

rating the videolaparoscopy technique into SUS. Survey about the number of hospitalization and expenditures related to bariatric surgeries effectuated in Brazil in the period between 2008 and 2012. **METHODS:** Search, analysis and critical scientific literature usage based on Medline, Pesquisa Saúde and Rebrats (The Brazilian Network for Health Technology Assessment). A priority was attributed to Brazilian studies and studies financed by Department of Science and Technology (DECIT) of the Ministry of Health of Brazil. Data acquisition of expenditures related to bariatric surgery in the database of the IT Department of SUS (DATASUS). **RESULTS:** There have been no observable differences between laparotomical and laparoscopic methods in such terms as mortality and weight loss. But there have been significant differences in the quality of life of the patient and internalization time. The studies financed by DECIT show that the cost of the surgery varies according to the access route. The average expenditure for videolaparoscopy was US\$12,448.00 compared to US\$4,911.00 for the conventional surgery. Data of DATASUS indicates that the number of hospitalization for bariatric surgery paid by SUS was 16,785. In this period an increase of more than 68% was observed. The aggregate value of the expenditure in this field was US\$44,116,330.031 for these years. **CONCLUSIONS:** The results show that the number of bariatric surgery has increased significantly in the last years. Therefore it's necessary to conduct a cost-benefit analysis in the standpoint of the SUS. This analysis should consider the implications to the quality of live of patients when evaluating videolaparoscopy bariatric surgery way.

PSU6

COST-EFFECTIVENESS ANALYSIS OF TREATMENT FOR RECTAL CANCER FOLLOWING CLINICAL COMPLETE RESPONSE

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OBJECTIVES: Total mesorectal excision (TME) in combination with neoadjuvant chemoradiation (CRT) therapy is the mainstay of rectal cancer treatment today. With the standard implementation of CRT, however, 15-30% of patients will have a complete response to therapy without any evidence of residual cancer prior to surgery. Current standard of care remains to be subsequent surgery along with the associated risks of a stoma and operative morbidity. Some researchers challenge the current trends and suggest that these patients can be closely observed rather than undergo surgery. Using decision analysis modeling we sought to determine the most cost-effective therapy for patients with rectal cancer who have clinical complete response (cCR): observation, local resection, or TME. **METHODS:** An extensive literature review was performed to determine the event rates, utilities and costs. Expert opinion was used when there were gaps in the literature. Sensitivity analysis was performed to determine which variables had the largest influence on treatment decision. **RESULTS:** A non-operative approach dominated both local excision and TME for a cost-effective treatment. Observation without surgery provided 0.16 additional QALYs over a 5-year period when compared to local excision and was over \$3,000 cheaper. Choosing to observe the patient saved nearly \$17,000 compared to TME and added an additional 0.96 QALYs over 5 years. On sensitivity analysis the probability of a local or distant recurrence when choosing to observe the patient had the largest effect on the outcome, with a threshold of greater than 12% risk of local or distant recurrence changing the preferred decision to perform local excision. **CONCLUSIONS:** Rectal cancer patients with clinical complete response often undergo unnecessary and costly surgery. This cost-effectiveness model shows that choosing to observe patients with clinical complete response is both cheaper and more effective than surgical intervention for this unique patient population.

PSU7

SEASONAL PERIODICITY OF SECONDARY HIP REPLACEMENT AFTER FEMORAL NECK FRACTURES WITH REDUCTION INTERNAL SCREW FIXATION AGED OVER 60

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OBJECTIVES: To evaluate the prognostic factors of secondary hip replacement following the primary reduction internal screw fixation of femoral neck fractures. **METHODS:** In this retrospective study the data derive from the database of the Hungarian National Health Insurance Fund Administration. The study includes patients over 60 years following primary reduction internal screw fixation of femoral neck fracture (S7200) discharged from inpatient care institutions in 2000. During the 8 years follow up period the data of secondary hip replacement were recorded. We evaluated the following risk factors: age, sex (male/female), type of primary femoral neck fracture (extracapsular, intracapsular undisplaced/intracapsular displaced), the season of primary treatment (spring, summer, autumn/winter), day of surgery (week-day/weekend), surgical delay (6-12h, 12-24h, 24h+/0-6h) and the absence or presence of comorbidities. The effects of prognostic factors were evaluated by Cox proportional hazard regression analysis (HR, 95% CI, p). **RESULTS:** A total of 2784 patients with primary reduction internal screw fixation met the inclusion criteria. In the follow up period 6.82% (190 cases) of patients underwent secondary hip replacement, mainly due to osteonecrosis, nonunion and coxarthrosis. Significant correlation can be shown between suffering secondary hip replacement and the age (year, HR=0.968, CI:0.951-0.986), the type of fracture (intracapsular undisplaced vs. displaced, HR=0.395, CI:0.260-0.601) and the season of primary surgical intervention (fall vs. winter, HR=0.505, CI:0.336-0.760 spring vs. winter, HR=0.626, CI:0.429-0.914 summer vs. winter, HR=0.613, CI:0.415-0.906). **CONCLUSIONS:** The role of age and fracture displacement are well-known as a risk factors in a literature, but the impact of winter season of primary

osteosynthesis is unknown. In the future this result should be further investigated in the context of seasonal changes in vitamin D level and bone remodeling, focusing on decreasing the secondary treatment with high burden after femoral neck fractures with reduction internal fixation.

SURGERY - Cost Studies

PSU8

BUDGET IMPACT ANALYSIS OF ANTI-BACTERIAL SUTURE USE IN APPENDECTOMY PROCEDURES IN SPAIN

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OBJECTIVES: Surgical Site Infection (SSIs) is the most frequent type of hospital-acquired infection, accounting for more than (37%). The prevalence of hospital-acquired infection in Spain is 7.8%, where SSI account for 19%. For appendectomy procedures, the SSI rate of 4.9% is reported. SSI increases the patient's risk of morbidity and mortality, prolongs hospital stay by more than a week, and worsens the overall patient quality of life. Moreover, the risk of SSI has increased recently due to multiple comorbidities. In addition, SSI is becoming more treatment-resistant than ever. The aim of this study was to analyze the economic consequences of using antibacterial sutures in appendectomy procedures in Spain. **METHODS:** A dynamic excel-based decision-analytic model was developed. Published literature reviews were used to estimate the three key variables: SSI reduction using antibacterial sutures (55%) compared to standard sutured, prolonged length of hospital stay due to SSI (7.7 days), and the cost of hospital stay per day (2,057€). The rate of readmission due to persistent infection was used (18%), which was estimated as costs 2,166€, and it was added to the prior amount to calculate total costs of infection. Country input data for the model were reported as the number of appendectomy procedures performed per year (34,500). The list price at which regular and antibacterial sutures were purchased was also collected. A two-way sensitivity analysis was conducted, with two variables being the infection rate and suture price. **RESULTS:** Antibacterial sutures were found to be 14% more expensive; however, allowing a 56% of hospital cost avoidance. This may have an impact of 4,970,273€ in annual savings in Spain. **CONCLUSIONS:** This analysis presents new evidence of support of the use of antibacterial sutures by demonstrating that it could reduce the SSI rate, and could allow cost-savings compared to standard sutures, among other benefits.

PSU9

BUDGET IMPACT OF AUTOGRAFT HARVEST, BONE GRAFT SUPPLEMENTS AND ORTHOBIOLOGIC BONE GRAFT SUBSTITUTE IN FOOT AND ANKLE FUSION PROCEDURES

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OBJECTIVES: No multicenter studies currently assess the incremental costs of autogenous bone graft harvest (autograft) in foot and ankle procedures. This study applied conservatively estimated incremental costs of autograft (with and without bone graft supplements/enhancers) using an interactive budgetary impact model comparing costs and cost offsets of an orthobiologic bone graft substitute (β -TCP with recombinant human platelet-derived growth factor-BB [rhPDGF-BB]) in foot and ankle fusion procedures. **METHODS:** A Canadian hospital-based budget impact model was developed utilizing International Society of Pharmacoeconomics and Outcomes Research (ISPOR) guidelines. Clinical and health economic literature, data from a 434-patient randomized control trial and data from a panel of ten experienced orthopaedic surgeons provided estimates of medical resource utilization and associated hospital costs. Model parameters were confirmed by six individuals representing 15 Canadian hospitals. **RESULTS:** Autograft carries incremental costs related to operating suite time (37.9 \pm 17.0 minutes for an iliac crest donor site and 22.1 \pm 21.6 minutes for local donor sites), recovery room time (25.0 \pm 12.3 minutes for iliac and 3.5 \pm 9.4 minutes for local), and donor site complications. Conservative base case incremental costs were \$1,601(CAD) for iliac crest and \$755 (CAD) for local sites. Complications at the harvest site contributed an additional base case cost of \$414 for iliac crest and \$182 for local sites. Use of an orthobiologic bone graft substitute had higher acquisition costs, but yielded per-case and annualized cost savings (\$34 and \$2,454, respectively, base case) by eliminating incremental costs, graft harvest complications, and patient pain reported for autograft harvest during clinical trial. **CONCLUSIONS:** The gold standard of harvesting autogenous bone graft as an adjunct to foot and ankle fusion surgery is associated with significant health care costs. The use of β -TCP with rhPDGF-BB eliminated variable, incremental hospital costs associated with bone graft harvesting and treating related complications.

PSU10

COSTS OF CARDIOVASCULAR READMISSIONS FOLLOWING PERCUTANEOUS CORONARY INTERVENTION IN PATIENTS WITH CHRONIC KIDNEY DISEASE: DATA FROM A LARGE MULTI-CENTRE AUSTRALIAN REGISTRY

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OBJECTIVES: Chronic kidney disease (CKD) and end-stage kidney disease are well-established risk factors for early mortality and morbidity in patients with coronary