

OBJECTIVES: To evaluate, through biomechanical tests, which synthetic material used for the manufacturing of test specimens (ABS plastic, polyamide, and polyurethane) shows a better biomechanical behavior for in vitro simulations of load resistance of a fixation method established to mandibular SSRO [Sagittal Split Ramus Osteotomy]. **METHODS:** 30 synthetic and standardized replicas of human hemimandibles with SSRO were divided into 3 groups of 10 samples each: Group A - ABS plastic, Group B - Polyamide, and Group C - Polyurethane. These were fixed by three positional bicortical screws (16 mm length, 2.0 mm system), in an inverted "L" pattern, using drilling guides and advancement of 5 mm. Each sample was subjected to a vertical linear load and the load resistance values recorded at 1, 3, 5, 7, and 10mm displacement. The standard deviations and means were compared using analysis of variance ($p < 0.05$) and Tukey's test. **RESULTS:** It was observed a tendency for lower values in group B than in groups A and C. In displacements of 3 and 5 mm, there was a difference between groups A and C to group B ($p < 0.05$). In displacements of 7 and 10 mm, there was a difference among the 3 groups, the highest values being found in group C and the lowest ones in group B ($p < 0.05$). **CONCLUSIONES:** Taking into consideration the results achieved and the behavior of each material used as substrate, we can consider that ABS plastic was very flexible and polyurethane very rigid. On the other hand, polyamide samples behaved more likely to the human cortical bone, which can be validated to perform load tests, for SSRO, compared to other tested materials.

PRM10

CALIBRATION OF A COST-EFFECTIVENESS MODEL TO EVALUATE THE INCORPORATION OF A QUADRIVALENT HPV TYPES 6, 11, 16, 18 VACCINE IN ARGENTINA: DISEASE BURDEN COMPONENT

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OBJECTIVES: To calibrate the disease burden component (mortality and incidence rates from cervical cancer) of a cost-effectiveness model that aims to evaluate the incorporation of a quadrivalent HPV Type 6, 11, 16, 18 vaccine in Argentina. **METHODS:** We adapted a previously developed mathematical model (Elbasha 2010) to evaluate the health and economic impact of routine vaccination of 11 years old females. The model is a dynamic transmission model which estimates the direct and indirect (via herd immunity) health benefits of vaccination. Individuals enter the model as they are born; move between successive age groups at an age, gender and sexual activity specific rates, and exit the model as they die. A systematic search on effectiveness, local epidemiology, resource use and costs was undertaken to populate the model. Selected intermediate parameters (probability of transmitting genital HPV infection per sexual partnership by HPV genotype, and percent of females with cervical cancer that recognize their symptoms and seek treatment) were used for calibration. The perspective used was that of the health care system, with a horizontal span of 100 years and a rate of discount of 5% for costs and health effects. **RESULTS:** The model was properly calibrated with results in a range of +/- 1% as compared to national vital statistics and Globocan. The model showed an incidence of 5,285 new cases of HPV 16&18 related cervical cancers per year in Argentina and 1,511 deaths for 2013. Eighty-seven and 80% of incident cases and deaths were concentrated in the 35 to 85 age group, and a median age of death of 55 years. **CONCLUSIONS:** The model proved to be an evidence-based, internally valid tool for the assessment of the main HPV related disease burden and can serve as the basis for the further evaluation of the cost-effectiveness of HPV routine vaccination in Argentina.

RESEARCH ON METHODS – Patient-Reported Outcomes Studies

PRM11

MEDICIÓN DE LA CALIDAD DE VIDA POR MEDIO DEL "DERMATOLOGY LIFE QUALITY INDEX" EN PACIENTES CON PSORIASIS: UNA REVISIÓN SISTEMÁTICA

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OBJECTIVOS: Evaluar la calidad de vida relacionada con la salud en pacientes con psoriasis, medida a través del Dermatology Life Quality Index (DLQI). **METODOLOGÍAS:** Se realizó una revisión sistemática en Pubmed, Cochrane Library, Embase y CINAHL sobre la calidad de vida relacionada con la salud en pacientes con psoriasis leve, moderada y severa. Se incluyeron artículos que evaluarán la calidad de vida en su condición basal mediante la escala DLQI y se reportó el resultado utilizando el Psoriasis Assessment and Severity Index (PASI) como resultado secundario. La búsqueda sólo incluyó estudios en inglés publicados desde 1994 hasta agosto de 2012. Se excluyeron los artículos que comparaban diferentes tipos de tratamiento en términos de mejora de la calidad de vida antes y después de la administración del medicamento, así como la evaluación de la calidad de vida en diferentes variantes de la enfermedad tales como la artritis psoriásica y psoriasis de las uñas. **RESULTADOS:** Se identificaron ocho artículos que cumplieron con los criterios de inclusión y exclusión que evaluaban la calidad de vida relacionada con la salud en pacientes con psoriasis leve y moderada mediante la escala DLQI. Se evidenció una pérdida de la calidad de vida en los pacientes con psoriasis, en sus actividades diarias y de trabajo, así como en la vida sexual. El promedio de DLQI estuvo entre 6,4 a 10,8; se observó una gran variabilidad en la duración de la enfermedad entre 17,6 y 28,9 años. Un total de dos estudios reportaron el PASI, el cual estuvo entre 6,53 y 10,5, lo que indica enfermedad leve y moderada. **CONCLUSIONES:** La psoriasis afecta la calidad de vida de los pacientes que padecen la enfermedad tanto en su forma leve como moderada, y este deterioro es superior a los encontrados en enfermedades tales como acné, vitiligo, alopecia y urticaria, entre otras enfermedades.

RESEARCH ON METHODS – Statistical Methods

PRM12

THYROID DYSFUNCTION DETECTION IN PREGNANCY: UNIVERSAL SCREENING OR TARGETED HIGH-RISK CASE FINDING? A META-ANALYSIS

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OBJECTIVES: Recent consensus guidelines do not advocate universal thyroid function screening during pregnancy but recommend testing high-risk pregnant women with a personal history of thyroid or other autoimmune disorders or with a family history of thyroid disorders. Maternal subclinical hypothyroidism during pregnancy is associated with various adverse outcomes. The present study aims to assess efficiency of the targeted high-risk case-finding approach in identifying women with thyroid dysfunction during early pregnancy. **METHODS:** A comprehensive literature search was done in PubMed and EMBASE databases till July 2012 for studies related to screening of thyroid dysfunction. Data was extracted from each relevant article. The primary estimate was pooled odds ratio with 95% CI. Data analysis was done by Comprehensive Meta Analysis software. Heterogeneity was assessed by I^2 statistics. Publication bias was assessed using Begg and Egger test. Sensitivity analysis was also performed. **RESULTS:** A total of 5 studies (published between 2007 and 2011) were found to be pertinent after exclusion of irrelevant studies. Because of significant heterogeneity, a random effects model was chosen. For the effectiveness of universal screening, pooled odds ratio was found to be 2.87 (95% CI, 1.60-4.94, $p=0.00$). **CONCLUSIONS:** Targeted thyroid function testing of only the high-risk group would miss about one third of pregnant women with overt/ sub-clinical hypothyroidism.

PRM13

DESARROLLO DE UNA ESCALA DE ESTRUCTURAS Y PROCESO PARA LA EVALUACIÓN DE LOS CENTROS DE HEMODIÁLISIS

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OBJECTIVOS: Desarrollar una escala de indicadores de calidad de estructuras y procesos para los centros de hemodiálisis del Uruguay. **METODOLOGÍAS:** Un conjunto de expertos nacionales elaboró una lista de indicadores basados en estándares que fueron evaluados mediante visitas técnicas en los centros desde 2004 hasta la actualidad. Mediante el Análisis de Coordenadas Principales (ACoP) y la distancia de Gower se estudió el conjunto de indicadores buscando obtener un número reducido de factores que expliquen una proporción importante de la varianza del sistema de indicadores en el período 2007 a 2010. Se construyó la escala de estructuras y procesos empleando como ponderación la mediana de la distancia euclídea entre los indicadores para el espacio de factores obtenidos en el ACoP. Mediante estadística descriptiva se analizó el comportamiento de la escala en el tiempo y respecto de los indicadores originales. Aplicando el criterio de Kaiser se seleccionaron los dos primeros factores del ACoP (varianza explicada 37,63%), el análisis presentó un índice de estrés de 0,1646. **RESULTADOS:** La escala desarrollada mostró una tendencia temporal de mejora en la calidad de las estructuras y procesos brindados por los centros de hemodiálisis. También se observó una asociación significativa con varias de las dimensiones de estructuras y procesos evaluados. **CONCLUSIONES:** Se considera que el instrumento desarrollado es adecuado para la valoración global de las prestaciones en hemodiálisis en las áreas de estructura y procesos.

PRM14

APPLIED COMPARISON OF META-ANALYSIS TECHNIQUES

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Meta-analysis is an approach that combines findings from similar studies. The aggregation of study-level data can provide precise estimates for outcomes of interest, allow for unique treatment comparisons, and explain differences arising from conflicting study results. Proper meta-analysis includes five basic steps: identify relevant studies; extract summary data; compute study effect sizes, perform statistical analysis; and interpret and report the results. **OBJECTIVES:** This study aims to review meta-analysis methods and their assumptions, apply various meta-techniques to empirical data, and compare the results from each method. **METHODS:** Three different meta-analysis techniques were applied to a dataset examining the effects of the bacille Calmette-Guérin (BCG) vaccine on tuberculosis (TB). Fixed-effect, random-effect modeling and meta-regression were applied for analysis, with added study-level covariates. Overall and stratified results, by geographic latitude were reported. **RESULTS:** Estimates of treatment effect differed depending on the technique applied. When a fixed effect model was applied to estimate the effect of a vaccination against tuberculosis, the log odds ratio was -0.436 (confidence interval [CI: -0.528, -0.344]). After testing for heterogeneity and fitting a random effects model, the estimate was reduced to -0.741 (CI [-1.12, -0.352]), and the CI became wider. When covariates were added to the model to explain the heterogeneity, the treatment effect was reduced even further. All three techniques showed statistically significant effects from the vaccination. However, once covariates were added, efficacy diminished. Independent variables, such as the latitude of the location in which the study was performed, appeared to be partially driving the results. **CONCLUSIONS:** Meta-analysis is useful to draw general conclusions from a variety of studies. However, proper study and model selection are important to ensure the correct interpretation of results. Basic meta-analysis models are fixed-effects, random-effects, and meta-regression.

RESEARCH ON METHODS – Study Design

PRM15

DISPONIBILIDAD Y FUENTES DE LA INFORMACIÓN PARA LA TOMA DE DECISIONES EN REUMATOLOGÍA: USO DE LOS ESTUDIOS ECONÓMICOS

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