

**1. Endocr J. 2019 Jan 22. doi: 10.1507/endocrj.EJ18-0445. [Epub ahead of print]**

*Changes in glucose metabolism based on 75-g oral glucose tolerance tests before and after surgery for adrenal Cushing's syndrome.*

Tsurutani Y(1), Miyoshi K(1), Inoue K(1)(2), Takiguchi T(1), Saito J(1), Omura M(1), Nishikawa T(1).

Author information:

(1)Endocrinology and Diabetes Center, Yokohama Rosai Hospital, Yokohama 222-0036, Japan.

(2)Department of Epidemiology, UCLA Fielding School of Public Health, Los Angeles 90024, USA.

Adrenal Cushing's syndrome (CS) is caused by cortisol-producing adrenal adenoma and is frequently accompanied by glucose metabolism disorders, which are characterized by increased insulin resistance and insufficient  $\beta$ -cell compensation. However, considering the rarity of CS, few studies have assessed whether the glucose metabolism disorders could be ameliorated by surgical treatment. In this case series, we evaluated glucose metabolism before and after surgery in 11 patients (10 women and 1 man) who underwent unilateral adrenalectomy for overt adrenal CS between 2005 and 2016. Patients with pre-diagnosed diabetes mellitus (DM) were excluded. Pre- and post-operative 75-g oral glucose tolerance tests were performed. Cortisol secretion decreased significantly after surgery (median 24-h urinary free cortisol: 582.0  $\mu\text{g}/\text{day}$  [interquartile range: 321.0-743.0  $\mu\text{g}/\text{day}$ ] to 31.3  $\mu\text{g}/\text{day}$  [23.6-40.6  $\mu\text{g}/\text{day}$ ],  $p = 0.001$ ). The results of the OGTT generally improved after surgery (normal glucose tolerance/impaired glucose tolerance/DM: 2/8/1 to 8/3/0), with significant decreases in the immunoreactive insulin and glucose levels. We also found a decrease in the median homeostatic model assessment of insulin resistance (2.4 [1.4-2.8] to 1.0 [0.6-1.1],  $p = 0.002$ ), and increases in the median Matsuda index (3.0 [2.3-4.5] to 8.2 [6.3-11.4],  $p < 0.001$ ), median insulinogenic index (0.70 [0.22-1.51] to 1.22 [0.78-1.64],  $p = 0.08$ ), and median disposition index (609.1 [237.8-1,095.2] to 1,286.0 [1,034.6-1,857.6],  $p = 0.002$ ). These findings indicate that adrenalectomy for adrenal CS without overt DM may help ameliorate glucose metabolism disorders, and improve both insulin resistance and insulin secretion.

DOI: 10.1507/endocrj.EJ18-0445

PMID: 30674738

**2. Ann Surg. 2019 Jan 18. doi: 10.1097/SLA.0000000000003200. [Epub ahead of print]**

*The Primary Aldosteronism Surgical Outcome Score for the Prediction of Clinical Outcomes After Adrenalectomy for Unilateral Primary Aldosteronism.*

Burrello J(1), Burrello A(2), Stowasser M(3), Nishikawa T(4), Quinkler M(5), Prejbisz A(6), Lenders JWM(7)(8), Satoh F(9), Mulatero P(1), Reincke M(10), Williams TA(1)(10).

Author information:

(1)Division of Internal Medicine and Hypertension, Department of Medical Sciences, University of Turin, Turin, Italy.

(2)Department of Electronics and telecommunications, Polytechnic University of Turin, Turin, Italy.

(3)Endocrine Hypertension Research Centre, University of Queensland Diamantina Institute, Greenslopes and Princess Alexandra Hospitals, Brisbane, QLD, Australia.

- (4)Endocrinology and Diabetes Center, Yokohama Rosai Hospital, Yokohama, Japan.
- (5)Endocrinology in Charlottenburg, Berlin, Germany.
- (6)Department of Hypertension, Institute of Cardiology, Warsaw, Poland.
- (7)Department of Medicine III, University Hospital Carl Gustav Carus, Technische Universität Dresden, Dresden, Germany.
- (8)Department of Medicine, Radboud University Medical Center, Nijmegen, The Netherlands.
- (9)Division of Clinical Hypertension, Endocrinology and Metabolism, Tohoku University Graduate School of Medicine, Sendai, Japan.
- (10)Department of Internal Medicine IV, Ludwig-Maximilians-University, Munich, Germany.

MINI: Clinical remission after unilateral adrenalectomy to treat unilateral primary aldosteronism is achieved in less than half of patients. A linear discriminant model with 6 presurgical predictors of clinical remission was used to build a 25-point prediction score of postsurgical clinical outcomes. The prediction score was integrated into a user-friendly online tool which can be used in a clinical setting to differentiate patients who are likely to be clinically cured after surgery from those who will need continuous surveillance after surgery due to remnant hypertension. OBJECTIVE: To develop a prediction model for clinical outcomes after unilateral adrenalectomy for unilateral primary aldosteronism.

SUMMARY BACKGROUND DATA: Unilateral primary aldosteronism is the most common surgically curable form of endocrine hypertension. Surgical resection of the dominant overactive adrenal in unilateral primary aldosteronism results in complete clinical success with resolution of hypertension without antihypertensive medication in less than half of patients with a wide between-center variability.

METHODS: A linear discriminant analysis model was built using data of 380 patients treated by adrenalectomy for unilateral primary aldosteronism to classify postsurgical clinical outcomes. The total cohort was then randomly divided into training (280 patients) and test (100 patients) datasets to create and validate a score system to predict clinical outcomes. An online tool (Primary Aldosteronism Surgical Outcome predictor) was developed to facilitate the use of the predictive score.

RESULTS: Six presurgical factors associated with complete clinical success (known duration of hypertension, sex, antihypertensive medication dosage, body mass index, target organ damage, and size of largest nodule at imaging) were selected based on classification performance in the linear discriminant analysis model. A 25-point predictive score was built with an optimal cut-off of greater than 16 points (accuracy of prediction = 79.2%; specificity = 84.4%; sensitivity = 71.3%) with an area under the curve of 0.839.

CONCLUSIONS: The predictive score and the primary aldosteronism surgical outcome predictor can be used in a clinical setting to differentiate patients who are likely to be clinically cured after surgery from those who will need continuous surveillance after surgery due to persistent hypertension.

DOI: 10.1097/SLA.0000000000003200

PMID: 30672800

**3. Neuroendocrinology. 2019 Jan 13. doi: 10.1159/000496846. [Epub ahead of print]**

*Recovery of the adrenal function after pituitary surgery in patients with Cushing Disease: persistent remission or recurrence?*

Serban A, Sala E, Carosi G, Del Sindaco G, Giavoli C, Locatelli M, Arosio M, Mantovani G, Ferrante E.

Background Cushing's disease (CD) represents the principal cause of endogenous hypercortisolism. The first-line therapy of CD is surgical removal of the ACTH secreting pituitary adenoma, which is generally followed by adrenal insufficiency (AI). Objective To analyse the recovery of the AI in patients with CD after pituitary surgery in relation with recurrence and persistent remission of CD. Materials and Methods Retrospective analysis on patients with CD who met the following inclusion criteria: adult age, presence of AI at 2 months after the surgical intervention, a minimum follow-up of 3 years after the surgical intervention. Results: Sixty-one patients were followed for a median of 6 years. Ten (16.3%) patients recurred during follow up. The patients who restored the adrenal function did it after a mean time of 19 months, with a significantly shorter time in the recurrence group (12.5 vs 25 months,  $p=0.008$ ). All 10 patients who recurred recovered their adrenal function within 22 months. The recovery rate of AI in the persistent remission group was 37% (19/51) at 3 years and 55.8% (24/43) at 5 years. In all patients the duration of AI was negatively associated with the recurrence of disease. Conclusion The duration of postsurgical AI in patients with recurrent CD is significantly shorter than in persistently remitted CD. and this parameter may be a useful predictor for recurrence. Patients showing a normal pituitary-adrenal axis within 2 years after surgery should be strictly monitored being more at risk of disease relapse.

©2019S. Karger AG, Basel.

DOI: 10.1159/000496846

PMID: 30636245

**4. Bull Exp Biol Med. 2019 Jan 8. doi: 10.1007/s10517-019-04362-x. [Epub ahead of print]**

*Infradian Rhythms of Resistance to a Dissociative Anesthetic in Wistar Male Rats under Normal Conditions and After Surgical Removal of the Adrenal Glands and Testes.*

Dzalilova DS(1), Diatropova MA(1), Mkhitarov VA(1), Diatropov ME(2).

Author information:

(1)Research Institute of Human Morphology, Moscow, Russia.

(2)Research Institute of Human Morphology, Moscow, Russia. diatrom@inbox.ru.

Daily dynamics of changes in the latency of a response to dissociative anesthetic tiletamine (time from injection to ataxia) was studied in mature Wistar rats. Both intramuscular and intravenous administration of the anesthetic was associated with 4-day oscillations of the latent period synchronous with the dynamics of changes in the concentration of glucocorticoid hormones. The period and phases of the infradian rhythm of resistance to the anesthetic remained unchanged after removal of both adrenal glands and testes and administration of corticosterone synthesis blocker trilostane diminishing the 4-day cycle of changes in corticosterone level. Therefore, hormones of the adrenal glands and testes do not play the key role in the mechanisms of formation of the 4-day infradian rhythm.

DOI: 10.1007/s10517-019-04362-x  
PMID: 30617706

**5. BMJ Case Rep. 2018 Dec 9;11(1). pii: e226384. doi: 10.1136/bcr-2018-226384.**

*Extra-adrenal pheochromocytoma presenting as inverse takotsubo-pattern cardiomyopathy treated with surgical resection.*

Tafreshi S(1), Naqvi SY(2), Thomas S(2).

Author information:

(1)Department of Medicine, University of Rochester Medical Center, Rochester, New York, USA.

(2)Department of Cardiology, University of Rochester Medical Center, Rochester, New York, USA.

Pheochromocytoma is a rare catecholamine-secreting tumour that is typically located in the adrenal medulla or along the sympathetic ganglia. The typical symptoms are episodic in nature and include tachycardia, sweating and headache. These tumours can present as transient, reversible cardiomyopathy similar to takotsubo cardiomyopathy (TCM). TCM is characterised by transient hypokinesis of the left ventricular apex and is typically induced by emotional stress. We describe the case of a 26-year-old woman with a medical history significant for headaches who presented initially to her family physician with nausea, vomiting, headache and hypertension. She was started on lisinopril 10 mg daily. One week later, she presented to the emergency department with substernal severe chest pressure. Her troponin level was elevated. Coronary angiogram showed normal coronary arteries and left ventriculogram showed inverse TCM pattern. Serum catecholamines were very elevated confirming pheochromocytoma. She was successfully treated with alpha-blockers followed by surgical resection.

© BMJ Publishing Group Limited 2018. No commercial re-use. See rights and permissions. Published by BMJ.

DOI: 10.1136/bcr-2018-226384

PMID: 30567218

Conflict of interest statement: Competing interests: None declared.

**6. Medicine (Baltimore). 2018 Dec;97(50):e13591. doi: 10.1097/MD.000000000013591.**

*Simultaneous occurrence of primary aldosteronism due to aldosteronoma and ectopic meningioma in the adrenal gland: A case report.*

Ramlagun D(1), Shadhu K(1), Sang M(2), Zhu K(1), Qin C(1), Sun M(2).

Author information:

(1)Department of Urology.

(2)Department of Endocrinology, First Affiliated Hospital of Nanjing Medical University and Jiangsu Province Hospital, Gulou District, Nanjing City, Jiangsu Province, PR China.

**RATIONALE:** Primary aldosteronism due to aldosteronoma is the most common form of secondary hypertension, with an estimated prevalence of 4% of hypertensive patients in primary care and around 10% of referred patients. Diagnosis is a clinical challenge with simultaneous occurrence of primary ectopic meningioma in the adrenal gland. To our knowledge this is the first reported case of simultaneous occurrence of aldosteronomas and ectopic meningioma in the adrenal

gland based on literatures.

**PATIENT CONCERNS:** A 30-year-old man presented with resistant hypertension for one year. The computed tomographic scans were suggestive of left adrenal gland hyperplasia.

**INTERVENTION:** The patient underwent partial unilateral laparoscopic adrenalectomy.

**DIAGNOSIS:** The histopathological examination of the resected sample confirmed primary ectopic meningioma in adrenal gland and aldosterone producing adenoma (APA). The saline load test, captopril test, and plasma aldosterone/renin ratio were indicative of primary aldosteronism (PA).

**OUTCOMES:** The patient had controlled blood pressure postoperatively.

**LESSONS:** The patient was diagnosed with PA due to APA and nonfunctional primary ectopic meningioma in the adrenal gland which is very rare and dealt with unilateral laparoscopic adrenalectomy.

DOI: 10.1097/MD.00000000000013591

PMID: 30558028 [Indexed for MEDLINE]

**7. J Endocr Soc. 2018 Sep 20;2(12):1338-1344. doi: 10.1210/js.2018-00239. eCollection 2018 Dec 1.**

*Pharmacokinetics of Glucocorticoid Replacement Before and After Bariatric Surgery in Patients With Adrenal Insufficiency.*

de Heide LJM(1), de Boer HHR(2), van Borren M(3), Emous M(4), Aarts E(5), de Boer H(6).

Author information:

(1)Department of Internal Medicine, Medical Center Leeuwarden, AD Leeuwarden, Netherlands.

(2)Department of Endocrinology, University Medical Center Groningen, RB Groningen, Netherlands.

(3)Department of Clinical Chemistry, Rijnstate Hospital, TA Arnhem, Netherlands.

(4)Department of Surgery, Medical Center Leeuwarden, AD Leeuwarden, Netherlands.

(5)Department of Surgery, Rijnstate Hospital, TA Arnhem, Netherlands.

(6)Department of Internal Medicine, Rijnstate Hospital, TA Arnhem, Netherlands.

Adequate glucocorticoid replacement in patients with primary or secondary adrenal insufficiency is essential to maintain general well-being. Little is known about the effects of bariatric surgery on glucocorticoid absorption. This study evaluates glucocorticoid absorption before and after bariatric surgery, with assessment of plasma cortisol profiles in five patients receiving glucocorticoid replacement therapy for primary (n = 1) or secondary (n = 4) adrenal insufficiency. One patient underwent sleeve gastrectomy (SG), one a one-anastomosis gastric bypass (mini-GB), and three a Roux-en-Y gastric bypass (RYGB). Pharmacokinetic calculations were based on plasma cortisol measurements performed during the first 6 hours after ingestion of the morning dose. Plasma cortisol profiles were very similar before and after surgery; only minor differences were observed. After SG, plasma peak cortisol concentration and cortisol area under the curve (AUC) were higher by 23% and 24%, respectively, and time to peak cortisol was 10 minutes shorter. The mini-GB had no marked effect on pharmacokinetic parameters. In the three patients who underwent RYGB, AUC changes ranged from -12% to 20%. In conclusion, in this small number of patients with adrenal insufficiency, plasma cortisol profiles were similar before and after

bariatric surgery. However, in view of individual differences in response to different types of surgery, we recommend postoperative cortisol profiling to guide appropriate glucocorticoid dose adjustment.

DOI: 10.1210/js.2018-00239

PMCID: PMC6262195

PMID: 30511036

**8. Turk J Urol. 2018 Nov 21. doi: 10.5152/tud.2018.94412. [Epub ahead of print]**

*Tourniquet and adrenaline use in hypospadias surgery: a survey on the current practice in Turkey.*

Ateş U(1), Ekberli G(1), Taştekin NY(1), Göllü G(1), Çakmak M(1).

Author information:

(1)Department of Pediatric Surgery, Ankara University School of Medicine, Ankara, Turkey.

**OBJECTIVE:** Aim of the study is to determine the hemostatic techniques among pediatric urologists in Turkey.

**MATERIAL AND METHODS:** Questionnaire forms were sent to 459 pediatric urologist by e-mail.

**RESULTS:** Ninety eight of 459 participants answered the questionnaire forms. Eighty-one (84.4%) of the participants were using tourniquet. The participants who didn't use tourniquet stated their justifications as follows: lack of need (n=10: 66.7%), development of edema, ischemia, delay of wound-graft healing and fistula risk (n=5: 33.3%). The indications of tourniquet use were stated as follows: penile (91.4%: n=74), distal (72.8%: n=59), penoscrotal (55.6%: n=45) hypospadias; fistula repair (33.3%: n=27), cripple hypospadias (33.3%: n=27), repair with flaps (30.9%: n=25), repair with grafts (27.2%: n=22), and isolated penile curvature (21%: n=17). Most commonly used tourniquet material (49.9%) was latex glove. Erection test was applied by 43.8% of participants. Scalp vein set was the most commonly (54.8%) used injector during erection test. Only 9.4% of participants were using adrenaline. Adrenaline dosages used at 1/100.000 dilution by 55.6%, lidocaine with 1/100.000 adrenaline by 44.4% of participants.

**CONCLUSION:** Beside a few experimental ones there is a paucity of studies that can serve as a guideline for using these techniques in the literature. There is a necessity of realizing prospective, randomized studies with long-term follow up to evidence that postoperative complications could develop secondary to hemostatic techniques and also to facilitate safe use of these techniques.

DOI: 10.5152/tud.2018.94412

PMID: 30468426

**9. Medicine (Baltimore). 2018 Nov;97(47):e13329. doi: 10.1097/MD.000000000013329.**

*Spontaneous adrenal hematoma in pregnancy: A case report.*

Yang L(1), Zhu YC(2), Liu RB(1).

Author information:

(1)Department of Radiology.

(2)Department of Urology, West China Hospital of Sichuan University, Chengdu, Sichuan 610041, China.

**RATIONAL:** Spontaneous adrenal hematoma in pregnancy is a very rare condition.

Herein we present an additional rare case of unilateral spontaneous adrenal hematoma in a pregnant woman, aiming to share this experience and summarize the signal characteristics of simple adrenal hematoma in magnetic resonance imaging (MRI).

**PATIENT CONCERNS:** A 28-year old pregnant woman was referred to our hospital with a vague paroxysmal left-side back pain at 17 weeks of gestation.

**DIAGNOSIS:** MR scan of the abdomen revealed an 8.1 × 7.7 × 6.8 cm round mass in the left adrenal region, which showed a rim of acute hemorrhage signal. Due to the stable condition of the patient and fetus, she was admitted for observation. Repeat MR scan was performed a month later, and it showed a stable mass with marginal subacute bleeding signal.

**INTERVENTIONS:** Laparoscope excision of the hematoma was performed.

**OUTCOMES:** Simple adrenal hematoma was confirmed by pathological examinations. And the patient was discharged 3 days later with normal renal and adrenal functions.

**LESSONS:** The most important characteristic of adrenal hematoma is the high-signal rim on T1-weighted MR images, and the clinicians should make individualized treatment plan for every patient encountered in the future who might have different clinical conditions.

DOI: 10.1097/MD.00000000000013329

PMID: 30461650 [Indexed for MEDLINE]

**10. J Clin Endocrinol Metab. 2018 Nov 1;103(11):4089-4096. doi: 10.1210/jc.2018-01863.**

*Genital Reconstructive Surgery in Females With Congenital Adrenal Hyperplasia: A Systematic Review and Meta-Analysis.*

Almasri J(1)(2), Zaiem F(3), Rodriguez-Gutierrez R(4)(5), Tamhane SU(6), Iqbal AM(7), Prokop LJ(8), Speiser PW(9), Baskin LS(10), Bancos I(6), Murad MH(1)(2).

Author information:

(1)Evidence-Based Practice Research Program, Mayo Clinic, Rochester, Minnesota.

(2)Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery, Mayo Clinic, Rochester, Minnesota.

(3)Department of Pathology, Karmanos Cancer Institute, Wayne State University School of Medicine, Detroit, Michigan.

(4)Division of Endocrinology, Department of Internal Medicine, University Hospital Dr. Jose E. Gonzalez, Autonomous University of Nuevo Leon, Monterrey, Mexico.

(5)Plataforma INVEST Medicina UANL-KER Unit Mayo Clinic, Autonomous University of Nuevo Leon, Monterrey, Mexico.

(6)Division of Endocrinology, Mayo Clinic, Rochester, Minnesota.

(7)Division of Pediatrics and Adolescent Medicine, Department of Pediatric Endocrinology, Mayo Clinic, Rochester, Minnesota.

(8)Mayo Clinic Libraries, Mayo Clinic, Rochester, Minnesota.

(9)Division of Pediatric Endocrinology, Cohen Children's Medical Center and Zucker Hofstra Northwell School of Medicine, Lake Success, New York.

(10)Department of Urology, University of California, San Francisco, California.

**Background:** Females with congenital adrenal hyperplasia (CAH) and atypical genitalia often undergo complex surgeries; however, their outcomes remain largely uncertain.

**Methods:** We searched several databases through 8 March 2016 for studies

evaluating genital reconstructive surgery in females with CAH. Reviewers working independently and in duplicate selected and appraised the studies.

**Results:** We included 29 observational studies (1178 patients, mean age at surgery,  $2.7 \pm 4.7$  years; mostly classic CAH). After an average follow-up of 10.3 years, most patients who had undergone surgery had a female gender identity (88.7%) and were heterosexual (76.2%). Females who underwent surgery reported a sexual function score of 25.13 using the Female Sexual Function Index (maximum score, 36). Many patients continued to complain of substantial impairment of sensitivity in the clitoris, vaginal penetration difficulties, and low intercourse frequency. Most patients were sexually active, although only 48% reported comfortable intercourse. Most patients (79.4%) and treating health care professionals (71.8%) were satisfied with the surgical outcomes. Vaginal stenosis was common (27%), and other surgical complications, such as fistulas, urinary incontinence, and urinary tract infections, were less common. Data on quality of life were sparse and inconclusive.

**Conclusion:** The long-term follow-up of females with CAH who had undergone urogenital reconstructive surgery shows variable sexual function. Most patients were sexually active and satisfied with the surgical outcomes; however, some patients still complained of impairment in sexual experience and satisfaction.

The certainty in the available evidence is very low.

DOI: 10.1210/jc.2018-01863

PMID: 30272250

**11. J Laparoendosc Adv Surg Tech A. 2019 Jan;29(1):19-23. doi: 10.1089/lap.2018.0286.**

**Epub 2018 Sep 28.**

*Robotic Adrenalectomy: Are We Expanding the Indications of Minimally Invasive Surgery?*

Quadri P(1), Esposito S(2), Coleoglou A(1), Danielson KK(1)(2), Masrur M(1), Giulianotti PC(1).

Author information:

(1)1 Division of General, Minimally Invasive and Robotic Surgery, Department of Surgery, University of Illinois at Chicago, Chicago, Illinois.

(2)2 Division of Epidemiology and Biostatistics, University of Illinois at Chicago, Chicago, Illinois.

**INTRODUCTION:** Laparoscopic adrenalectomy (LA) is accepted as the gold standard treatment for most adrenal pathologies. Open surgery is still considered the standard of care for large tumors and malignancies. In the past decade, robotic adrenalectomy (RA) has become an alternative to the laparoscopic and open approaches. The aim of this study was to analyze perioperative and postoperative outcomes in a series of consecutive nonselected patients undergoing a RA, to determine whether factors that negatively affect outcomes in LA (body mass index [BMI], size, and side of the tumor) have the same impact in RA.

**MATERIALS AND METHODS:** This is a single-center single-surgeon retrospective study with 43 patients who underwent a RA. Patients were divided into different groups according to tumor size (cutoff values of 5 or 8 cm), tumor side (left/right), and BMI (cutoff value of  $\text{kg}/\text{m}^2$ ). Perioperative and postoperative outcomes included operative time, length of hospital stay, blood loss, readmissions, complications, and conversions to open.

**RESULTS:** There were no significant differences between the groups with tumors

<5 cm versus ≥5 cm regarding gender, age, race, BMI, American Society of Anesthesiologists (ASA) score, history of previous abdominal surgery, tumor side, and histopathological diagnosis (all P values ≥.06). There were no significant differences in any of the outcomes analyzed with respect to the tumor size (all P values ≥.14) except for a higher occurrence of complications in patients with tumors ≥8 cm versus <8 cm (P = .03). There were no significant differences in any outcomes related to side (left versus right) of the tumor nor BMI (<30 versus ≥30 kg/m<sup>2</sup>). The overall readmission and conversion rates were both 2.3% and no mortalities were registered.

**CONCLUSION:** Patient's BMI, tumor side, and size did not demonstrate a negative impact on perioperative and postoperative outcomes of RA. This approach could potentially expand the indications of minimally invasive surgery.

DOI: 10.1089/lap.2018.0286

PMID: 30265584

**12. Urology. 2018 Nov;121:22-28. doi: 10.1016/j.urology.2018.06.021. Epub 2018 Jun 26.**

*Adrenal Cyst in Pregnancy: A Surgical Emergency.*

Mandato VD(1), Mastrofilippo V(2), Kuhn E(3), Silvotti M(4), Barbieri I(5), Aguzzoli L(2), La Sala GB(6).

Author information:

(1)Unit of Obstetrics and Gynecology, Azienda Unità Sanitaria Locale, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Azienda Unità Sanitaria Locale, Reggio Emilia, Italy. Electronic address: dariomandato@gmail.com.

(2)Unit of Obstetrics and Gynecology, Azienda Unità Sanitaria Locale, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Azienda Unità Sanitaria Locale, Reggio Emilia, Italy.

(3)Unit of Pathology, Azienda Unità Sanitaria Locale, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Azienda Unità Sanitaria Locale, Reggio Emilia, Italy.

(4)Unit of Radiology, Azienda Unità Sanitaria Locale, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Azienda Unità Sanitaria Locale, Reggio Emilia, Italy.

(5)General and Emergency Surgery, University of Modena and Reggio Emilia, Reggio Emilia, Italy.

(6)Unit of Obstetrics and Gynecology, Azienda Unità Sanitaria Locale, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Azienda Unità Sanitaria Locale, Reggio Emilia, Italy; y.

DOI: 10.1016/j.urology.2018.06.021

PMID: 29958968

**13. Br J Radiol. 2018 Dec;91(1092):20180090. doi: 10.1259/bjr.20180090. Epub 2018 Jul 25.**

*CT-guided percutaneous core biopsy for assessment of morphologically normal adrenal glands showing high FDG uptake in patients with lung cancer.*

Chassagnon G(1), Bennani S(1), Freche G(1), Magdeleinat P(2), Mansuet-Lupo A(3), Revel MP(1).

Author information:

(1)1 Radiology Department, Groupe Hospitalier Cochin Broca Hôtel-Dieu -

Université Paris Descartes , Paris , France.

(2)2 Department of Thoracic Surgery, Groupe Hospitalier Cochin Broca Hôtel-Dieu - Université Paris Descartes , Paris , France.

(3)3 Department of Pathology, Groupe Hospitalier Cochin Broca Hôtel-Dieu - Université Paris Descartes , Paris , France.

**OBJECTIVE::** Increased fludeoxyglucose (FDG) uptake in morphologically normal adrenal glands on positron emission tomography-CT (PET-CT) is a diagnostic challenge with major implications on treatment. The purpose of this retrospective study was to report our experience of CT-guided percutaneous core biopsy of morphologically normal adrenal glands showing increased FDG uptake in a context of lung cancer.

**METHODS::** Biopsies for non-enlarged adrenal glands showing increased FDG uptake in lung cancer patients performed at our institution from December 2014 to December 2016 were retrospectively analyzed. Six biopsies were performed in five patients during the study period. All procedures were performed with the patients in the prone position, using a posterior approach and coaxial 17-gauge needles with 18-gauge automated cutting needles. Patient characteristics, procedural details and final pathological diagnosis were analyzed, as well as the duration of hospitalization.

**RESULTS::** Five of the six biopsies (83.3%) confirmed adrenal metastasis from the primary lung cancer. No complications were reported and the patients were discharged the day after the procedure.

**CONCLUSION::** The high confirmation rate of metastasis and lack of complications support performing CT-guided percutaneous biopsy of non-enlarged adrenal glands showing increased FDG uptake, for optimal management in lung cancer patients.

**ADVANCES IN KNOWLEDGE::** Morphologically normal adrenal glands showing high FDG uptake in patients with lung cancer are metastasis. This manuscript shows that CT-guided percutaneous biopsy should be proposed. Increased FDG uptake in morphologically normal adrenal glands may indicate metastasis.

DOI: 10.1259/bjr.20180090

PMCID: PMC6319859 [Available on 2019-12-01]

PMID: 29906237 [Indexed for MEDLINE]