


SURGICAL RESEARCH
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 FORUM

Reynold López-Enriquez, M.D.
 Chairman

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 Department of Surgery, UPR-RCM

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• **Myth Prevents Successful Breastfeeding in Breast Augmentation Patients**

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Purpose: It has been suggested that in women who had breast augmentation the success of breastfeeding might be affected by the perception of how this could alter the appearance of the breasts. However, available evidence tells us that although breasts sag more with each pregnancy, breastfeeding doesn't seem to worsen these effects in women with or without breast implants. Method: A clinical study was designed to evaluate if the perceived effect of breastfeeding on breast aesthetics affected the success of breastfeeding in women with breast augmentation. In this study 160 women participated all of whom had breast augmentation with saline-filled implants in a subpectoral position. The inclusion criteria for the study were: no reported loss of nipple sensation, having had a live birth (non-operative delivery) subsequent to the breast augmentation, and having followed recommended good breastfeeding practices. The breastfeeding practices required for inclusion of the participant in the study were: attempting breastfeeding on a schedule, not supplementing with formula during the first few days, and not offering pacifiers to the baby on a regular basis

during the initial days. The study controlled these variables because they are known to significantly decrease the success of breastfeeding. A self-administered questionnaire was used to collect data on demographics, breastfeeding success, implant information and perception of how breastfeeding affected the appearance of the breast. For our study a period of two weeks or more was chosen as the defining duration of a successful breastfeeding attempt. Results: The group that was successful at breastfeeding (n=63) was not significantly different from the non-successful group (n=97) in age (24±6 vs. 25±7), body mass index (22±3 vs. 23±2), implant size (325±35 vs. 300±40) or incision location (40% vs. 35% periareolar). However, the groups were significantly different (p<0.05) regarding the perception that breastfeeding adversely affects the appearance of the breast (Table 1). Conclusion: A woman's perception of how breastfeeding will impact the appearance of the breasts following breast augmentation strongly influences her chances of successfully breastfeeding. It makes sense that breast augmentation patients would be concerned about the effect breastfeeding could have on the appearance of their breasts, since they have invested both time and money into them. However, it's the number of pregnancies, not breastfeeding, which causes the breast to sag over time. Patient education regarding this matter will be required to overcome the myth and increase breastfeeding success in this population of women.

Table 1.

Breastfeeding	Perceived adverse aesthetic effect
Successful Group (n=63)	13%
Unsuccessful Group (n=97)	86%

• **Compressive Symptoms in Benign Thyroid Disease: Is Surgery Helping These Patients?**

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Purpose: Benign thyroid nodules with associated compressive symptoms (CS) are a frequent indication for thyroidectomy. The etiology of these CS could be multifactorial. We aim to evaluate the outcome of thyroidectomy in these patients. Method: This cross-sectional study reviewed charts of patients who underwent thyroidectomy from 2007-2012. Patients with benign pathology who reported having any of the following symptoms: dysphagia, choking, globus pharyngeus, dyspnea, odynophagia, voice changes or neck pain, were included. Data was collected for: gender, age, presence of CS, history of GERD, FNA, nodule size, surgical procedure and permanent pathology. Patients were contacted and completed a phone interview that included questions about the presence of 9 CS before and after surgery. The questionnaire assessed whether there was persistence of CS after surgery. A bivariate analysis determined associations among variables. A Pearson's chi-squared test was used to determine significance with a 95% CI and a p-value ≤ 0.05. For statistical difference between pre and post op CS, a McNemar Test was used. A multivariable logistic regression

was performed controlling for the presence of thyroiditis, GERD, nodule size and resolution of CS. Results: Of 1053 thyroidectomies performed from 2007-12, 152 patients met the inclusion criteria and 80 were able to be reached by phone. Participation rate was 100%. Average time between surgery and date of interview was 30 mo. There were 75 F (94%) and 5 M (6%). Mean age was 49 y/o (25-72). Median nodule size was 2.8cm (0.8-10cm). 53 patients (66%) reported having GERD. The surgical procedures performed were total thyroidectomy (55%; n=44), subtotal thyroidectomy (7%; n=6) and lobectomy (38%; n=30). Permanent pathology reported the presence of thyroiditis in 28 % (n=22) of cases. The comparative incidence of each CS between prep op/post op periods was: dysphagia (71% /25%), globus pharyngeus (66%/ 29%), choking (65%/16%), dyspnea (43%/14%), voice changes (41%/ 21%), throat itching (39%/14%), neck pain (33%/ 15%) and odynophagia (29% / 10%). All reductions in incidence were significant. Nodules >2.5cm have 2x more possibility of resolving at least one CS compared to size < 2.5cm (p=0.092). There was no significant reduction in the incidence of CS in patients with thyroiditis who had only thyroid lobectomy (p=0.628). Conclusion: Thyroidectomy helps in the resolution of compressive symptoms in patients with benign nodules.

- Thyroid Cancer in Puerto Rico: A New Epidemic?**
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Introduction: The incidence of thyroid cancer is increasing worldwide. In Puerto Rico, thyroid cancer was the third most common cancer in women between 2005-2009. There is limited data on the characteristics of thyroid cancer in Puerto Rico. Hypothesis: Based on previous data we hypothesized that the increased in thyroid cancer incidence occur due to older age (>70 years old) and hereditary conditions. Method: After approval by the Institutional Review Board of the Medical Sciences Campus, we evaluated electronic files from thyroid cancer patients diagnosed between 2005-2009. In addition, we used the mean, median, and standard deviation to describe certain variables. We used Chi2 and Student T-test to analyzed parametric and non-parametric data We also evaluated annual percent change (APC) as a method to quantify the change in a variable for a specific period of time. Results: We analyzed a total of 2,740 cases of thyroid cancer for the period of 2005-2009. There were a total of 358 cases in men and 2,281 cases in women. The annual percent change (APC) in men was 16.3 (2003-2009) and 34.5 in women (2004-2007). There was a

significant increase in patients with ages between 20-79 years old. Evaluation of APC by histology type showed that most of the increase in incidence was due to an increased diagnosis of papillary thyroid cancers (APC 28.9; 2003-7). There was no significant APC in other histologic types (follicular, medullary, anaplastic). Compared to 2000-2004, the period of 2005-2009 showed a significant increase in cases diagnosed at a localized or regional stage. There was no significant change in mortality due to thyroid cancer in this period. Conclusion: These results demonstrated that thyroid cancer is a significant public health issue in Puerto Rico. Our findings are consistent with thyroid cancer statistics in other countries.

- Thyroid Nodules in Children: What Should Be a Minimal Work-up Preceding Surgery?**
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Children with thyroid nodules undergo extensive and costly work-up before being referred to surgeons. We attempted to identify which is the minimal clinical workup necessary to develop an appropriate surgical management plan for euthyroid children diagnosed with thyroid nodules. Methods: Case-control study including cases of thyroid nodules surgically intervened in a ten-year period at the University Pediatric Hospital. Following variables were studied: labs, physical exam, size of nodule, thyroid function tests, imaging, FNA findings, surgical procedure, and final pathology. The preoperative workup cost for each patient was estimated. Results: Population consisted of twenty-four children. Nineteen were female and 5 were male with an average age of 14 years. Nodules were divided in malignant 54% and benign 46%. Of the 19 female cases 42% were malignant mostly papillary cell carcinoma (PCC). All male cases were PCC. Indications for surgical intervention in patients with benign lesions were continuous growth and symptoms not resolving with medical treatment. Most benign lesions were follicular adenoma. We had 75% FNA results and pathology results for all case studied. Of the cases preoperatively diagnosed as malignant neoplasm by FNA all of them were confirmed by pathology and there were no false positive malignancies. Preoperative workup cost average \$580 USD. Conclusion: A minimal workup algorithm is required before surgery in children with thyroid nodules. In a euthyroid child if a palpable nodule is found and it is accompanied by lymphadenopathy the suspicion for malignancy should be raised and FNA should be first line of evaluation. If no lymphadenopathy is present workup can proceed to US and

progress to FNA evaluation if the nodule persists or grows. In symptomatic patients with small nodule, difficult to palpate or in smaller child, US-guided FNA would be the best option.

- **Transanal Circular Stapled Reanastomosis: Alternative Management for Recalcitrant Rectal Strictures in the Pediatric Population**

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Purpose: Rectal strictures most commonly occur in the pediatric population after coloanal anastomosis. Occasionally, rectal strictures do not respond to standard dilatational management requiring operation. Transanal circular-stapled reanastomosis is effectively used to treat dilatational resistant strictures in adults. We present a case series of pediatric patients with benign recalcitrant rectal strictures that were managed successfully utilizing this therapeutic modality. Method: Four patients (3,12,13,17 y/o) with benign recalcitrant rectal strictures following colorectal anastomosis underwent trans anal resection of the stenosis and anastomosis of the remaining rectal segments by utilizing a circular stapler device. Results: No complications occurred. After 18 months of periodical follow-up visits, patients did not have recurrence of rectal strictures and exhibited normal bowel patterns. Conclusion: Transanal circular-stapled reanastomosis is a safe and efficacious management for benign, recalcitrant rectal anastomotic strictures in pediatric patients. To the best of our knowledge, this is the first case series describing the use of this therapeutic modality for this type of rectal strictures in the pediatric population.

- **Prevalence and Risk Factors Associated to Fecal Incontinence after Childbirth in Puerto Rican Women and its Effects on the Quality of Life**

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Purpose: Pelvic floor disorders such as fecal incontinence (FI) are common public health problems among worldwide populations. These disorders result in debilitating symptoms that can affect women's quality of life. This is the first study that determines the prevalence of FI and their association with birth deliveries among Puerto Rican women. The aim of our study was to evaluate the impact on quality of life and risk factors associated to the development of FI on our population. Method:

A cross sectional study was performed at the multi-specialty clinics of the University of Puerto Rico, School of Medicine and colorectal clinics at a private hospital in Puerto Rico from June, 2012 to January, 2012. Inclusion criteria: Puerto Rican women of all ages who had at least one childbirth, and were able to consent. Exclusion criteria: history of radiation therapy to cervical or anal area. Subjects completed a survey questionnaire that included the following study variables: maternal age and weight, mode of delivery, parity number, gestational comorbidities, obstetrical trauma and/or complications, fetal position, newborn weight, length, and gestational age, history of anal surgery, and anal/intestinal disorders. To assess psychosocial impact of FI on quality of life, the following variables were evaluated: type of incontinence, precipitating factors, and level of anxiety felt on different scenarios. Results: A total of 216 patients were invited to participate; 210 met the inclusion criteria; 200 agreed to participate (95%). Mean age: 50 years \pm 11 (19-91). Comorbidities: hypertension (33%), thyroid disorders (21%), diabetes mellitus (14%), and others. Patients reported: constipation (42%), protruded hemorrhoids (31%), bleeding hemorrhoids (14%), uterine prolapse (5%), bladder prolapse (9%), and rectocele (2%). 21% reported having practiced anal intercourse. The prevalence of FI was 42% (n=83), distributed as followed: gas (12%;n=23) and liquids and solids (30%;n=60). Mean score from Cleveland Clinic Scale of FI: 3 \pm 4 (0-18). 15% (n=24) agreed their lifestyles were affected by FI and of those with FI, 4% (n=7) have used diapers for inadvertent stools. A significant number of patients with FI reported anxiety (31%;n=26), particularly in the following situations: inadvertent stool passage (26%), perceiving other people can smell their feces (26%), being unable to reach the bathroom (25%), assisting to social activities (20%), sexual relationship (17%), interference with couple relationship (17%), and dining out (13%). 13% (n=3) of subjects who had only gas incontinence reported feeling anxiety related to FI compared to 38% (n=23) of those who had liquid and solid incontinence. Mean values for pregnancy associated variables: parity number: 2 \pm 1 (1-8), mode of delivery: 59% vaginally (FI: 45%) and 41% by cesarean section (FI:37%), maternal age: 31 years old \pm 5 (12-41), maternal weight 150lbs \pm 29 (97-272), maternal height: 64 inches \pm 2, BMI: 25.7, child weight: 7lbs \pm 1 (2-10), and length: 20 inches \pm 2 (6-24). The prevalence of gestational DM was 14% (n=27). Associated factors to any type of FI: episiotomy (POR=1.88, 1.03-3.42, p=0.03), gestational DM (POR=3.79, 1.56-9.23, p=0.002), presence of hemorrhoids (POR= 2.48, 1.34-4.58, p=0.003), bladder prolapse (POR= 2.18, 0.79-5.99, p=0.12), practiced anal intercourse (POR=1.77, 0.89-3.53, p=0.09), and previous anal surgery (POR=3.5, 0.89-13.95, p=0.09). Associated factors to gas incontinence: episiotomy (POR: 1.77, 0.99-3.19, p=0.05), and gestational DM (POR: 2.67, 1.17-6.11, p=0.017). No significant difference was found between: DM (p=0.43), Cancer (p=1.00), Neuropathy

($p=0.23$) BMI ($p=0.82$), mode of delivery ($p=0.24$), maternal age ($p=0.75$), parity number ($p=0.36$), fetal weight ($p=0.08$), fetal lie ($p=0.17$), history of constipation ($p=0.85$), uterus prolapse ($p=0.74$), vaginal hernia or rectocele ($p=1.00$), bladder or rectocele repair ($p=1.00$) and developing any type of FI. Conclusion: FI is a prevalent pelvic floor disorder among Puerto Rican women who had at least one childbirth. The most common disorder identified was FI to solids and liquids. From those with FI, one third reported feeling anxiety related to this disorder. As FI worsens, anxiety exacerbates. Significant associated factors to any type of FI include: episiotomy, gestational DM, and presence of hemorrhoids.

- **A Simple Way to Create a Relational Database for a Surgical Department**

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Purpose: In these days of cost-containment, surgical departments within universities need to find easy and inexpensive ways to create and maintain a database of their clinical workload. Using the commercially available Microsoft ACCESS program we developed a simple and easy to use relational database for the General Surgery Department, without the need to pay thousands of dollars to a computer programmer for a custom made database. Method: Using the ACCESS program that comes bundled with the Microsoft Office Professional program (retail cost of \$100 for academic use) we created a HIPAA compliant, secure and confidential database of surgery procedures performed by the department. The electronic database was designed to contain basic demographic data, general clinical information pertinent to the surgery, type of surgery performed and attending surgeon. These data was obtained from the regular report, on a weekly base, by the residents of the different surgical services at the Medical Center, Pavia, Auxilio Mutuo and Carolina hospitals. The data aggregation was compiled from existing data that resulted from surgery procedures that were performed on patients for reasons other than generating research data. Personal identifiers were removed prior to incorporation into the database. The basic tables were first created with the information to be collected from the cases and this was followed by the creation of forms, which are the simple user interface where information is entered (Figure 1). All information was encrypted and password protected, which are features available in the ACCESS program. Results: Currently we have entered the data for the four month period between September and December 2012 for a total of 1,538 cases. The number of cases per month has been: 278 in September, 461 in October, 359 in November and 440 in December. The average age of our patients has been 50.23. Patients 65 years of age and older have represented 23% of the total workload of the department, reflecting our current aging population. Conclusion: This simple database, collected on a

prospective basis, allows any surgery department to keep current and useful information. If properly done it can be HIPAA compliant, secure and confidential. This electronic database is ideal for collecting information on surgical procedures and outcomes.

Fig. 1. Computer screen image of the form for user interface

- **Surgical Experience of Emergent Cricothyrotomies and Timeframe for Tracheostomy Conversion in the Puerto Rico Trauma Center**

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Purpose: The cricothyroidotomy has been historically described as a way to gain a surgical access to the airway in patients that cannot be intubated oro- or naso-tracheally. The time interval for conversion of a cricothyroidotomy into a tracheostomy, in which the development of airway complications is minimized, has not been precisely defined in the world literature. Some authors claim that the cricothyroidotomy should be converted into a tracheostomy within twenty-four to forty-eight hours after the initial procedure is performed. Others claim that as much as a week can go by before conversion. Method: A retrospective medical records review of all patients, 12 years or older, admitted to the Trauma Service of the Puerto Rico Trauma Center who had emergent cricothyroidotomy performed between January 2000 and 2009. Socio demographics variables as well as injury severity score (ISS), mechanism of trauma, comorbid illnesses, endotracheal intubation prior to cricothyroidotomy, traumatic diagnoses, acute and chronic airway complications, cause of death, and interval of time in hours will be collected for results analysis. Results: Study population included a total of 35 patients. The mean age was 32 years \pm 15.51 ($n=35$; 15-69). The most common mechanism of trauma was penetrating injury (51.4%; $n=18$). Patients had difficult airway complications due to: 1) failure to secure a definite airway (83%; $n=29$), including hemorrhage, unable to visualize the vocal cords, and severe facial

trauma or 2) posterior airway injuries (14%; n=5). The majority did not have any chronic airway complication. However, 14% (n=5) developed Ventilator Associated Pneumonia (VAP). The mean ISS was 32 ± 12.93 (9-57). A total of 7 patients died at the hospital. The remaining (n=28) were discharged home. A total of 37% (n=13) had an interval of time of more than 24 hours between the conversion of cricothyroidotomy to tracheostomy compared to 43% (n=15) whose timeframe between the two procedures was less or equal to 24 hours. A total of 7 patients never underwent conversion to tracheostomy; 5 out of 7 died before conversion. A total of 13% (n=2), 20% (n=2), and 33% (n=2) of patients who had 24 hours or less, 25 hours to 1 week and more than one week (respectively) interval of time of conversion developed Pneumonia VAP. There is no statistically significant association between the time interval of conversion between both procedures and having developed an airway complication ($p=0.69$; 95%CI). A total of 16% (n=3) of patients who had an ISS of 30 or less had VAP compared to 13% (n=2) who scored 31 or more. There is no significant association between the ISS obtained and the development of chronic airway complications including VAP [$p=1.00$; RR= 1.26 (95%CI= 0.24- 6.65)]. In addition, a total of 7 patients were endotracheally intubated before the cricothyroidotomy procedure. Of those 7, one (14%) developed ventilation associated pneumonia. Conclusion: The higher the interval of time from conversion to tracheostomy, the higher the percentage of patients who developed airway complications such as VAP. Neither ISS nor being endotracheally intubated before cricothyroidotomy was predictor factors for developing ventilation associated pneumonia. Cricothyroidotomies should be converted to tracheostomy in a short period (less than 24 hours) to reduce the risk of developing further airway complications. Limitations include low power of study due to decreased number of available cases. Further studies on our population should focus on evaluating the long-term consequences.

- **Initial Experience of Endovascular Repair of Traumatic Subclavian Arterial Injury in the Puerto Rico Trauma Center**

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Purpose: Traumatic subclavian injury is rare but often lethal, as much as 50% to 80% of patients die in pre hospital transport. Fifteen percent of those that survive die during treatment. Penetrating trauma accounts for the majority of subclavian vessel injury although blunt trauma can be a causative factor.

Historically, immediate exploration with repair of vessels was the mainstay of treatment. Due to major morbidity caused by open repair, endovascular repair has been increasing. Endovascular treatment with covered stents has been increasingly used in this location with adequate results. The first subclavian pseudoaneurysm repair in the Puerto Rico Trauma Center (PRTC) was done in February 9, 2011. We will describe the initial experience of endovascular repair in the PRTC. Method: We studied all adult patients admitted with subclavian artery injury at the PRTC, a state-designated level 1 trauma center. All patients were evaluated initially by the Trauma Surgery service and stabilized. Patients underwent diagnosis by CTA and consulted to Vascular Surgery service. All endovascular procedures were performed by the same vascular surgeon. Patients with pseudoaneurysms, arteriovenous fistulas and persistent flaps were considered candidates for endovascular repair. Analyses of demographics, injury severity scores, type of arterial injury, procedure-related complications, and outcomes were performed. Results: From January 2010 to October 2012 there were a total of 4,475 admissions to the PRTC. Seven cases (0.16%) of radiographically confirmed subclavian injury were identified. Of this 5 (71.4%) were pseudoaneurysm, 1 (14.3%) arteriovenous fistula and 1 (14.3%) persistent flap. Six (85.7%) of those injuries were caused by penetrating trauma and one (14.3%) by blunt trauma. The average age was 29 (range from 21-46). The average Injury Severity Score (ISS) was 26.4 (range from 13-41), the majority of associated injuries were to the chest, abdomen and extremities. Six of these cases were repaired by an endovascular approach using covered stent (GORE Viabahn). The most common diameters were 6mm (33%) and 8mm (33%). The most common length was 5cm (83%). One patient received blunt trauma and underwent TEVAR procedure and presented with persistent intimal flap of subclavian artery. Endovascular repair for this patient was not achieved because we were unable to traverse the injury. Of the 6 endovascular repair none developed acute complication related to the procedure. One patient underwent proximal humeral repair and video assisted thoracoscopic surgery (VATS) after endovascular repair. 16 days after initial repair patient developed a stent graft thrombosis with proximal stent graft migration and distal subclavian internal flap. Reintervention was done in which a bigger diameter stent graft was placed with adequate results. Two patients were lost to follow up. Mean follow up was 4.25 months (range, 1-9 months). All patients with no signs of ischemia or symptomatic cyanosis. Conclusion: Endovascular repair of traumatic subclavian injury is a safe and successful method of treatment. It can be safely done with adequate results in the PRTC. Only 1 patient required reintervention. All patients were alive at follow up and none with major complications due to the procedure. No late complications have been identified but longer follow up and continued surveillance is required.

- **Neoplasms in Kidney Transplant Patients: The Puerto Rico Experience**

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Purpose: The immune system serves to identify, control, and eliminate cancer cells among other abnormal cells. Patients with organ transplants receive immunosuppressive drugs for life which make them more susceptible to viruses, bacteria, and cancer. Experimental Question: What is the incidence and clinical correlates of tumors found in the Puerto Rico kidney transplant population? Method: A retrospective review of the medical records of 1589 kidney transplant recipients from 1978 to 2011 was performed. Information was collected on patient gender, age at the time of transplant, age at the time of tumor diagnosis, time between transplant and diagnosis, type of donor, date of transplant, number of rejections, type of immunosuppression, pre-transplant diagnosis, and type of tumor. The data was tabulated in a master Excel chart and analyzed using standard descriptive program. Results: Out of the 1589 renal transplant recipients, 272 benign or malignant neoplasms occurred in 172 recipients; 112 benign and 160 malignant. These 160 malignancies occurred in 105 recipients. The incidence of total tumors and malignancies was 10.8% and 6.6% respectively. The three most common malignancies in the study were squamous cell carcinoma (78), basal cell carcinoma (26) and non-Hodgkins lymphoma (12). Other malignancies found were carcinoma of the kidney (7), colon (6), prostate (6), breast (6), other (4), lung (3), stomach (3), thyroid (3), liver (2), Kaposi sarcoma (2), and Hodgkins lymphoma (2). Average age at diagnosis for a malignancy was 52 ± 14 years (range from 4 to 80 years). Average time after transplant for the malignancy was 91 ± 79 months, with 72.8% occurring within 10 years. Of the 105 patients, 72 (68.6%) were male and 33 (23%) were female, this accounting for 7.17% and 5.64% of the male and female population respectively. 51 of the kidney allograft were from cadaveric donor, 50 from live related donor and 4 from live unrelated donors, this accounting for 5.25, 9.6, and 4.35 percent of cadaveric, live related donor, and live unrelated donor respectively. Average kidney allograft rejection in patients with a malignancy was 1 ± 1 (range from 0-6). Among 105 patients affected with a malignancy, 23 died of malignancy (mortality rate = 21.9%), 22 (20.9%) died of another cause, 8 (7.6%) are alive with tumor and 52 (49.5%) are alive without malignancy. The incidence of a malignancy in the kidney transplant recipient of Puerto Rico is 6.6%, the most common being non-melanoma skin cancers. The diagnosis occurred at

an earlier age than in the general population, with the greatest risk of developing malignancy within the first 10 years after transplant. Conclusion: Malignancy after transplant is a major concern that should be addressed with diligence. These results underscore the importance of long term surveillance for tumors in the transplant population.

- **Lower Extremity Bypass after Failed Angioplasty Attempt, Provides with Excellent Outcomes in High Risk Population**

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Purpose: Critical limb ischemia occurs mostly in elderly patients, is a late complication of atherosclerosis. Most patient present initially with coronary issues and this natural history of disease makes all patients with critical limb ischemia a high risk population. Since the advent of endovascular interventions most patients are treated initially with endovascular procedures and bypass are left as a secondary treatment, in spite of knowledge that bypass surgery provides with better results and higher patency rates. The purpose of this study is to determine whether or not this strategy of using tibial or foot target bypass as last resort can really provide with good outcomes. Method: We perform a retrospective review of all consecutive distal bypasses performed at a single institution after failed attempt to angioplasty and found 37 subjects. All patients had critical limb ischemia. We collected data regarding demographics, comorbid conditions, Rutherford class, type of intervention, type of conduit, Type of anesthesia, hospital length of stay, ICU length of stay and inflow and target vessel. Outcomes measured were major amputation, minor amputation, mortality, morbidity, ambulatory status, re-interventions, medications and any other complication. Results: Peri-operative mortality was 8% (N=3). During the initial 30 day period, minor amputations rate was 30% (N=11) and major amputation rate was 5% (N=2). Major co-morbid conditions were diabetes 81%, hypertension 84%, hyperlipidemia 57% and previously symptomatic coronary artery disease 51%. Inflow vessel was popliteal (N=13) and femoral (N=24) and outflow vessel where plantar (N=3), dorsalis pedis (N=13), posterior tibial (N=8), anterior tibial (N=1) and popliteal (N=7). Re-intervention rate was 10.8% (N=4) that turned out to be a predictor for major amputation initially and subsequently. Primary patency and secondary patency rate at 30 days respectively was 90% and 94%. Full ambulatory capacity, at 3 and 6 months; where 73% and 79% respectively. Conclusion: Patients who are high risk and treated with a strategy of endovascular intervention first, who fail that attempt and need revascularization with distal bypass surgery can have good outcomes, avoid major amputation and regain full ambulatory status. Early re-intervention is a predictor of major amputation. Having all four main co-morbid conditions is a predictor of mortality.

- **Robotic Prostatectomy Associated with Improved Urinary Continence and Faster Recovery of Urinary and Erectile Function Compared with Open Prostatectomy: Data from a Single Surgeon**

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Purpose: Limited studies have described the differences in outcome between retropubic (open) and robotic prostatectomy performed by a single, fellowship-trained urologic oncologist with formal training in both techniques. We present the initial report of pathological and clinical characteristics of a cohort of Hispanic patients with prostate cancer treated with surgery. Method: A prospective database was maintained to collect clinical, pathologic, quality of life, and outcome data for all prostate cancer patients treated at our Institute. Herein we compare the clinical and pathologic characteristics of 154 patients treated with retropubic (open) prostatectomy to a consecutive cohort of 325 consecutive patients treated with robotic prostatectomy by a single surgeon (RS). Results: There were no differences between groups with regards to preoperative parameters such as age, body-mass index, initial PSA, clinical stage, prostate volume, or Gleason score. There were no differences between groups with regards to operative time (192 min. Robotic[®] vs. 176 min, $p=0.52$), early complications (7.2% R vs. 7.8%, $p=0.57$), incidence of extraprostatic extension (pT_{3a}), or positive surgical margins (8.6% R vs. 8.4%, $p=0.61$). The robotic group exhibited a lower mean blood loss (161 cc R vs. 566 cc, $P<0.0001$), less transfusions (0.003% R vs. 2.6%, $p<0.04$), a shorter catheterization time (8.2 vs. 11.7 days) ($p<0.001$), and a lower incidence of late complications (4.1% R vs. 9.2%, $p<0.0001$), in particular bladder neck contractures (0.09% R vs. 7.7%, $p<0.0001$). The pad-free rate in patients with follow-up >12 mo. was significantly higher in the robotic group (95.8% vs. 89.1%, $p<0.04$), and their return of continence was faster (mean time to no pads: 3.8 vs. 6.0 months, $p<0.001$). In patients with a preop SHIM score >21, there was no difference in sexual function with bilateral nerve sparing between groups (73.2% R vs. 70.6% intercourse with or without PDE5I, $p=0.51$) but the mean time to intercourse (with or without PDE5I) was shorter in the robotic group: 2.5 vs. 6.0 months, $p<0.002$. Conclusion: In this series of Hispanic patients with prostate cancer treated by

a single surgeon, robotic prostatectomy was associated with an overall improvement in continence, lower risk of bladder neck contractures, and a faster recovery of continence and sexual function than in patients undergoing open prostatectomy.

- **Low Incidence of Hydrocele Formation Following Lymphatic Sparing Laparoscopic Varicocelectomy in the Pediatric Population**

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Purpose: Laparoscopy is gaining more impetus as the treatment modality of choice for varicoceles in pediatric urology. Hydrocele formation is a known complication of varicocelectomy with a reported incidence between 0 to 29%. We report our experience with lymphatic sparing varicocelectomy and evaluate risk of postoperative complications. Method: This study evaluates 113 male patients, age's 8–21 years old, which were referred to our center for evaluation and treatment of clinically significant varicoceles and underwent laparoscopic correction. Most patients underwent a three trocar standard lymphatic sparing laparoscopic varicocelectomy. Four were performed as single port surgery, five were bilateral, and nine had an artery sparing procedure. Of the traditional laparoscopic approach, one was right sided. Mean follow up was 24 months. We evaluated for postoperative complications and management these complications. Results: Of the 113 patients who underwent laparoscopic varicocelectomy, hydrocele was identified by physical exam in 8 patients (7%). Of those only two had a clinically significant hydrocele (1.7%), which required open repair. One patient had recurrence of varicocele. Four patients had postoperative epididymitis. One patient had postoperative ileus. No intraoperative complications were identified. No complications were reported in the artery sparing or bilateral repair groups. Conclusion: Laparoscopic varicocelectomy appears to be a safe and feasible alternative to open repair with minimal risk for morbidity and mortality in the pediatric population. There appears to be a very low risk for clinically significant hydrocele formation with the lymphatic sparing/artery non-sparing approach.

• Correction •

HIV and Syphilis Infection among Men attending an Sexually Transmitted Infection Clinic in Puerto Rico. Vivian Colón-López, PhD, MPH; Ana P. Ortiz, PhD, MPH; Geetanjoli Banerjee, MS; Alida M. Gertz, MD, MPH; Hermes García, MD, MPH. *P R Health Sci J* 2013;1:8-13. The manuscript title was incorrect and it was corrected in the online version. The correct title is *HIV and Syphilis Infection among Men attending a Sexually Transmitted Infection Clinic in Puerto Rico.*