: group A (n=52) without T2DM and group B (n=21) with T2DM] submitted to SG between 2014-2015 were selected for the present investigation. Iron, vitamin B12, folic acid, parathyroid hormone (PTH) and calcium were determined at baseline and 6 and 12 months after SG.
Results: Before surgery, 15.38% of patients presented iron and B12 deficiency, whereas 7.69% displayed folic acid and respectively 3.84% PTH deficiency in group A. In group B we identified deficiencies of vitamin B12 as well as of PTH in 19.04% cases, iron in 23.8% cases and no deficiencies of folic acid at the pre-operative moment. The only statistically significant change (increase) was identified in group B in PTH at 6 ($p<0.01$) and at 12 months respectively after SG.
Conclusions: The most critical identified deficiencies were iron and B12 in group A as well as iron, B12 and PTH in group B at baseline. Provided that proper supplementation is being followed, SG has shown not to induce significant nutritional changes in these patients, except for PTH values in patients with obesity and T2DM.

1-06

PREDICTORS OF WEIGHT REGAIN AFTER SLEEVE GASTRECTOMY: A REVIEW

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Weight regains, or secondary weight gain or recidivism, is a complication of bariatric surgery evidenced by a gradual decline in the percentage of weight change. Sleeve gastrectomy is one of the most commonly performed bariatric procedures. Weight loss following sleeve gastrectomy is durable with sustained loss of over 50 % of excess weight (EWL) after 5 years. Long-term data being reported, it is evident that weight regain following sleeve gastrectomy is significant.
The proposed mechanism for weight regain following sleeve gastrectomy are technical factors contributing to initial sleeve size like bougie size, leaving fundal remnant or size of the antral remnant.?!? Other factors are sleeve dilatation, ghrelin levels, follow-up support or lifestyle behaviours.
In addition to weight regain, further prognostic factors were identified on the relapse of diabetes after bariatric surgery: advanced age, longer duration of diabetes, insulin-dependent therapy and/or assumption of 2 or more medications, worse glycemic control

before surgery.
Long-term data on diabetic evolution are needed to inform morbid obese diabetic patients before surgery and may help to select the patient candidates to LSG on favorable prognostic factors. An intensive follow-up schedule is mandatory to prevent "severe regain" in diabetic patients.
In conclusion, weight regain is a common phenomenon following sleeve gastrectomy. We'll need a standardization in definition and standardization of the technique (bougie size, antrum remnant, residual sleeve size). We'll need a strict postoperative follow-up care and assessment of the patient behaviours.

1-07

CONCOMITANT HIATAL HERNIA REPAIR DURING BARIATRIC SURGERY: DOES THE REINFORCEMENT MAKE THE DIFFERENCE?

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Background: Hiatal hernia repair (HHR) is still controversial during bariatric procedures, especially in the case of laparoscopic sleeve gastrectomy (LSG).
Aims: To report the long-term results of concomitant HHR, evaluating the safety and efficacy of posterior cruroplasty (PC), simple or reinforced with biosynthetic, absorbable Bio-A® mesh (Gore, USA). Primary endpoint: PC's failure, defined as symptomatic HH recurrence, nonresponding to medical treatment and requiring revisional surgery.
Methods: the prospective database of 1876 bariatric operations performed in a center of excellence between 2011-2019 was searched for concomitant HHR. Intraoperative measurement of the hiatal surface area (HSA) was performed routinely.
Results: A total of 250 patients undergone bariatric surgery and concomitant HHR (13%). Simple PC (group A, 151 patients) was performed during 130 LSG, 5 re-sleeves and 16 gastric bypasses; mean BMI 43.4 ± 5.8 kg/m^2, HSA mean size 3.4 ± 2 cm^2. Reinforced PC (group B) was performed in 99 cases: 62 primary LSG, 22 LGB and 15 revisions of LSG; mean BMI 44.6 ± 7.7 kg/m^2, HSA mean size 6.7 ± 2 cm^2. PC's failure, with intrathoracic migration (ITM) of the LSG was encountered in 12 cases (8%) of simple vs. only 4 cases (4%) of reinforced PC (p=0.23); hence, a repeat, reinforced PC and R-en-Y gastric bypass (LRYGB) was performed laparoscopically in all cases. No mesh-related complications were registered perioperatively or after long-term follow-up (mean 50 months). One case of cardiac metaplasia without goblet cells was detected 4 years postoperatively; conversion to LRYGB, with reinforced redo of the PC was performed. The Cox hazard analysis showed that the use of more than four stitches for cruroplasty represents a negative factor on recurrence (HR = 8; $p < 0.05$).
Conclusions: An aggressive search for and repair of HH during any bariatric procedure seems advisable, allowing a low HH recurrence rates. Additional measures, like mesh reinforcement of crural closure with biosynthetic, absorbable mesh, seem to improve long term follow up results especially in case of larger hiatal defects. In our experience, reinforcement of even smaller defects seems advisable in the obese population.

1-08

BARIATRIC SURGERY COMPLICATIONS IN COVID-19 PANDEMIC – A NIGHTMARE SCENARIO FOR GENERAL SURGEONS - CASE PRESENTATION

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Obesity is on the rise, and bariatric surgery, as an effective and safe treatment option, is increasingly used worldwide. Bariatric and metabolic surgeries are performed by specialized surgeons, preferably in institutions dedicated to the care of metabolic patients. For optimal results, it is recommended that the management of the metabolic patient, including pre-operative evaluation, surgery, post-operative follow-up and especially identifying and treating possible complications, must be performed within these specific forms of organization. In Romania, the onset of the CoVid-19 pandemic in early 2020, was followed by establishing recommendations on

limiting the spread of infection and the application of protocols for the diagnosis and treatment of SARS CoV 2 infected patients. Thus, CoVid-19 positive patients are treated in designated hospitals. Bariatric Centers with specialized staff were not included in the COVID-19 network, consequently restricting the access of positive bariatric patients to dedicated teams.
In these circumstances, we present the case of a bariatric patient, 40 years old, who underwent a laparoscopic sleeve gastrectomy for superobesity (BMI - 59 kg / sqm) and associated diseases (sleep apnea, dyslipidemia, hepatic steatosis, hypertension) in 2019, with favourable postoperative evolution until July 2020, when he was diagnosed with subphrenic abscess by late gastric fistula and SARS CoV 2 infection. The moment of diagnosis was followed by two successive surgical procedures, using laparotomy to drain the collection and close the gastric dehiscence . The patient was managed in general surgery departments and intensive care units, through multiple transfers between four hospitals - CoVid-19 dedicated throughout in the country. The course was difficult with the formation of a gastro-cutaneous fistula and dramatic nutritional deficiencies. The patient could be admitted in a bariatric center three months after the first hospitalization, according to the recommendations requiring negative CoVid-19 tests and a thoraco-pulmonary CT evaluation. After extensive assessment of the patient, the treatment was established and staged as follows: initially, the route of the gastro-cutaneous fistula was suppressed and the feeding jejunostomy on the excluded Y-loop was performed laparoscopically, and used as e bridge for 5 months, for restoring nutritional status and until the remission of gastric and paragastric inflammation. After this period, the second stage was possible, which consisted in the dissolution of the gastric fistula by laparoscopic approach, performing fistulo-jejunoanastomosis on the Y-loop, the patient's evolution being good with the progressive resumption for oral feeding.
Analyzing the exceptional situation of the bariatric patient who develops complications during the CoVid-19 pandemic, we were able to outline some ideas which completes our experience: SARS CoV 2 infection of a bariatric patient with postoperative complications delays appropriate treatment and can lead to consequences; when treatment is not possible in a bariatric surgery department, consulting with bariatric surgeons through remote communication methods (telephone, internet) can be an advantage in patient management; from the perspective of increasing the number of bariatric interventions performed and the current epidemiological context, it may be beneficial to introduce in the training of general surgeons, courses containing situations that can send the bariatric patient to the emergency room of the nearest hospital.

1-09

METABOLIC AND WEIGHT CHANGES AFTER BARIATRIC SURGERY IN A RAT MODEL OF INDUCED TYPE 2 DIABETES MELLITUS AND OBESITY

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Sleeve gastrectomy (SG) and gastric plication (GP) are surgical procedures providing weight loss through several mechanisms incompletely understood. Rat models allow the possibility of tight regulation of experimental conditions, making them the ideal candidates for animal models in bariatric surgery.
The aim of this study was to compare the weight and metabolic changes between sleeve gastrectomy and gastric plication in a rat model with type 2 induced diabetes mellitus and obesity. Fifteen male Wistar rats were fed with DIO food (Bio Serv ®F3282 - Mouse Diet, High Fat, Fat Calories -60%), after 36 weeks were allocated to the study three arms-SG, GP and sham operation (SO). Four weeks after the surgery the rats were weighted again. Blood tests were performed before surgery and four weeks after surgery searching for blood glucose, total cholesterol, HDL, triglycerides, and LDL. At the onset of the study, the rats were 9 weeks old and had an average body mass of 231.6g ± 31.58. After 36 weeks of DIO, one day preoperatively body weight was 774.93g ± 95.02. The preoperatively average of body weight in the SG group was 777.4g ± 104.66, 775.4 g ± 104.6 in the GP group, respectively 772g ± 79 in the SO group. 4 weeks after surgery the mean body weight in the SG group was 648.8g ± 99.09, in the GP group was 695.6g ± 99.09, respectively 825.4g ± 79.87 in the SO fed ad libitum group. There was a significant decrease of mean fasting glucose levels at 4 weeks postoperative in the SG group compared to the SO group (87.4mg/dL± 8.73 versus 103.6 mg/dlL± 4.66, p= 0.01). The same trend of mean fasting glucose was registered in the GP group versus the SO group (92.8 ± 5.67 mg/dl vs 103.6 mg/dl ± 4.66, p= 0.01). Our study provides evidence of the positive effects of bariatric surgery for treating patients with morbid obesity associated with diabetes mellitus and dyslipidemia and the use of rats to study the mechanisms of weight reduction and metabolic changes in bariatric surgery.

1-10

THE USE OF ICG IN REVISIONAL BARIATRIC SURGERY

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Introduction: ICG fluorescence is a widely adopted technique in various surgical fields, it has been introduced recently also in bariatric surgery
Aim: to evaluate the results of the use of ICG in revisional bariatric surgery.
Material and method: we used ICG in all cases of revisional bariatric surgery beginning with 2018, ICG was administered iv during surgery repeatedly at different surgical steps in order to obtain a real time assessment of blood supply patterns and tissue perfusion.
We administered ICG at the beginning of surgery for an initial evaluation of the patient arterial and venous anatomy and we were able to do a perfusion preserving dissection, ICG was administered repeatedly throughout surgery and at the end of surgery to ensure adequate tissue perfusion at the level of the gastric tube (for redo gastric sleeve) at the level of gastric pouch, gastric remnant, anastomotic level, transection sites (for redo GBP cases) or of the round ligament (Narbona-Arnau technique)
Results: Since 2018 in our clinic 25 patients underwent revisional bariatric surgery, surgical procedures were – redo sleeve after gastric sleeve, redo GS after VBG, redo RYGBP after RYGBP, fistula-jejunal-anastomosis all cases by laparoscopic approach, 21 cases needed associated hiatal hernia repair.
We were able in all cases to assess vascularization and to do a perfusion preserving dissection.
By checking tissue perfusion in one case of redo gastric bypass after failed vertical banded gastroplasty for morbid obesity despite intraoperative laparoscopic normal aspect of the gastro-jejunal anastomosis, ICG mediated fluorescence allowed to identify an unexpected ischemic anastomosis and we could prevent consecutive postoperative leakage
Conclusion: ICG represents a valuable tool for the surgeon for intraoperative real-time assessment of vascularization and tissue perfusion in bariatric surgery. Its standard use in revisional bariatric cases allows us to perform a blood supply preserving dissection and to assess tissue perfusion in order to prevent ischemia associated complications.

1-11

LAPAROSCOPIC PANCREATICODUODENECTOMY AFTER ROUX-EN-Y GASTRIC BYPASS – CASE REPORT

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Study objective: The prevalence of obesity is progressively increasing, reaching rates close to 30% of the total population in Western countries. Which is why bariatric procedures such as Roux-en-Y Gastric Bypass (RYGB) are more frequent in usual surgical practice. Due to the relationship between obesity and hepatobiliopancreatic cancers, in coming years there will be more chances of having to deal with pancreatic head resection after a RYGB which is why we propose a case report of a patient undergoing pancreaticoduodenectomy after a RYGB.
Material and methods: A 39 year old diabetic female patient, with a BMI of 38 kg/m2, underwent laparoscopic RYGB in 2008. In 2018, she developed jaundice and a laparoscopic duodeno-pancreatectomy (L-DPC) was performed.
Results: Instead of making a classical reconstruction using 3 anastomoses and preserving the gastric remnant (GR), we decided to resect the biliary limb (BL) completely with the specimen and also the GR. Reconstruction was realized using the alimentary limb (AL), in an Omega fashion with a mechanical side to side Braun jejunojejunostomy. Blood loss was 300cc, and the total operative time was 390 minutes. The postoperative period was uneventful and the patient was discharged on day 10.
Conclusions: Pancreaticoduodenectomy after Roux-en-Y gastric by-pass is complex and rarely needed. Our case demonstrates a technique of reconstruction which is feasible and laparoscopically safe.

1-12

PORT ANESTHETIC PREPERITONEAL INFITRATION ENSURES A BETTER RECOVERY AFTER GASTRIC SLEEVE

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Objectives: We sought to find out if preperitoneal anaesthetic infiltration of the ports site (PAPSI) in patients with gastric sleeve might ameliorate postoperative pain, digestive tolerance and inflammatory response.
Methods: We designed a pilot case control study in which each arm had twelve patients with similar demographic and medical characteristics, as well as a similar body mass index. In group A, patients underwent local subcutaneous infiltrations before site ports skin incision and PAPSI at the end of the procedure, performed under visual control. We used 2.5 ml Ropivacaine in 7.5 ml saline for preincisional infiltration and 7.5 ml Ropivacaine in 12,5 ml saline for PAPSI. Group N had no local anesthesia. We evaluated parameters such as postoperative pain on the visual analogue scale, but also digestive tolerance and PCR dynamics in the first two postoperative days.
Results: The visual analogue scale on the first postoperative day revealed a mean score of 3.8 in group A and of 6.2 in group N (p=0.04), while on the second postoperative day the scores were 3.1 and 4.0 respectively B (p=NS). Patients in group N required more parenteral analgesics. Patients in group A had no complaints at liquid ingestion on the first postoperative day, while in group N two patients accepted liquid diet only on the second postoperative day. The PCR levels were slightly lower in group A compared to N, but without statistical significance.
Conclusions: Local pre-and postoperative anesthesia in gastric sleeve reduces postoperative pain and inflammatory response and increases patients' digestive tolerance.

2-01

ROBOTIC PARTIAL NEPHRECTOMY: THE ROLE, ISCHEMIA MANAGEMENT AND THE FUTURE

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As shown by Umberto Veronesi's studies and the trials in breast cancer, the challenge of surgical treatment is the evolution from the maximum tolerable approach to the minimally effective treatment, maintaining the same oncologic results (1,2). Following this principle, in renal cancer surgery, the milestone paper of Novik (3), showed that for tumours less than 3 cm in diameter, surgical removal of the tumour was equivalent to the radical nephrectomy, as far as oncologic control is concerned, conserving meanwhile better renal function rates. On the other hand, the spread of minimally invasive approaches, such as laparoscopy, determined an unexpected shift towards laparoscopic radical nephrectomies, disfavouring partial nephrectomies, difficult to perform using pure laparoscopy (4). Robot-assisted laparoscopy was the technology progress that allowed to easily perform partial nephrectomies by using minimally invasive approach.

In order to perform partial nephrectomy, ischemia is often requested to perform a correct tumour excision and control blood-loss. Experimental studies showed that cellular degeneration begins mainly in the proximal tubules after 20-30 min of clamping, while more than 60 min of warm ischemia time, complete cellular degeneration occurs.

Many techniques were proposed to reduce or avoid warm ischemia (5, 6), but in our experience only the robotic simple enucleation is worthful being considered (7). The clamp-less simple enucleation was associated in our study with a higher rate of SIB 0 (8) achievement and a better impact on serum creatinine.

The advent of novel percutaneous thermal ablation techniques having similar oncologic results as robot assisted partial nephrectomies (9, 10), is expected to determine a shift of patients towards these minimally invasive, percutaneous, image-guided approaches.

References

1. Corso G, Veronesi P. […], Luini A.: The Veronesi quadrantectomy: an historical overview. Ecancermedicalscience, 2017; 11:743
2. Veronesi U, et al. Quadrantectomy versus lumpectomy for small size breast cancer. Eur J Cancer. 1990; 6(6): 671–3.
3. Novick AC: Partial Nephrectomy for Renal Cell Carcinoma, Urol Clin North Am. 1987; 14(2) :419-33
4. Scherr DS, Casey NG, […], del Pizzo: Practice patterns among urologic surgeons treating localized renal cell carcinoma in the laparoscopic age: Technology versus oncology, Urology. 2003; 62(6): 1007-11.
5. Desai MM, de Castro Abreu AL, […], Gill I: Robotic partial nephrectomy with superselective versus main artery clamping: a retrospective comparison Eur Urol, 2014; 66(4): 713-9.
6. Papalia R, Simone G, […], Gallucci M: Laparoscopic and robotic partial nephrectomy with controlled hypotensive anesthesia to avoid hilar clamping: feasibility, safety and perioperative functional outcomes. J Urol 2012; 187(4):1190-4.
7. Matei DV, Vartolomei MD, […], de Cobelli O: Outcomes of robot-assisted simple enucleation of renal masses: A single European center experience. Medicine (Baltimore). 2017; 96(18): e6771
8. Minervini A, Carini M, […], Kutikov A: Standardized reporting of resection technique during nephron-sparing surgery: the surface-intermediate-base margin score. Eur Urol. 2014; 66(5): 803-5.
9. Krokidis ME, Orsi F, […], Adam A: CIRSE Guidelines on Percutaneous Ablation of Small Renal Cell Carcinoma. Cardiovasc Intervent Radiol. 2017; 40(2): 177-191.
10. Camisassi N, Mauri G, […], Orsi F: Local recurrence of renal cell carcinoma successfully treated with fusion imaging-guided percutaneous thermal ablation. Ecancermedicalscience. 2020; 14:1070.

2-02

ROBOTIC ADRENALECTOMY FOR A VOLUMINOUS ADRENAL TUMOR USING A TRANSPERITONEAL APPROACH

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Study Objective: Adrenal tumors require an attentive surgical treatment, especially when performed minimally invasive. The transperitoneal approach offers a wide working space compared to the retroperitoneal approach.

Material and methods: Using a video support, we exemplify transperitoneal Da Vinci X robotic adrenalectomy on a case of a 70-year-old patient with a right adrenal tumor of 7 cm in diameter.
Results: The surgery lasted 30 minutes with minimal blood loss and grade 1 Clavien-Dindo complications. The patient was discharged on the 3rd post-operatory day.
Conclusions: The robotic approach offers fine tissue manipulation and gentle dissection, an important aspect in treating adrenal tumors, both for oncologic safety and for avoiding catecholamine release from secreting tumors.

2-03

ROBOTIC PARTIAL NEPHRECTOMY, FROM ZERO ISCHEMIA TO VERY CHALLENGING CASE

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Study objective: We present our experience in robotic partial nephrectomy without temporary ischemia for small renal tumors and a case of a single kidney patient with a challenging T2a tumor, who underwent robotic partial nephrectomy.
Material & Methods: Data and results are presented from N = 57 patients who underwent robotic partial nephrectomy without temporary ischemia from October 2013 to October 2019. The cases were performed by a single surgeon in 3 clinics (1. Interbalcan Medical Center, Thessaloniki, Greece. 2. American Medical Center, AIMIS Robotics, Nicosia, Cyprus, and Monza Hospital, Bucharest, Romania). Additionally, a 62-year-old male patient with a single kidney and a T2a renal tumor underwent robotic assisted partial nephrectomy on the left side. The results and videos of the surgical techniques are presented.
Results: Regarding the zero ischemia patients, the tumor size was from 1.5 cm-3.9 cm (2.7 cm), the surgery time on the console was 27 minutes - 45 minutes (36 minutes). No intraoperative complications, need for blood transfusion or need for open surgery were observed. The stay at the clinic was 2 days (Exception for the Monza Hospital, Bucharest, Romania). Surgical limits were free in all patients. Regarding the single kidney T2 patient case, the console surgery time was 83 minutes and the temporary ischemia time 16 minutes. Surgical resection margins were free of tumor. The tumor size was 9.2 cm.
Conclusions: In selected patients, robotic partial nephrectomy without ischemia is a very effective operation without complications and with a fast recovery of patients. Furthermore, in experienced hands, robotic assisted partial nephrectomy, even in very difficult cases, is a surgical procedure with excellent surgical and oncological results.

2-04

ROBOTIC REPAIR OF IATROGENIC URETERAL INJURY DURING ROBOTIC HYSTERECTOMY

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Study objective: Iatrogenic ureteral injuries, more than half of which occur during gynecologic surgery, may have devastating consequences for patients and physicians. The objective is to present a case of iatrogenic ureteral injury during robotic hysterectomy and its repair.
Material and methods: We present the case of a 61-year-old woman referred to us for a robotic hysterectomy for a benign uterine mass. During the dissection and section of the left lateral vaginal wall, a ureteral injury was produced.
Results: We repaired the ureteral injury by introducing a "double J" stent and performing a ureteral suture with the help of the robotic platform. The guidewire and the stent were introduced via the vaginal port. A drainage tube was placed afterwards. Postoperative course was uneventful, and the hospital stay was 2 days. The urinary catheter and the drainage tube were removed after 14 days, and the "double J" stent was removed after 1 month.
Conclusions: Early repair of iatrogenic ureteral injuries is mandatory to decrease the rate of outpatient complications or stricture recurrence. We suggest that, if possible and appropriate, effort should be made to identify and subsequently repair iatrogenic ureteral injuries early, minimize morbidity for the patient and avoid a potentially increasingly complex ureteral reconstruction.

2-05

DA VINCI X ROBOT VS. 3D LAPAROSCOPY IN PERFORMING RADICAL PROSTATECTOMY WITH TRIFECTA AND PENTAFECTA RESULTS

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Study Objective: Achieving trifecta and pentafecta is desirable in treating prostatic adenocarcinoma, the life quality of our patients being impacted by functional results, even long after the oncologic danger is treated. The minimally invasive approach comes with higher costs and requires operatory skills for the tight working space of the pelvis, with differences between the 3D laparoscopic approach and the robotic approach.
Material and methods: Using a video support, radical prostatectomy with an extraperitoneal approach is exemplified performed both with 3D laparoscopy, and with Da Vinci X robot. Nerve sparing techniques are highlighted, with peri and postoperative data being analyzed.
Results: 533 radical prostatectomies were performed with a 3D laparoscopic approach and 23 cases were performed with the robotic approach. There was no difference in oncologic results for any of the approaches. Most of the robotic cases presented early continence, right after removing the urinary catheter inserted intra-operatory.
Conclusions: Both the 3D laparoscopic approach and the Da Vinci X approach are feasible and safe, with the potential of offering trifecta and pentafecta when treating prostatic adenocarcinoma.

2-06

SHOULD ROBOTIC GASTRECTOMY BECOME A STANDARD SURGICAL TREATMENT OPTION FOR GASTRIC CANCER?

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Aim: Gastrectomy is the mainstay treatment for gastric cancer. In order to reduce the associated patient burden; minimally invasive gastrectomy was introduced in almost 30 years ago. The increase in the availability of robotic surgical systems led to the first robotic-assisted gastrectomy to be performed in 2002 in Japan. Consequently, the number of robotic gastrectomies (RG) performed yearly has been increasing, particularly in East Asia.
No randomized clinical trials comparing robotic gastrectomy to either laparoscopic or open equivalent have been performed yet. However, cohort studies show that robotic gastrectomy is equal in oncological outcomes in terms of survival and lymph node yield.
Material & method: Results: Operative times in the robotic group are consistently longer than laparoscopic or open gastrectomy, although evidence is emerging that resection time is equal. The only reproducible significant difference in favor of robot-assisted gastrectomy is a reduction in intraoperative blood loss and some studies show a reduction in the risk of pancreatic fistula formation.
The minimally invasive techniques for treating gastric cancer seem to be rather promising, rapidly improving the patients' short and long-term outcomes with early and advanced gastric cancer. Technical aspects are more challenging in laparoscopic and robotic gastrectomy, but this seems related to the surgeon's expertise and experience.
The use of robotic assistance is associated with decreased amylase levels in drainage fluid, reducing the risk of pancreatic fistula and avoiding pancreatic injury. The robotic approach seems to achieve better short-term surgical outcomes. A higher rate of retrieved lymph nodes was observed in the RG group.
In conclusion, robotic gastrectomy is a safe and feasible procedure that may reduce postoperative morbidity. Despite the costs and the longer operative time, it could be a better alternative to open or laparoscopic gastrectomy in: blood loss, quality of lymphadenectomy, short and long-term results. However, future large-scale well-designed trials must be conducted to establish the real benefits of robotic gastrectomy.

2-07

ROBOTIC PANCREATODUODENECTOMY: ROBOTIC OR HYBRID APPROACH?

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Introduction: Pancreaticoduodenectomy (PD) is accepted as the only cure for hepatobiliary pathologies concerning mainly the pancreatic head, such as: pancreatic head malignancy, malignant periampullary tumors, DI/DII cancer, distal cholangiocarcinoma. It is, however, a complex operation with high perioperative morbidity and mortality due to its retro-peritoneal location, adjacent major vessels, and intricate reconstruction. Minimally invasive pancreaticoduodenectomy began in an attempt to improve the outcomes of the conventional, open approach. It is now included as a surgical option in the major oncology guidelines. However, the reconstruction step is reported as a major hurdle to the widespread adoption of the laparoscopic approach. Various literature reviews and case series suggest the robotic approach as a facilitator in the reconstruction phase.
Aim: Standardization is crucial to overcome the learning curve. Based on our institutional experience with the standardization of other techniques and protocols, we propose a hybrid approach to combine the versatility of laparoscopy and the visual and motor advantages of the DaVinci Xi to maximise the precision of the reconstruction.
Methods: In the presented video, we demonstrate a step-by-step guide with our hybrid approach. The big picture is laparoscopy-robotic-laparoscopy.
We start with the mobilisation of hepatic flexure of the colon and further sectioning of the gastro-colic and gastro-hepatic ligaments. Then we mobilise the stomach up to its distal half and perform transect the stomach after which the anterior surface of the pancreas and duodenum is revealed. We then perform a Kocher manoeuvre to mobilise the duodenum from right to left and then subsequently we mobilise it from left to right starting from the Treitz angle. After uncrossing the duodenum, we transect the jejunum at 5 cm from Treitz angle and pass it through the transverse colon mesentery. We then dissect and transect the gastro-duodenal artery and main bile duct followed by dissection of the isthmus off the portal vein and we isolate it with a vascular loop.
This is when the DaVinci Xi steps in. We continue with the mobilisation of the uncinate process, then with sectioning of the gastro-duodenal vein and Belcher vein. This marks the complete eliberation of the duodenal-pancreatic specimen. We perform a pancreatico-jejunostomy with interrupted 5.0 Prolene stitches, having had a 6-Fr Catheter introduced through the Wirsung duct and jejunum. The anastomosis is further reinforced with several 2.0 braided absorbable interrupted stitches, mainly to fix it the pancreatic body to the jejunum. The next critical step is the choledoco-jejunostomy, performed as well with 5.0 interrupted Prolene stitches tutored on a 10-Fr silicone catheter.
We then perform the gastro-jejunostomy and Roux limb by laparoscopic approach and the operation is concluded with a final inspection and multiple drainages.
Results: There have been five cases of robotic assisted pancreaticoduodenectomies in our institution to date. We observed a significant decrease in operative time in anastomotic reconstruction from 2 hours down to 1 hour and a total surgery time of 10 hours down to 6 hours. One case of anastomotic leak (pancreatico-jejunal) required reoperation and one case of biliary leak which was treated conservatively.
Conclusions: The hybrid approach facilitates taking the advantages of both laparoscopic and robotic approaches. While laparoscopy is safer in manipulating the bowel and allows the Roux en Y reconstruction, the robotic assistance enables the surgeon to perform delicate anastomosis with a high accuracy. Having a standardized approach significantly overcomes the learning curve, team-bond and nevertheless decreases operative time.

2-08

ROBOTIC IVOR-LEWIS ESOPHAGECTOMY

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Introduction: The Ivor-Lewis procedure is the method of choice in approaching Siewert I and II lesions of the gastro-esophageal junction. The first minimally invasive Ivor-Lewis esophagectomy has been reported by Watson et al. in 1999 and since the robot was introduced in the current surgical practice several teams have published their experience with robotic minimally invasive esophagectomies. This report aims at presenting our first totally robotic Ivor-Lewis esophagectomy.

Material and method: A 61-year-old female patient diagnosed with a Siewert II adenocarcinoma of the esophagogastric junction was admitted to our hospital. Due to the experience of our Center in robotic surgery, we proposed an Ivor-Lewis esophagectomy. The duration of the procedure was 390 minutes. The blood loss was minimal. The patient left the hospital on the 8th postoperative day.
Results: The postoperative evolution of the patient was comparable to that of an open approach from an oncologic point of view, but the patient's rehabilitation was considerably faster.
Conclusions: Robotic esophagectomy is feasible and safe for the patient, but requires experience in oncologic upper gastrointestinal and thoracic surgery, as well as experience in robotic surgery.

2-09

FIRST RIB RESECTION BY ROBOTIC APPROACH

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Introduction: The thoracic outlet is a space between the clavicle and the first rib, where the nerves of the brachial plexus and the subclavian artery and vein go from the neck to the arm. Thoracic outlet syndrome is a group of disorders that occur when one of these neurovascular bundle structures is compressed. This compression is usually given by the modified anatomy of the area, with the bony structures being too close to each other, and it can cause pain, numbness, tingling, discoloration or discomfort in portions of the arm. Because the clavicle is very important in maintaining shoulder stability and mobility, the surgical treatment of choice, when dealing with the thoracic outlet syndrome, is the partial resection of the first rib. The anterior part of the rib should be removed by disarticulating it from the sternum and resecting it near the insertion of the medium scalene muscle. This maneuver will provide space for the compressed neurovascular bundle without losing much of the skeletal integrity of the area. The first rib resection could be conducted classically by supra and infraclavicular approach and transaxillary approach, but all of them are difficult surgeries, due to area's anatomy.
Methods and materials: We present a 34 year old female patient, with no medical history and no sport related activities that could trigger the symptoms of the thoracic outlet syndrome. After she developed pain and discomfort in the right arm, but with no swelling, no discoloration or redness, she was investigated and diagnosed with neurogenic thoracic outlet syndrome, which is very frequent in young female patients. The imaging investigations shows that all three subclavicular structures on the right side are compressed by the first rib. We decided to operate the patient robotic assisted and approach the first rib from the inside of the right pleural cavity, with the patient in a left lateral decubitus position and left lung ventilation, using a four ports approach, two working, one for the camera and one for the assistant. We had a 30 degrees scope, monopolar curved scissors on the right hand, for dissection, and a Cadiere forceps on the left hand to expose the structures. The parietal pleura was divided along the first rib, exposing the bone with its margins and the cartilaginous part of the first rib. After clearing the upper and lower margins we dissected the costoclavicular ligament and the infraclavicular muscle, keeping as close to the bone as possible, to not injure the nerves and the blood vessels. We continued with the disinsertion of the anterior scalene muscle, the disarticulation of the rib from the sternum, posterior dissection, and partial disarticulation of the middle scalene muscle. For the posterior resection of the rib segment, we used an endoscopic rib cutter and a Kerrison rongeur, inserted through the posterior working incision. The resected rib segment was extracted through the assistant port, and it was 5cm long and almost 2cm wide. We had under 10ml of blood lost and did not use a chest tube, so that the patient went home in the second day postoperative, with mild neck and shoulder pain, but without thoracic outlet syndrome symptomatology.
Conclusions: We concluded that the surgery of the thoracic outlet syndrome by robotic approach is safe and efficient, with an excellent view of the operating field, excellent control of the neurovascular bundle, no unnecessary dissection, minimal blood loss, no need for a chest tube and easy to control postoperative pain.

2-10

ROBOTIC SURGERY FOR UTERINE CERVICAL CANCER IN THE CURRENT ONCOLOGICAL CONTEXT

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Objective: Robotic surgery has gained ground in recent years in benign and malignant gynecological interventions. The purpose of this article is to present the main indications of robotic surgery, to identify the advantages and disadvantages of this surgical technique and to present our experience in this field.
Material and method: Comparison of data from the literature with the main surgical indications encountered in the group of patients selected by us, who benefited from robotic surgery.
Results: The integration of robotic technology represents a significant advance in the minimally invasive techniques of treatment of gynecological pathology, used to treat both benign and malignant diseases. The advantages of robotic surgery are: 3D visualization of the operating field, superior dexterity, seven degrees of freedom to move the forceps, superior ability to perform sutures and knots, superior ergonomics, elimination of the fulcrum effect, scaling movements and reduced tremor.
Conclusions: Robotic surgery is an effective, safe and feasible method for the treatment of malignant cervical diseases, in order to preserve reproductive function in patients who want to maintain fertility and in carefully selected cases of cervical cancer. Further studies are needed to assess overall survival and associated morbidity.
Keywords: robotic surgery, minimally invasive surgery, oncological surgery

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2-11

DA VINCI X ROBOT VS. 3D LAPAROSCOPY IN PERFORMING RADICAL CYSTECTOMY / CYSTOPROSTATECTOMY AND PELVIC LYMPHADENECTOMY WITH TOTALLY INTRACORPOREAL ILEAL NEOBLADDER

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Study Objective: The objective of this paper is to analyze minimally invasive approaches in performing totally intracorporeal ileal neobladder, in patients undergoing radical cystectomy / cystoprostatectomy and pelvic lymphadenectomy for muscle invasive urinary bladder carcinoma.
Material and methods: We report our experience of 55 cases of reconstructive surgery (modified Y-shaped, modified Studer and pure Studer) consisting in ileal neobladders performed entirely intracorporeal – 43 cases with a 3D laparoscopic approach and 12 cases with the robot-assisted approach. In 27 cases Indocyanine green was used, guiding the excision of ischemic tissues. Key operatory steps are highlighted with peri and post operatory data being analyzed.
Results: The mean surgery time for the 3D laparoscopic approach was 85 minutes (radical cystoprostatectomy and lymphadenectomy) + 150 minutes (reconstructive surgery), for the robot-assisted approach 150 minutes (radical cystoprostatectomy and pelvic lymphadenectomy) + 210 minutes (robot-assisted reconstructive surgery). The patients were discharged after a mean of 21 days and the mean volume capacity of the urinary reservoir is 420ml, 3 months post operatory (measurement by ultrasound examination).
Conclusions: Both approaches are safe and feasible, the robotic approach bringing the so much required fine tissue manipulation in reconstructive surgery, with precise tissue excision and suturing without applying tension or stripping. The 3D laparoscopic approach is preferable to us for pelvic lymphadenectomy.

2-12

POSTERIOR MICROSCOPIC AND ANTERIOR ROBOTIC ASSISTED STAGED APPROACH FOR VOLUMINOUS DUMBBELL GANGLIONEUROMA

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Introduction: Ganglioneuromas are benign tumors emerging from the sympathetic nervous system from the neural crest. Most of them are diagnosed by accident because they are usually asymptomatic, tend to grow slowly and stay clinically silent for a long time until they are incidentally discovered or produce mass effect symptoms due to their large size. They usually developed from neuroblastomas as primary ganglioneuromas. They can be localized anywhere along the sympathetic nervous chain, but more frequent in the posterior mediastinum (42%), retroperitoneal (37.5%), adrenal glands and cervical. The presacral development is quite rare, with under 20 cases being reported in the literature.
Aim: The surgical excision is the therapy of choice. The anterior exclusive approach is mostly reported and a consistent literature is describing the laparoscopic approach. We aim to demonstrate that Robotic assisted surgery makes these complex dissections simpler than conventional laparoscopy.
Material & method: A 9 year old female patient was admitted to our hospital for investigations, accusing chronic abdominal pain in the hypogastrium for over 6 months before, limiting the physical activity, sometimes associated with nausea. The MRI diagnosed an expansive process originating from the spinal channel (S1-S3) with dural sac and nerve routs stenosis and compression, with an extension throughout the right S2 enlarged foramen into the presacral region where is localized the voluminous extension, up to 10 cm, with inhomogeneous contrast intake.
The case was discussed in the Institutional Tumor Board meeting which decided on a staged
surgical approach. The posterior approach was performed by the spine neurosurgical team. A S1-S2 laminectomy was performed. A solid white-yellow extradural mass was objectified, severely reducing the spinal canal. The S2 right nervous root was undifferentiated from the tumor (originating root) and had no peripheral response when stimulated. This root was ligated preganglionary and resected. The rest of the tumor was excised using the ultrasonic/coagulating aspiration and micro-scissors, clearing and recalibrating the spinal canal, the rest of the horsetail roots remaining intact. We completely excised the S1 extension and partially the S2 one where we have left a Titanium clip as a radiological marker and surgical landmark for the consecutive anterior approach. The neurosurgical time was 165 minutes, with 75ml blood loss. The patient was discharged in on postoperative day (POD) 4.
Two weeks after the neurosurgical resection, the anterior excision for the presacral component, also under continuous neuromonitoring, using the minimally invasive robotic approach (DaVinci Xi platform). We started by dissecting the rectum in the mesorectal plane, isolating the hypogastric nerves on rubber bands. We then gradually identify a large tumor, with renitent consistency, and started the circumferential dissection, gradually isolating the tumor from the iliac bundles, ureters, and vagina, down to the pelvic floor. The origin of the tumor was confirmed at the right S1-S3 nervous roots. We slowly progress identifying small tumoral extension, medial, infero-lateral and cranial to the right piriform muscle. Knowing the benign histopathology from the previous posterior surgical step we could partially resect the tumor to increase the working space and mobility to better understand the posterior aspect. We managed to protect the S1-S3 roots by cold sharp dissection with the scissors, permanently maintaining the peripheral electric potentials. We must acknowledge the importance of the multidisciplinary team during surgery, the neuro-physiologist managing to direct us around the noble nervous structures when the local anatomy was unclear.
The hypogastric nerves electrical integrity was controlled by using the neuromonitoring probe. The specimen was removed throughout a small Pfannenstiel incision. Time of surgery was 660 minutes due to the very challenging posterior dissection and the difficulties of mobilizing such a large tumor in a child's small pelvic space. Blood loss was 50 ml.
Results: Prognosis after the complete resection of the ganglioneuroma is excellent and it was demonstrated in our case too. The 3- and 6- months MRI revealed no local recurrence. Due to the benign findings of the histopathological exam, the patient did not required postoperative chemotherapy or radiotherapy. The strength of our report is to describe a novel staged surgical technique of excising a voluminous dumb-bell ganglioneuroma, using microscopy for the posterior extension and minimally invasive robotic-assisted surgery for the anterior extension, both under continuous neuromonitoring.
In conclusion the posterior microscopic and anterior robotic assisted staged approach with continuous neuromonitoring for dumbbell ganglioneuroma has proven to be an efficient surgical strategy and technique.

2-13

OVERVIEW OF ROBOTIC RECTAL SURGERY: OUR EXPERIENCE

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Study objective: Colorectal cancer is an important cause of cancer-related deaths worldwide. Robotic rectal surgery is no longer seen as revolutionary and it has become a feasible alternative in most developed countries.
Material and methods: During 6 years, 126 robotic interventions aiming colorectal cancer took place in our clinic. Several parameters were followed including age, gender, ASA score, neoadjuvant radiotherapy, intraoperative complications.
Results: 95 procedures consisted of low anterior resection (LAR). The predominance of male patients was observed (76.95%). Also, unsurprisingly, the highest incidence was in the 6th decade of life. In more than half of the cases of low anterior resection, a loop ileostomy was performed. In all cases, total mesorectal excision was possible. A gradual improvement of the operating time was observed with an average of 160 minutes. The postoperative hospitalization time was considerably shorter than in the case of open surgery.
Conclusions: We mention that the robotic approach brings extra comfort in male patients, with a narrow pelvis, where dissection and visualization is easier with a wristed instrument and a high resolution camera. At the same time, the intraoperative bleeding becomes minimal compared to the classic approach.

2-14

THE ROLE OF ROBOTICS IN VESICO-VAGINAL FISTULA REPAIR

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Vesico-vaginal fistula (VVF) in well-resourced countries (0.3-2%) are due to iatrogenic, unperceived injury of the dorsal bladder wall during a hysterectomy (62.7%); sometimes during sling placement for incontinence colorectal, urological surgery (12.7%), pelvic irradiation and malignant disease. Meanwhile, in low-resourced countries they are caused mainly by a cephalopelvic disproportion leading to prolonged labor and having a broader injury area.
For a correct fistula identification, pelvic examination with speculum and cystoscopy should be integrated with cystogram, cysto-CT-scan, MRI and the "double dye test".
The criteria to consider a fistula as 'complex' are: multiple previous surgeries; previous irradiation, a large size; high degree of peri-fistula inflammation and fibrosis, malignancies and/or endometriosis.
The landmarks of the surgical approach of VVF are: in 1980 O'Conor (1) described the transabdominal, suprapubic, extraperitoneal access with a cystostomy; in 1994 Nezhat (2) published the first laparoscopic repair of VVF, while in 2005 Melamud the first robotic repair (3).
There is no consensus on the optimal timing of surgery for VVF. The ERUS Reconstructive Panel recommends a trial with a catheter for attempting conservative management of up to 12 wk.
The surgical technique: The fistula is marked with a guidewire. Sharp and blunt dissection is then performed in order to expose the vesicovaginal space or the vaginal stump after hysterectomy. The bladder might subsequently be opened to prepare the fistula, to resect the fistula completely including perifistular scar and inflamed tissue. The vesicovaginal cleavage is dissected in order to mobilize the bladder wall as much as possible to provide a tension-free closure. Bladder and vaginal sutures have to be perpendicular (4).
By reviewing the literature (5), 130 pts data coming from case reports, very small (2-5 patients), small (7-10 patients) series and only 3 series (including 13-32 patients) are available. As far as the surgical approach is concerned, 9 studies report the trans-vesical (bi-valve) technique while 7, the extravesical approach. No flap was reported in 4 series, and the use of sealing agents in 3 series. The use of interposition flaps was reported by the majority (11) of authors. The reported success rate is 100%.
In conclusion, the robotic approach results adequate for VVF repair as it enables easier dissection of the VV cleavage, it improves the quality of the bladder and vagina suture and as a consequence, it allows very high success-rates. Tissue interposition seems unnecessary by default and should be considered only in complex fistulae repair.

References:

1. O'Conor VJ Jr Review of experience with vesicovaginal fistula repair. J Urol. 1980 Mar;123(3):367-9.
2. Nezhat CH, Nezhat F, […], Rottenberg H: Laparoscopic repair of a vesicovaginal fistula: a case report. Obstet Gynecol. 1994; 83(5 Pt 2): 899-901.
3. Melamud O, Eichel L,[…], Shanberg A: Laparoscopic vesicovaginal fistula repair with robotic reconstruction Urology. 200; 65(1): 163-6.

4. Matei DV, Zanagnolo V, […], de Cobelli O: Robot-Assisted Vesico-Vaginal Fistula Repair: Our Technique and Review of the Literature. Urol Int. 2017; 99(2): 137-142
5. Randazzo M, Lengauer L, […], John H: Best Practices in Robotic-assisted Repair of Vesicovaginal Fistula: A Consensus Report from the European Association of Urology Robotic Urology Section Scientific Working Group for Reconstructive Urology. Eur Urol. 2020 Sep;78(3):432-442

2-15

ROBOTIC TME IN 10 STEPS PROCEDURE TIPS AND TRICKS AFTER 150 CASES

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Total mesorectal excision (TME), a concept introduced in 19791 by Bill Heald, from Basingstoke, England, has dramatically increased the implementation of sphincter saving rectal surgery. The concept promotes that there is mobility at the interface between tissues of different embryologic origin and the rectum and its mesentery encased by the fascia propria of the mesorectum are separate from those structures outside of this fascial envelop. So the dissection can and must be performed sharply (no ripping or tearing or blunt dissection), under direct vision, with good illumination and gentle opening of the plane by continuous traction and countertraction. Robotic surgery with its stable camera, three long working arms under the control of the surgeon practically mimic the open surgery (the "gold standard" for TME), but diving into the pelvis, is the best tool for minimally invasive TME. The assistant can focus on contra-traction and suction and the surgeon with articulated 3 arms can perform a better circumferential dissection.
After 12 years of robotic surgery with over 600 cases of different procedures, 150 cases of robotic TME and more 1000 laparoscopic TME we have standardized the technique in a 12 steps procedures for robotic approach.
In fact, we promote a hybrid approach for fast and organized surgery with laparoscopic mobilization of splenic flexure. For economic consideration we use 3 instruments no more and laparoscopic stapling. Safety is very important, so we triple check of anastomosis with ICG, bubble test and endoscopy. A good and safe TME is the purpose and robot is a better tool for dissection in pelvis.
For that purpose, we need a team trained for fast and organized surgery and operative planning.
The 12 steps are:

1. Patient's positioning and OR set-up for minimaly invassive surgery (MIS)
2. Laparoscopic access and surgical evaluation (it includes intraoperative ultrasonography)
3. Expose the left colonic &rectal region by placing away the small bowel using the laparoscopic approach
4. Splenic flexure mobilization – selectively, using the laparoscopic approach: Lateral to medial, Medial to lateral superior to inferior. Division of IMV

Robotic Assisted Steps:

– Open the peritoneum at the level of promontory medial to right ureter
5. Carefully docking and positioning of the DaVinci Xi platform
6. IMA Ligation – high tie/low tie, adequate lymphadenectomy
7. Posterior dissection of mesorectum
8. Anterior dissection of mesorectum
9. Lateral dissection of mesorectum (right, left)
10. Deep circumferential dissection of mesorectum toward the pelvic floor
11. ICG evaluation (FireFly)
12. Stapling, anastomoses, anastomotic evaluation, ileostomy by laparoscopic approach

We may conclude that robotic assisted surgery is another tool expected to provide an improved performance of the same job. The task can be reached out while a structured protocol is routinely applied. In our experience, the using of advanced laparoscopic surgery steps (hybrid approach) increased the time and costs efficiency of the robotic rectal surgery.

2-16

ROBOTIC PARTIAL NEPHRECTOMY TECHNIQUES

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Renal malignancies, detected in their initial stages, may benefit from nephron-sparing techniques. The two main drivers of post-

operative functional recovery are the quality of the remnant parenchyma, a patient-dependent and non-modifiable variable, as well as its quantity, which can be potentially influenced by the employed resection technique.
One of the main factors that influence postoperatory glomerular filtration rate is warm ischemia time. Studies have shown that patients who underwent off-clamp partial nephrectomy had better long-term outcomes than those with selective vascular control. In order to preserve as much parenchyma as possible, minimizing the excisional volume is crucial. The robotic approach has demonstrated its superiority for complex tumors, facilitating their precise resection by enhancing visualization and dexterity. Clear cell carcinomas, due to their slow growth rate, develop a surrounding layer of fibrous tissue that acts as a pseudocapsule, providing an avascular plane suitable for enucleation. However, the risk of pseudocapsular effraction is greater as the tumor diameter increases. In this case, once the equator of the neoplasia is surpassed, the blunt enucleation technique should be merged with sharp resection of the tumoral bed. To ensure the viability of the remaining tissue, reducing devascularization must be a priority. Currently, authors debate double versus single layer renorrhaphy, without greater complication rates being reported. While basal-layer renorrhaphy ensures better exposure of bleeding sources, cortical layer-only with sliding clips offers a safe closure alternative even for open collecting systems. Hemostatic bolsters showed no difference in postoperative complications or transfusion rates, being slightly more useful in complex cases and bleeding-prone patients.
To summarize, robotic partial nephrectomy combines oncological safety requirements with maximized preservation of renal function, especially in patients with solitary kidney or bilateral disease.

2-17

DA VINCI X ROBOT VS. 3D LAPAROSCOPY IN PERFORMING PARTIAL NEPHRECTOMY – ANALYZING SURGICAL TECHNIQUE FOR KEY OPERATORY STEPS

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Study Objective: Partial nephrectomy performed minimally invasive challenges the skills of the surgeon under the warm ischemia time frame. This paper explores the differences and similarities of the robotic vs. the 3D laparoscopic treatments.
Material and methods: Using a video support, we exemplify our experience of minimal invasive transperitoneal partial nephrectomies. Key operatory steps are analyzed for both approaches, highlighting technical aspects.
Results: 293 partial nephrectomies were performed with a 3D laparoscopic approach and 11 surgeries with Da Vinci X robot. In 6 cases Indocyanine green was used.
Conclusions: The robotic approach offered surgical precision due to the wrist articulation but there were no differences in oncologic results compared to the laparoscopic approach. The Ligasure® device in laparoscopy offered a faster renal pedicle preparation and kidney dissection from adjacent tissues compared to the robot.

2-18

ROBOTIC RECONSTRUCTIVE TECHNIQUES OF THE URINARY TRACT (PYELOPLASTY, PYELO-PYELIC ANASTOMOSIS)

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One of the main advantages that robotic surgery brings to the table is the ability to outperform other minimally-invasive techniques in terms of suturing and reconstructive procedures of the urinary tract.
Anastomoses between a ureter and the contralateral one (end-to-side ureteroureterostomy) or between the upper calyx and ipsilateral ureter (end-to-side pyeloureterostomy) are indicated in case of duplicated collecting system or obstructed upper renal pole. The benefit of robotic-assisted approach resides in statistically significant shorter hospital stay and a greater number of patients with resolved or at least improved hydronephrosis on follow-up imaging, compared to open techniques.
Ureteropelvic junction obstruction (UPJO) can be managed through open, endoscopic or minimally-invasive interventions, the options are filtered by considering the magnitude of hydronephrosis, coexisting lithiasis or crossing vessels and previous surgery.

A successful procedure is defined by reduced or absent lumbar pain, no identifiable obstruction on renal imaging and improved differential renal function. The past two decades have shown an increased number of robot-assisted pyeloplasties, in both pediatric and adult patients. However the distribution between medical centers tends to be uneven, cases cluttering in teaching hospitals, with high-volume surgeons or in private hospitals. In side-to-side comparison with open and laparoscopic surgery, the robotic platform has a similar safety and efficacy profile, reducing the learning curve in terms of suturing abilities, thus diminishing the operating time and assuring a faster resolution hydronephrosis, therefore being preferred whenever the technology is available. Difficult cases, such as stricture with concomitant stones, secondary pelvi-ureteric junction obstruction or malrotated, horseshoe and ectopic kidneys plead for robotic disease management as well.
To conclude, robotic systems are at the forefront regarding reconstructive surgeries, providing less hospitalization days and analgesic requirements, while maintaining high success rates, with fewer postoperative complications.

2-19

TOTALLY INTRACORPOREAL ROBOTIC NEOBLADDER

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The curative treatment for muscle invasive bladder cancer is radical cystectomy, a complex procedure that oftentimes takes a toll on patients' body image and psychological well-being. The subsequent urinary diversion can be dealt with by creating a urostomy or a continent reservoir, in an extra- or intracorporeal manner. Current trends show an increasing interest for performing continent, totally intracorporeal urinary diversions (ICUD), overlapping with the widespread of robotic platforms. If only 9% of radical cystectomy cases were followed by robotic intracorporeal neobladder in 2005, by 2016 it has become a routine procedure, as 97% of cases benefited from this advantage. Nowadays, the question that arises is if robotic ICUD can be considered the gold standard.
The literature debates multiple neobladder techniques, with various subtle differences in terms of length of the ileal loop used to create the urinary pouch, modality of closing the reservoir, if the urethro-ileal anastomosis should be performed at the start of reconstruction or after pouch completion, type of uretero-neobladder anastomosis, as well as the variety of ureteric drainage and indwelling vesical catheters. Regardless of the type of orthotopic neobladder, functional outcomes weigh heavily when measuring the quality of life at further follow-ups. Continence rates vary depending on the time of day, night-time continence being achieved in only 57% of the patients, while throughout the day, nearly 93% of them manage to retain urine voluntarily. Potency varies between 48% and 81%, with studies advocating for bilateral nerve sparing and seminal vesicle sparing approaches if it is considered to maintain oncological safety requirements.
In conclusion, robotic radical cystectomy with total ICUD is today a worldwide accessible intervention, being however encumbered by supraselection of cases in large-volume medical centers and higher medical costs.

2-20

ROBOTIC RETROPERITONEAL APPROACH FOR PARTIAL NEPHRECTOMY

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Partial nephrectomy can be considered a challenging procedure, especially if the retroperitoneal access is chosen. The main indications for this approach are past history of abdominal surgery, ongoing peritoneal dialysis or renal tumors located on the posterior valve.
Most surgeons would argue that retroperitoneal space provides insufficient working volume, unsuitable for fitting three robotic arms along with the assistant surgeon's instruments, causing frequent clashing between them, to the point where the surgery cannot advance. However, this approach has irrefutable advantages, such as early arterial control, low risk of intestinal lesions, perioperative complications limited to a confined space, reduced systemic impact and faster recovery. Previous experience in laparoscopic retroperitoneal surgery can be translated to robotic platforms. By placing the robotic cart at the head of the patient and the trocars in a triangulated fashion, with the optic port above the iliac crest, while maintaining an 8 to 9 cm distance between access points, the reduced working space is used at its maximum capacity, preventing the conflict and clutter of instruments.

Originally described by our department as an appropriate technique for robotic adrenalectomy, its applications may extend to every urological intervention that can be performed retroperitoneally, particularly partial nephrectomy. Compared to standard transperitoneal robotic approach, multi-centric studies have reported similar perioperatory and oncological outcomes in terms of mean operation and warm ischemia time, complication rate and positive surgical margins percentage, favoring however the retroperitoneal route when estimating blood loss, thanks to better exposure of arterial vascular elements.
In conclusion, triangular disposition of the ports creates a comfortable working space for robotic arms and bedside assisting surgeon, making complex oncological and reconstructive operations such as partial nephrectomy feasible in a retroperitoneal manner.

2-21

APPLICATIONS OF INDOCYANINE GREEN IN MINIMALLY INVASIVE UROLOGIC SURGERY – THE ADVANTAGES OF DA VINCI X ROBOT

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Study Objective: Indocyanine green (ICG) is a dye that can be used in surgery under fluorescence guidance. The up-to-date literature reports it is safe with its potential in urological surgeries being scarcely explored. This paper dissects the applications of ICG in 3D laparoscopic and Da Vinci X robotic and robot-assisted surgeries in the field of urology.
Material and methods: We exemplify our experience of using ICG in urology with a video collage. The technique of ICG usage is described with peri and post operatory parameters being analyzed.
Results: 37 surgeries were performed under ICG fluorescence guidance: 12 cases of robot-assisted totally intracorporeal ileal neobladders, 15 cases of 3D laparoscopic totally intracorporeal ileal neobladders, 2 cases of lymph node dissection during 3D laparoscopic radical prostatectomy, 5 cases of 3D laparoscopic partial nephrectomies (1 case on a solitary kidney and 1 on a horseshoe kidney), 1 case of robotic partial nephrectomy, 1 case of 3D laparoscopic vesico-vaginal fistula repair and 1 case of 3D laparoscopic pyeloplasty. ICG guided the analysis of tissue vascularization, excision of ischemic tissues, lymph nodes' identification and allowed selective arterial clamping.
Conclusions: ICG presented a safe profile of usage with an important role in the excision of ischemic tissues in reconstructive surgery and highlighted vascularization and lymph trajects, with possible implications in peri and post operatory functional and oncologic outcomes. The Firefly® mode of the Da Vinci robot presented more ergonomic and easy access to near-infrared fluorescence images, compared to 3D laparoscopy.

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THE ROLE OF ROBOTICS IN RETROPERITONEAL LYMPHADENECTOMY FOR NON-SEMINOMATOUS TESTICULAR CARCINOMA

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Open RPLND remains the gold standard, based on: oncologic outcomes and long-term follow-up data, intraoperative and post-operative complications rate and adjunctive surgery and the excellent function outcomes in terms of antegrade ejaculation based on nerve-sparing (1). In 1974, Ray (2) was the first who noted the absence of crossover relative to the primary landing zones among patients with solitary metastases of the right or left testes. In 1982, Donohue (3) confirmed the predictable patterns of disease spread as reported by Ray and provided pathologic rationale for the safe omission of suprahilar, interiliac, and contralateral RP dissections. According to the minimally effective treatment principles, the lymph nodes dissection surface was gradually reduced (4).
When L-RPLND was first introduced in 1992 (5), the main criticism was a concern for lower overall LN yield and its impact on oncological outcomes. However, in time the technique has improved, so that retro-aortic and retro-caval LNs are now routinely removed laparoscopically. On the other hand, Rassweiler et al. (6), demonstrated that the removal or not of the tissue posterior to vena cava inferior and the aorta does not influence the "in-field" relapse rate. Moreover, unilateral template dissection seems appropriate even

if performed not nerve sparing, as far as the inferior mesenteric artery and thus, the hypogastric plexus are strictly respected.
With the advent of robot-assisted surgery, RPLN dissection was proposed and successively performed (7). Advocates of robotic technology refer not only to the superior perioperative outcomes, but also to the ease of intracorporeal suturing and improved control around vessels and nerve plexuses.
According to our experience (32 patients, including 25 stage I NSGCT and 7 with post-CT residual masses), these technical advantages of robotics are critical for RPLND, particularly concerning the number of LNs resected (average 16.5), the maintenance of an antegrade ejaculation (97%), and protection of the great vessels (vascular injuries: 6.25%). As a result, the robotic approach seems adequate to obtain trifecta: oncologic control (1 pulmonary relapse after 42 months of follow-up, morbidity at 90-days after (28% chylous ascites) and functional recover (97%).
Even if promising, Robotic RPLND remains an experimental approach as the number of patients treated with this technique remains sparse and more data is needed to assess oncologic outcomes. Moreover, it should be performed in high volume centres to ensure an appropriate patient selection and optimized treatment schedules.

References

1. Laguna MP, Albers P, Albrecht W: EAU guidlines on testicular cancer. European Association of Urology 2019
2. Ray B, Hajdu SI, Whitmore WF Jr: Proceedings: distribution of retroperitoneal lymph node metastases in testicular germinal tumors. Cancer, 1974. 33:340–348
3. J P Donohue, J M Zachary, B R Maynard: Distribution of nodal metastases in nonseminomatous testis cancer J Urol. 1982; 128(2): 315-20
4. Masterson TA, Cary C, Rice KR, Foster RS: The Evolution and Technique of Nerve-Sparing Retroperitoneal Lymphadenectomy. Urol Clin North Am. 2015; 42(3): 311-20
5. Rukstalis DB, Chodak GW: Laparoscopic retroperitoneal lymph node dissection in a patient with stage 1 testicular carcinoma J Urol. 1992; 148(6): 1907-9; discussion 1909-10.
6. Rassweiler JJ, Scheitlin W, [..], Janetschek G: Laparoscopic retroperitoneal lymph node dissection: does it still have a role in the management of clinical stage I nonseminomatous testis cancer? A European perspective. Eur Urol. 2008; 54(5): 1004-15.
7. de Cobelli O, Brescia A, […], Deliu Victor Matei: A novel "intuitive" surgical technique for right robot-assisted retroperitoneal lymph node dissection for stage I testicular NSGCT World J Urol. 2013; 31(3):435-9.

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