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Czech Republic

Abstract ID: 65

AI vs. Human: Evaluating the Efficacy of AI-Generated Patient Information Leaflets in Healthcare Communication

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Objectives
Our study aimed to evaluate if new easily accessible artificial intelligence technologies could provide a more efficient way to produce Patient Information Leaflets (PILs) for complex immunological diseases and medications in the clinical setting.

Method
We utilised ChatGPT version 3.5 to generate patient information leaflets for medications, diseases, and complex diagnoses in Clinical Immunology. An iterative process was employed to optimise prompts. Existing in-house PILs were compared where available. Evaluation criteria included readability scores using the Flesch-Kincaid tool and Ensuring Quality Information for Patients (EQIP) Score, along with clinician acceptance. Statistical analysis was conducted using Microsoft Excel.

Results
Our study found that in-house PILs for medications scored higher in readability, with a mean score of 51.87 compared to 37.36 for ChatGPT-generated PILs. This was statistically significant with p=.000679 ($p<.05$). EQIP scores favoured in-house versions, scoring 61.11 compared to 44.44 for ChatGPT versions. Clinicians overwhelmingly preferred in-house PILs, with only 1 out of 9 ChatGPT PILs deemed acceptable by all assessors. For diagnosis, both versions were deemed "difficult to read''. In-house versions had a mean EQIP score of 70.86, while the ChatGPT versions fell short with a mean of 49.64. This difference was statistically significant with p=0.00001 ($p<.05$). 2 out of 3 assessors would consider using the ChatGPT versions. Complex diagnosis PILs generated by AI were uniformly rejected by our clinical assessors.

Conclusion
Our study suggests in-house leaflets outperform AI-generated ones, but both require improvement. We propose a framework integrating AI to revise leaflets, enhancing readability and clinical applicability.

Keywords
Clinical Immunology ; WCIM ; Artificial Intelligence ; Prague ; Internal Medicine

Abstract ID: 71

Efficacy and safety of subcutaneous compared to intravenous monoclonal antibodies for inflammatory bowel disease - A meta-analysis

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Objectives

This study assessed the efficacy and safety of subcutaneous (SC) compared to intravenous (IV) monoclonal antibodies (mAbs) for the induction and maintenance of remission in IBD.

Methods

This is a systematic review and meta-analysis of RCTs that compared the efficacy and safety of SC versus IV mAbs for IBD. Meta-analysis was carried out using inverse variance heterogeneity models to generate overall odds ratios (OR) and 95% confidence intervals. Subgroup analysis was done for the type of IBD (Crohn's disease (CD) or Ulcerative colitis (UC)). Heterogeneity was quantified using /2, publication bias using funnel plots, and evidence certainty using GRADE.

Results

From 6311 RCTs, 12 met the inclusion criteria. Four on UC, Seven on CD, and one on both. After meta-analysis, SC, compared to IV, was less efficacious for induction of remission, overall (OR 0.53, 95%CI 0.27-1.04), especially in UC (OR 0.35, 95%CI 0.07-1.79), than in CD (OR 0.77, 95%CI 0.53-1.12). However, SC was similar to IV for maintenance of remission, overall (OR 0.93, 95%CI 0.63-1.38), worse in UC (OR 0.82, 95%CI 0.54-1.23), but SC was superior to IV in CD (OR 1.63, 95%CI 0.95-2.81). Overall, SC, compared to IV, showed higher odds of treatment discontinuation (OR 1.33, 95%CI 1.02-1.74), again SC was worse in UC (OR 1.52, 95%CI 1.17-1.98), and similar to IV for CD (OR 1.06, 95%CI 0.67-1.68).

Conclusion

SC administration of mAbs has lower efficacy for induction of remission but almost similar efficacy when used for maintenance of remission. SC is more efficacious in CD than in UC.

Keywords

Crohn’s disease (CD); Ulcerative Colitis (UC); Intravenous (IV); Subcutaneous (SC); Monoclonal antibodies (mAbs).

Abstract ID: 86

Turkish validity and reliability of Burnout Syndrome Assessment Scale for Nurses Working in intensive care units

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Objective:
The aim is to adapt the Burnout Syndrome Assessment Scale for Nurses Working in Intensive Care Units to the Turkish version and determine its validity and reliability.

Methods:
Methodological study design was used. The instrument was translated into Turkish and back-translated into English. The scale's language equivalence, content validity, test-retest reliability, internal consistency, and construct validity were evaluated. The research was conducted with 200 intensive care nurses at a university hospital who volunteered to participate. Internal consistency was analyzed using Cronbach's alpha and item analysis, while construct validity was assessed via confirmatory factor analysis. Time-dependent invariance was determined through the test-retest Method with 150 intensive care nurses at two-week intervals, calculating intraclass correlations. The number, percentage distributions, intraclass correlation coefficient (ICC), Kappa coefficient test, and Mann–Whitney U test were used to analyze the data.

Results:
Twelve experts evaluated content validity, and the content validity index (CVI) ranged between 0.833 and 1.000, which is higher than the generally accepted standard level. Three dimensions were obtained according to the eigenvalues in the first-factor analysis Results. Still, since most of the items related to the scale were explained over a single dimension, the factor analysis application was carried out over a single dimension. Maslach Burnout Scale was used for the inter-reliability of parallel forms. The questionnaire's overall internal consistency coefficient (Cronbach's Alpha) was highly reliable, with a value of 0.95.

Conclusion:
The Burnout Syndrome Assessment Scale for Nurses Working in Intensive Care Units is a valid and reliable instrument for intercultural studies.

Keywords:
Nursing; Intensive Care; Burnout Syndrome; Validity; Reliability

Abstract ID: 97

Machine Learning-Based Mortality Prediction Model for Patients with Chronic Hepatitis C Infection: Exploratory Study

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Background:
Chronic hepatitis C (HCV) infection presents global health challenges with significant morbidity and mortality implications. Successfully treating cirrhotic patients may lead to mortality rates comparable to the general population. This study aims to utilize machine learning techniques to create predictive mortality models for individuals with chronic HCV infection.

Methods:
Data from chronic HCV patients at Sultan Qaboos University Hospital (2009-2017) underwent analysis. Data pre-processing handled missing values and scaled features using Py-thon via Anaconda.

Results:
A cohort of 702 patients meeting eligibility criteria, predominantly male, with a median age of 47, was analyzed across a follow-up period of 97.4 months. Survival probabilities at 12, 36, and 120 months were 90.0%, 84.0%, and 73.0%, respectively. Ten key features selected for mortality prediction included hemoglobin levels, alanine aminotransferase, comorbidities, HCV genotype, coinfections, follow-up duration, and treatment response. Machine learning models, including logistic regression, random forest, gradient boosting, and support vector machine, showed high discriminatory power, with logistic regression consistently achieving an AUC value of 0.929. Factors associated with increased mortality risk included cardiovascular diseases, coinfections, and failure to achieve SVR, while lower ALT levels and specific HCV genotypes were linked to better survival outcomes.

Conclusion:
The study presents the use of machine learning models to predict mortality in chronic HCV patients, providing crucial insights for risk assessment and tailored treatments. Further validation and refinement of these models are essential to enhance their clinical utility, optimize patient care, and improve outcomes for individuals with chronic HCV infection.

Keywords:
Chronic hepatitis C; Machine Learning; prediction model; Mortality

Abstract ID: 105

Cardiovascular risk factors in Czech population aged 25-64 with respect to diabates

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Objectives:
Cardiovascular events are still the most common cause of death in Czech Republic. The aim of the study was to determine prevalence and interrelationships of cardiovascular risk factors.

Method:
The data for this epidemiological study were obtained from the Czech cross-sectional study EHES 2019 (European Health Examination Survey) with stratified random sampling. Individual parameters were assessed according to standard criteria. Data were analysed by descriptive statistics. Cardiovascular risk stratification according to SCORE2 was performed in the age group of 40-64 years.

Results:
Of the total number of 1057 study participants aged 25-64 years, in almost 84% at least one cardiovascular disease risk factor was identified. The most common risk factor was dyslipidaemia, which occurred in 71.7% of the subjects. The prevalence of hypertension was 36.3%. 29.7% of subjects were obese, 17.7% were active smokers, another 6% reported occasional smoking. A combination of risk factors was common. Of the 60 diabetics, 57 had at least 1 other risk factor. After stratification of cardiovascular risk prediction according to SCORE2, 49.7% of individuals fall into low risk, 28.6% into medium risk, and up to 11.3% into high and 10.4% into very high risk.

Conclusion:
The most common risk factor is lipid spectrum disorders. It can be seen that diabetes mellitus is in most cases combined with other risk factors, which increases the risk of cardiovascular events in these individuals. In the 40-64 age group, 21.7% of the population is at >5% risk of a fatal cardiovascular event over the next 10 years.

Keywords:
EHES; czech population; SCORE2; cardiovascular risk factors; diabetes

Abstract ID: 114

A preliminary ultrasound bed-side Method for the evaluation of the systemic vascular resistances in patients with heart failure.

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Objectives:
The aim of the present study is to evaluate the hemodynamic parameters (particularly the systemic vascular resistances SVR), by the means of a bed-side ultrasound (US) Method, in patients with and without heart failure.

Methods:
We enrolled 88 patients admitted to S.Andrea Hospital of Rome (Prot 4 SA 2022, REF. CE 6583 2021), evaluating the medical history, anthropometric measures (body mass index or BMI, body surface area or BSA) and cardiovascular parameters (systolic/diastolic/mean blood pressure or SBP/DBP/MAP, heart rate or HR). Applying a bed-side Method US recently developed by our group, the ejection fraction (EF), the cardiac output (CO), the cardiac index (CI), the central venous pressure (CVP) and the systemic vascular resistance (RVS) were estimated (by using a VSCAN Extend ™); a standard echocardiogram was performed via Esaote MyLabOmega.

Results:
The characteristics of the patients were BMI=25.1+3.8, BSA=1.7+0.2 m2, SBP/DBP/MAP=123.0+18.6 / 71.8+11.5 / 89.2+12.5 mmHg and HR=75.9+14.0 bpm (mean+standard deviation). The measurements of CO, CI, PVC and RVS were: 2.7+1.3 l/min, 1.5+0.7 l/min/m2, 8.6+2.7 mmHg and 4996.0+3088.6 dyne×sec/cm5/m2. The EF evaluated by the bed-side US Method (50.1+15.0%) was similar to that one obtained by the standard echocardiogram (52.2+11.1%). The patients with heart failure showed significantly higher levels of SVR than the patients without heart failure ($p<0.025$).

Conclusions:
The bed-side US evaluation can be useful for the evaluation of the cardiovascular functions and of the hemodynamic parameters in the patients with heart failure, to support and complete the clinical examination and to modulate the specific treatments.

Keywords:
systemic vascular resistance, heart failure, bed-side echoscopy

Abstract ID: 126

Retrospective evaluation of suicide attempt cases admitted to the emergency ınternal medicine unit: Tertiary hospital experience

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Introduction:
Suicide is one of the most important causes of mortality worldwide. These cases were frequently applied to emergency services. In this study, we investigated the demographic, psychosocial, and organ failure findings of suicide attempts.

Methods:
A total of 133 patients between 2019-2021 were included. Clinical and demographic data were obtained from patient files through a retrospective evaluation.

Results:
Of the 133 patients, 45% (n=60) were male and 55% (n=73) were female. The mean age at presentation was 33±11.5 years. The mean application time was 5.85± 6.67 hours. 95% (n=121) of suicide attempts occurred through drug poisoning and 51% (n=68) occurred through multiple drug use. The most commonly used drugs are serotonin-norepinephrine reuptake inhibitors (SSRI/SNRI), nonsteroidal anti-inflammatory drugs, and antipsychotics. Concomitant use of psychoactive substances or alcohol was detected in 26 (20%) patients. Gastric lavage was performed in seven cases (5%), activated charcoal was applied in nine cases (7%), and gastric lavage + activated charcoal was applied in four cases (3%). 58 cases (44%) were hospitalized and 14 (11%) were monitored in intensive care unit. Lactic acidosis was detected in 26 patients, acute kidney injury in 7, drug-related liver damage in 1, and prolonged QT in 1. Three (2%) patients died. Depressive disorders were detected in 47% (n=46) of patients.

Conclusion:
Economic and social disadvantages increased suicide attempts. The most common Method of poisoning with multiple drugs is used. Cases may develop signs of organ damage that will cause mortality, and rapid clinical evaluation and close follow-up are important.

Keywords:
Suicide, emergency, intoxication

Abstract ID: 136

Prevalence of dysmagnesemia in critically ill patients & its outcomes: A prospective study

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Objectives:
Ionized Mg (iMg) is believed to offer more precise reflection of Mg status during critical illness than total Mg (tMg). The data on this is spare, so we assessed the prevelance and complications of dysmagnesemia comparing serum iMg and tMg.

Methods:
This prospective study done in high acuity care adult patients, at a tertiary hospital, in 2023. The serum iMg and tMg were collected and analyzed on day 0, 3 and 7. Further data was obtained from electronic system, direct contact or phone call follow-up.

Results:
A total of 134 patients were included, with a median age of 63.5, IQR (52-77) years. Those on ventilator and vasopressors were 122 (91.04%) and 87 (64.93%) respectively. The prevalence of iMg hypomagnesemia was 9 (6.72%), (95% CI [0.03313, 0.1273]) and hypermagnesemia was 53 (39.55%), (95% CI [0.3133, 0.4839]). The prevalence of tMg hypomagnesemia was 20 (14.93%) (95% CI [0.09571, 0.2235]) and hypermagnesemia was 30 (22.39%) (95% CI [0.1583, 0.3056]). The iMg hypomagnesemia showed significant association with atrial fibrillation (p 0.015) and all types of cardiac arrhythmias (p <0.01) compare to normomagnesemia and hypermagnesemia. The hospital LOS was higher in the group of higher fractional ionized magnesium (FxiMg) (p <0.01). The rest of outcomes assessed did not show any significance.

Conclusion:
Hypomagnesemia is overestimated by tMg in critical illness compare to iMg. Cardiac arrhythmias were more with iMg hypomagnesemia. These findings reflect the need for larger future studies.

Keywords:
Hyper-magnesemia, hypo-magnesemia, ionized magnesium, total magnesium, critically-ill

Abstract ID: 149

UTILIZATION OF ROTATIONAL THROMBOELASTOMETRY FOR HEMOSTASIS EVALUATION IN PATIENTS WITH PSORIASIS: A PILOT PROSPECTIVE STUDY

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Objectives:
Psoriasis is an immunologically mediated, inflammatory skin disease associated with cardiovascular comorbidities. Several studies have repeatedly described an increased risk of thrombotic complications in patients with severe psoriasis. Rotational thromboelastometry (ROTEM) is a viscoelastic hemostatic test that allows sophisticated in vivo evaluation of hemostasis in whole blood samples. The objective of this study was to assess hemostatic changes in psoriatic patients using ROTEM.

Methods:
We conducted a pilot, observational, prospective study. The study included 61 patients with severe psoriasis and a control group of 60 healthy blood donors. We compared ROTEM parameters between healthy donors and patients with severe psoriasis. Blood samples were tested using the ROTEM Gamma analyzer (Pentapharm GmbH, Munich, Germany) with INTEM, EXTEM, and FIBTEM reagents. We measured clotting time (CT), clot formation time (CFT), maximum clot firmness (MCF), amplitude at 10 minutes post-CT (A10), amplitude at 20 minutes post-CT (A20), and alpha angle.

Results:
The psoriatic patient group consisted of 30 men and 31 women (51±13 years), while the control group included 34 men and 27 women (42±9 years). Comparing patients with psoriasis and the control group, we identified statistically significant differences in the parameters: CT-EXTEM ($p<0,05$), MCF-EXTEM ($p<0.05$), A10-EXTEM ($p<0,05$), A20-EXTEM ($p<0,05$), alpha-EXTEM ($p<0,05$), CFT-INTEM ($p<0,05$), A10-INTEM ($p<0,01$), A20-INTEM ($p<0,05$), alpha-INTEM ($p<0,001$), CT-FIBTEM ($p<0,05$), CFT-FIBTEM ($p<0,05$), alpha-FIBTEM ($p<0,05$).

Conclusions:
Compared to the control group, patients with severe psoriasis exhibited a shift in hemostasis towards a procoagulant state.

Keywords:
psoriasis; ROTEM; hemostasis

Abstract ID: 151

Characterisation of non-cirrhotic MAFLD-related hepatocellular carcinoma

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Background & Aims:
Hepatocellular carcinoma (HCC) presents a significant global health concern, with a shifting etiology towards non-viral causes, particularly metabolic (dysfunction)-associated fatty liver disease (MAFLD). While traditionally associated with cirrhosis, a subset of HCC cases arises in non-cirrhotic MAFLD patients, whose characteristics remain poorly understood.

Objectives:
To characterize the clinical features of patients with cirrhotic MAFLD-related HCC vs non-cirrhotic MAFLD-related HCC.

Methods:
We conducted a single-center study comprising 89 well-defined MAFLD-related HCC patients to explore their clinical and genetic characteristics. Statistical analysis has been done to compare cirrhotic and non-cirrhotic groups for HCC features, adjusting for relevant variables.

Results:
Non-cirrhotic MAFLD-HCC patients exhibited lower BMI, higher triglyceride levels, and increased smoking prevalence compared to cirrhotic counterparts. Despite lacking cirrhosis, they displayed more aggressive tumor features, including larger tumor size, multifocality, and portal vein thrombosis. Logistic regression confirmed non-cirrhotic status as an independent predictor of larger tumor size and increased lesion number.

Conclusions:
Non-cirrhotic MAFLD-related HCC presents distinct clinical and tumor characteristics, suggesting a potential progression spectrum within MAFLD.

Keywords:
Hepatocellular carcinoma (HCC), metabolic (dysfunction)-associated fatty liver disease (MAFLD), cirrhosis

Abstract ID: 162

Therapeutic strategy in neurosarcoidosis : Comparison of the efficacy of Cyclophosphamide, Infliximab and MethotrexateRetrospective multicenter study of 52 cases

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Neurosarcoidosis affects 10% of patients with sarcoidosis. Baseline therapy relies on steroids. Other drugs are available : Cyclophosphamide (CYC), anti-TNFα biotherapy, conventional immunosuppressants Methotrexate (MTX). However, therapeutic strategy is not defined.Primary endpoint was relapse, defined as an increase of at least 1 point of Extrapulmonary Organ Severity Tool (ePOST) score after initial improvement.French multicenter retrospective study. Patients with definite or probable neurosarcoidosis (histologically proven sarcoidosis and neurological location) were divided into 3 groups according to the treatment : CYC, infliximab (IFX) and MTX. 712 cases were screened, 52 patients (18 treated with CYC, 10 with IFX and 24 with MTX) were included, as many male as female (50%) with a median age of 44.5 years [36-50]. Neurosarcoidosis was associated with multivisceral impairment in 63% cases and revealing in 35% of patients. Preferred neurological locations were brain (60%), meninges (48%) and cranial nerves (46%). Overal relapse-free survival rate was 98% at 6 months and 86.5% at 12 months. Relapse-free survival medians between three groups didn't statistically differ (p=0.07), nonetheless, relapse was more frequent with CYC (50%), than with MTX (25%) or IFX (10%) (p=0.06). CYC was associated with relapse (p=0.05). Relapse was associated with cerebral location (p=0.006) and younger age (p=0.04). Neurological ePOST differ between the three groups at 3, 6 and 12 months (p= 0.01 ; 0.045 and 0.035 respectively), higher in patients receiving CYC.Cyclophosphamide seems to be a third-line choice, given the risk of relapse. Infliximab and Methotrexate appears as effective options for relapse prevention in neurosarcoidosis.

Keywords:
Neurosarcoidosis, therapy, infliximab, cyclophosphamide, methotrexate

Abstract ID: 173

Endothelial markers in type 2 diabetic patients with acute decompensated heart failure: a pilot study

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Objective:

Impaired endothelial function has been connected with vascular complications of type 2 diabetes (T2D), but its role in T2D-related heart failure (HF) remains indeterminate. The aim of this study was to assess the selected markers of endothelial function in T2D patients with acute decompensated HF.

Methods:

A pilot prospective study in patients with acute decompensated HF requiring hospital admission was carried out. Vascular endothelial growth factor (VEGF), intracellular cell adhesion molecule 1 (ICAM-1) and vascular cell adhesion molecule 1 (VCAM-1) were assessed at admission and after decongestion. Subsequently, differences in these markers between T2D and non-diabetic (ND) patients were studied. 21 patients (10 with T2D and 11 ND patients) were enrolled. Fifteen presented with preserved ejection fraction (EF) and 6 with reduced EF.

Results:

There were no significant differences in VEGF (169.0 vs. 58.5 pg/mL, P=0.44), VCAM-1 (2237±1195 vs. 2699±1093 ng/mL, P=0.37) and ICAM-1 (596±268 vs. 638±437 ng/mL, P=0.79) levels between T2D and ND patients on admission, and after decongestion. The value of EF (preserved or reduced) did not affect the Results.

Conclusion:

This study did not identify significant differences in plasma levels of selected endothelial markers between T2D and non-diabetic individuals with acute decompensated HF. Literature: Yang J. et al. Mechanistic Pathogenesis of Endothelial Dysfunction in Diabetic Nephropathy and Retinopathy. Front Endocrinol 2022. Wei J. et al. Serum VEGF, high-sensitivity CRP, and cystatin-C assist in the diagnosis of type 2 diabetic retinopathy complicated with hyperuricemia. Open Med 2023.

Keywords:

type 2 diabetes; endothelial markers; acute decompensated heart failure; diabetic heart disease

Abstract ID: 174

Predictors of Mortality in Hospitalized HIV/AIDS Patients at Tertiary Hospital in Indonesia.

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Objective:
This study proposed that clinical signs and laboratory parameters could be expected to predict the mortality in HIV/ AIDS patients.

Methods:
This retrospective study was done by collecting 408 medical records of adult HIV/AIDS inpatients at a tertiary hospital in Indonesia. Bivariate analysis using Chi-square test was carried out on nine variables, which were Glasgow Coma Scale <15, hypotension, PaO2/FiO2 <400 mmHg, elevated liver enzymes, hemoglobin levels <10 mg/dl, platelet count <150,000/mm3, eGFR <60 ml/min/1.73 m2, albumin levels <3.5 mg/dl, and body mass index (BMI) <18.5 kg/m2. Variables which met the criteria would be included in the multivariate analysis using logistic regression.

Results:
Based on bivariate analysis, mortality was found to be significantly associated with GCS <15, hypotension, PaO2/FiO2, elevated liver enzymes, platelet count <100,000 mm3, eGFR <60 ml/1.73kg/m2, albumin levels <3.5 mgdl, and BMI <18.5 kg/m2. However, based on multivariate analysis, there were five variables which were found to be able to independently predict the patients' mortality, those were GCS <15 (OR 11.625), hypotension (OR 6.062), PaO2/FiO2< 400 mmHg (OR 7.794), eGFR <60 ml/min/1.73 m2 (OR 2.646), and albumin levels <3.5 mg/dl (OR 4.091).

Conclusion:
GCS <15, hypotension, PaO2/FiO2 <400 mmHg, eGFR <60 ml/1.73g/m2, and albumin levels <3.5 mg/dl were found as the independent risk factors which could predict the hospitalized HIV/AIDS patients' mortality.

Literature:
Lakoh S, et al, 2019. Causes of hospitalization and predictors of HIV-associated mortality at the main referral hospital in Sierra Leone: a prospective study. BMC Public Health.

Keywords:
HIV; mortality; predictor; AIDS; risk factor

Abstract ID: 182

A case study of melatonin supplementation and continuous glucose monitoring on glycemic control, glucose variability, and sleep quality

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Objective:
Melatonin supplementation has been studied for its potential benefits in improving sleep quality and glycemic control in type 2 diabetes. Continuous glucose monitoring (CGM) provides real-time data on glucose levels and variability, which can help improve diabetes management. This case study investigates the effects of melatonin supplementation and the subsequent addition of CGM on glycemic control, glucose variability, sleep quality, and self-monitoring in a 55-year-old patient with a 20-year history of type 2 diabetes and coronary artery disease.

Method:
The patient has been self-monitoring for 10 years. Melatonin supplementation (3mg/night) was initiated, and after one year, CGM was added. Data on glycemic control (HbA1c), glucose variability (coefficient of variation, CV), sleep quality (Pittsburgh Sleep Quality Index, PSQI), and self-monitoring frequency were collected at baseline, 1 year (post-melatonin), and 2 years (post-CGM). Result: At baseline, the patient's HbA1c was 8.2%, CV was 36%, PSQI score was 11 (poor sleep quality), and self-monitoring frequency was 3 times/day. One year after starting melatonin, HbA1c decreased to 7.6%, CV reduced to 32%, PSQI score improved to 7 (borderline sleep quality), and self-monitoring frequency remained unchanged. Two years after baseline and one year after adding CGM, HbA1c further decreased to 6.8%, CV reduced to 28%, PSQI score was 5 (good sleep quality), and self-monitoring frequency increased to 5 times/day.

Conclusion:
Melatonin supplementation may have improved glycemic control, glucose variability, and sleep quality. Adding CGM may have further improved these parameters and increased self-monitoring frequency. Melatonin and CGM may synergistically affect diabetes management.

Keywords:
type 2 diabetes; continuous glucose monitoring; endocrinology; WCIM

Abstract ID: 183

Allopurinol Prescription Patterns among Patients Attending Primary Health Care Centers in Qatar: A Retrospective Cross-Sectional Study

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INTRODUCTION
Hyperuricemia is associated with increased comorbidities. Treatment guidelines for asymptomatic hyperuricemia remain controversial. Worldwide studies reported allopurinol overuse. In Qatar, national guidelines for hyperuricemia management are lacking. This study aimed to determine allopurinol overtreatment frequency and investigate associated factors.

METHODS
This retrospective cross-sectional study was conducted on adult patients prescribed allopurinol for the first time at the Primary Health Care Corporation, Qatar, over one year. Data were extracted from electronic medical records. Appropriate allopurinol use was defined as treatment for gout, kidney stones, kidney disease, tophi, extremely high serum uric acid levels (men>773.24 mmol/L; women>594.8 mmol/L), or ongoing chemotherapy for malignancy.

RESULTS
This study included 1949 patients with average age of 45.66 years and male predominance (75%). 17.39% were Qataris, while the rest were expatriates. The most common comorbidities were hypertension (44.38%,), dyslipidemia (42.74%), and diabetes (30.17%). Most patients had diagnoses related to hyperuricemia (45.29%) and gout (21.48%). Only 25.26% of patients had appropriately prescribed allopurinol. The most common dose was “100 mg daily” (89.38%). A significant difference was found between appropriate and inappropriate prescriptions by sex ($p<0.001$). Diabetes, dyslipidemia, chronic kidney disease, and cerebrovascular disease were associated significantly with an increased risk of inappropriate prescriptions ($p<0.05$). Both normal and abnormal serum uric acid levels were linked to inappropriate prescriptions. All patients with “extremely high” levels had valid prescriptions ($p<0.001$).

CONCLUSION
Our study revealed that most allopurinol prescriptions in primary care facilities were not indicated. The implementation of clinical guidelines for the hyperuricemia management is highly recommended.

KEYWORDS
Allopurinol; Uric Acid; Gout; Hyperuricemia; Inappropriate prescription

Abstract ID: 189

Evaluation of lipid-lowering therapy in patients with polyvascular disease based on the extent of coronary artery disease (KAMMA Registry)

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Objective.
To analyze the extent of lipid-lowering therapy in patients with polyvascular disease and varying degrees of CAD.

Methods.
KAMMA (NCT05189847) is an international real-world registry (28 centers, 4 countries); 3,059 patients. For this sub-analysis, among all patients with CAD (n=1893), two groups were identified:1,728 patients with obstructive coronary atherosclerosis (maximum stenosis ≥50% and/or a history of coronary revascularization) and 165 patients with non-obstructive coronary atherosclerosis (maximum stenosis<50%). Patients in both groups were comparable in age (Me=65; p=0.642).

Results.
Patients with non-obstructive CAD more frequently had dyslipidemia (35.8% vs. 24.3%; p=0.001) and higher levels of TC (5.30 mmol/L vs. 4.84 mmol/L; p<0.001) and non-HDL cholesterol (3.74 mmol/L vs. 3.54 mmol/L; p=0.01). Statin use was similar in both groups (92.7% vs. 95.4%). Patients with non-obstructive CAD were more likely to be prescribed omega-3 polyunsaturated fatty acids (23.6% vs. 12.0%; p<0.001). The use of ezetimibe (9.3% vs. 10.3%) and fibrates (4.3% vs. 3.3%) did not differ significantly between the groups, whereas PCSK9 inhibitors were only prescribed to patients with obstructive CAD (1.5%). Patients with non-obstructive CAD were less likely to receive high-dose therapy (44.2% vs. 65.5%; p<0.001) and more likely to be on moderate-intensity regimens (55.8% vs. 34.5%; p<0.001).

Conclusions.
Despite the higher prevalence of dyslipidemia and elevated lipid levels in patients with non-obstructive CAD, moderate-intensity lipid-lowering regimens were more commonly used. In the presence of PVD, more thorough diagnostics of lipid metabolism disorders and modifications to treatment approaches are necessary, regardless of the severity of CAD.

Keywords.
coronary artery disease; polyvascular disease; obstructive coronary artery atherosclerosis; non-obstructive coronary artery atherosclerosis; real-world data

Abstract ID: 224

Nocturnal hypoxemia predicts increased mortality risk in heart failure patients, earlier and independent of first proBNP value.

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Background:
Heart failure (HF) is highly associated with obstructive sleep apnea (OSA). Abrupt change in intrathoracic pressure and nocturnal hypoxemia are two of several pathophysiological mechanisms leading to HF. Purposes: To check if PES, apnea hypopnea index (AHI), oxygen desaturation index (ODI), and mean-spO2 are associated with increased mortality risk in patients with HF and OSA.

Methods:
174 patients, identified in HF-registry in Akershus. All underwent nocturnal respiratory polygraphy and esophageal manometry. Observation time 2003-2024. AHI, ODI, mean-spO2 and sleeping time with elevated esophageal pressure above different cmH2O PES were and analyzed in a Cox model adjusting to age, sex, body mass index (BMI), comorbidities and first proBNP value.

Results:
Mean age 66 years (SD 12.019). 34 (20%) females. 70 (40%) died during observation. Mean time to event (death) from first proBNP 3,5 years. Mean time to event from baseline polygraphy 8,2 years. First proBNP predicted mortality (HR 1.108 [95% CI 1.052-1.167], p<0,001). Mean-spO2 during sleep predicted mortality (HR 0.828 [95% CI 0.752 -0.912], p<0.001), but not sleep time with elevated esophageal pressure above 15 cmH2O, AHI>15 or ODI. Sleep time with higher pressure degrees (above 80 cm H2O) did predict mortality (HR 1.127 [95% CI 1.003-1.1.265], p 0.043).

Conclusion:
Mean-spO2, and PES above 80cmH2o predicted mortality in our cohort independent of first proBNP. This may explain why positive airway pressure is more effective in severe OSA. Oxygen therapy could be considered for patients with HF and OSA. Polygraphies may have prognostic value for patients before first proBNP is obtained.

Keywords:
Obsstructive; Sleep; Apnea; Heart; Failure.

Abstract ID: 239

Comorbidity of patients with albuminuria – AURA registry data

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Objectives.
To study comorbidity of the patient population with albuminuria.

Methods.
AURA (NCT05690009) - a real clinical practice registry (34 centers), includes 4,580 participants aged over 40 y/o with no previously confirmed CKD and diabetes. Albuminuria was diagnosed with test strips: ≥20 mg/l was determined in 64.9% of the patients and ≥50 mg/l in 23.2% of the patients. Two study groups were formed for this subanalysis: 1,592 subjects without albuminuria (<20 mg/l) and 2,939 subjects with albuminuria (≥20 mg/l).

Results.
Albuminuria prevailed among smokers (19.1% vs 15.7%, p=0.006), men (44.2% vs 38.6%, p<0.001) and the older age groups (61 vs 59 y/o, p<0.001). Cardiovascular diseases including hypertension (79% vs 71.5%, p<0.001), IHD (35.5% vs 29.7%, p<0.001), MI (11.8% vs 7.35%, p<0.001), HF (41.5% vs 35%, p<0.001) and AF (17.3% vs 12.5%, p<0.001) prevailed in the patients with albuminuria. It is noteworthy that detected albuminuria did not affect the severity of hypertension, while it was more common in the patients with 3-4 FC of HF (29.8% vs 25.1%, p=0.049) compared with FC 1-2 (70.2% vs 74.9%, p=0.049) as well as with reduced LV EF <50% (15.2% vs 10%, p=0.007) compared to >50% (84.8% vs 90%, p=0.007). Metabolic syndrome (32% vs 23.4%, p<0.001), prediabetes (14.7% vs 8.93%, p<0,001) and excess weight (28.1 vs 27.2 kg/m2, p<0.001) also prevailed in the patients with albuminuria.

Conclusions.
The AURA registry data confirm that patients with cardio-metabolic diseases require timely diagnosis and early prevention of kidney pathology, specifically by determining subclinical albuminuria.

Keywords.
AURA registry; albuminuria; kidney pathology

Abstract ID: 274

Post-transplant diabetes and diabetic foot - a challenge for multidisciplinary cooperation

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Background
Heart transplant represents a vital surgery and an established treatment for patients with an end-stage heart failure. The International Society of Heart and Lung Transplantation Registry indicates the prevalence of posttransplant diabetes mellitus (PTDM) to be 23% at one year increasing to 37% at 5 years after heart transplant due to regimen of immunosuppression with high-dose steroids. Case report We illustrate this topic on a report of a 69-year-old patient after heart transplant 13 years ago. The patient is polymorbid, former smoker, emphasis on PTDM with intensified insulin regimen, chronic obstructive pulmonary disease, chronic kidney disease (CKD) stage 3, BMI 48 kg/m2. He was referred to Surgical Clinic with right foot little finger wet gangrene, ultimately with RTG verified osteomyelitis. After consulting the Department of transplantation, immunosuppressive agents were discontinued. Diagnostic imaging techniques were performed. USG concluded no hemodynamically significant stenosis of common and superficial femoral artery; medial artery calcification of foreleg arteries was present. Due to CKD digital subtraction angiography was not possible to realize. Digital amputation and later trans-metatarsal amputation were performed. Afterwards patient was discharged from hospital and would check in at the Department of Heart Failure and Transplantation and Department of burns and Reconstructive Surgery.

Conclusion
An internist in a multidisciplinary team caring for a patient after a heart transplant is involved in the treatment of PTDM and the prevention of diabetic foot. Early recognition of the signs of diabetic foot can save the patient's limb and thus his quality of life.

Keywords
diabetic foot; posttransplant diabetes mellitus

Abstract ID: 277

Prognostic prediction in very elderly patients with chronic heart failure

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OBJECTIVES:
To study mortality predictors in chronic heart failure (HF) patients according to age.

METHODS:
Retrospectively study of adult HF outpatients with ejection fraction<50% from January 2012 to December 2020. Very elderly (VE) - patients ≥85 years - were compared to those <85. Follow-up: 3 years; endpoint under analysis: all-cause mortality. A Cox-regression analysis was used to assess mortality predictors in VE and non-VE. Multivariate models were built.

RESULTS:
We included 1123 patients, 166 (14.8%) were VE. They were mostly women, with higher prevalence of arterial hypertension, atrial fibrillation and ischaemic HF, and lower diabetes mellitus (DM) prevalence. VE were more symptomatic, had lower diastolic blood pressure (DBP), lower heart rate, lower haemoglobin, poorer renal function and higher B-Type natriuretic peptide (BNP). They were less medicated with evidence-based drugs and more often on loop diuretics. During follow-up, 356 (31.7%) patients died: 27.8% <85 years vs 54.2% ≥85 years, p<0.001. In non-VE, DM, lower Haemoglobin, higher BNP and lower serum sodium predicted mortality; systolic blood pressure (SBP) and DBP portended no independent prognostic impact. Mortality-predictors in VE: BNP (HR=1.05 (95% CI:1.02-1.08) per 100pg/mL increase), renal function (HR=0.86 (0.75-0.98), per 10mL/min/1.73m² eGFR increase), SBP and DBP (HR=0.79 (0.67-0.93) and HR=1.37 (1.05-1.79) per 10mmHg increase, respectively).

CONCLUSIONS:
VE represented 14.8% of chronic HF patients and 54.2% of them died within 3 years. Mortality predictors in VE were higher BNP, worse renal function, lower SBP and higher DBP. Blood pressure appears to be more important in HF prognostic prediction in the VE.

KEYWORDS:
Mortality Predictors; Chronic Heart Failure; Reduce Ejection Fraction

Abstract ID: 278

Diagnosis of previously unverified Crohn's disease in patients with rheumatic diseases based on the level of fecal calprotectin

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Objectives.
To determine the prevalence of previously unverified Crohn's disease (CD) in a cohort of patients with rheumatic diseases (RD) based on fecal calprotectin (FC) levels.

Methods.
The analysis included 271 patients: 37 with rheumatoid arthritis, 87 with psoriatic spondylitis (PsSpA) and 147 with ankylosing spondylitis (AS). The FC level was determined by enzyme immunoassay: <80 µg/g – normal (n=102, 37.6%); 80-160 µg/g – moderate (n=37, 13,7%), >160 – high (n=132, 48.7%). 85 patients with elevated level of FC, 3 with moderate and 9 with normal had fibrocolonoscopy (FCS) and biopsy.

Results.
49.4% (n=42) of the patients with elevated FC had signs of inflammatory changes during FCS, and 18.8% (n=16) of the patients had histologically confirmed CD. In this cohort, 87.5% (n=14) of the observed patients had AS, 12.5% (n=2) – PsSpA, 75% (n=12) had peripheral arthritis, 31.3% (n=5) – enthesitis, 12.5% (n=2) – uveitis, 68.8% (n=11) were positive for HLA-B27. All 3 patients with moderate FC levels had signs of inflammation during FCS, while one HLA-B27 positive patient with a history of peripheral arthritis and enthesitis had histologically verified CD. 33.3% (n=3) of the patients with normal FC level had signs of nonspecific inflammation after FCS; all of them had nonspecific nature.

Conclusions.
Elevated FC made it possible to verify histologically confirmed previously undiagnosed CD in 18.8% of the patients with RD. All the patients with newly diagnosed CD had one of the spondyloarthritis family diseases: AS (88.2%) and PsSpA (11.8%), and most of them were positive for HLA-B27 (70.6%).

Keywords.
Crohn's disease; fecal calprotectin; ankylosing spondylitis

Abstract ID: 280

Prevalence of HLA-B27 and HLA-Cw6 alleles in patients with various rheumatic diseases

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Objectives.

To determine the prevalence of HLA-B27 and HLA-Cw6 mutations in the major histocompatibility complex in patients with rheumatic diseases (RD).

Methods.

The analysis included 520 patients: 297 with psoriatic spondyloarthritis (PsSpA), 107 with seropositive rheumatoid arthritis (RA), 73 with ankylosing spondylitis (AS) and 26 with seronegative RA. Seropositivity in RA was based on the titers of AB-CCP and RF. HLA-B27 and HLA-Cw6 were determined by PCR.

Results.

In AS, HLA-B27 was positive in 61.6% (n=45), and HLA-Cw6 – in 50.7% (n=37). Simultaneous presence of mutations for both HLA-B27 and HLA-Cw6 was recorded in 31.5% (n=23) of the cases. Among the patients with PsSpA, HLA-B27 was detected in 10.8% (n=32), while HLA-Cw6 – in 41.1%. At the same time, HLA-B27 and HLA-Cw6 were simultaneously positive in 2.4% (n=7). HLA-B27 was detected in 17.8% (n=19) with seropositive RA and HLA-Cw6 – in the same 17.8% while both genotypes were simultaneously detected in only 0.9% (n=1) of the cases. With negative RF and AB-CCP in RA patients, HLA-B27 was detected in 7.7%, and HLA-Cw6 – in 15.4% (n=5). In 3.8% (n=1) of the cases, both HLA-B27 and HLA-Cw6 were detected.

Conclusions.

HLA-B27 and HLA-Cw6 genotypes, both isolated and simultaneously, prevailed in the AS patients. Mutations more typical for spondyloarthritis group were quite often detected among RA patients. These features may show shortcomings of modern understanding of RD etiopathogenesis, which requires further research and observations. This fact is of high relevance when planning the amount of examination and treatment for this cohort of patients.

Keywords.

HLA-B27; HLA-Cw6; ankylosing spondylitis; psoriatic spondyloarthritis; ankylosing spondylitis

Abstract ID: 281

Patterns and clinico-demographic characteristics of vasculitis: experience of a referral rheumatology centre of Bangladesh

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Introduction:
Aim was to evaluate patterns of vasculitis and their demographic and clinical characteristics.

Methods:
Data retrieved from 2017 to 2021. Eighty one vasculitis patients were included. Primary and secondary vasculitis, demographic and clinical characteristics, treatment and outcomes were evaluated. BVAS and VDI were used to monitor disease activity during last follow-up visit.

Results:
Primary and secondary vasculitis were 46(56.79%) and 35(43.20%) respectively. In primary vasculitis, small and medium vessel vasculitis 21(45.65%), GPA 10(21.74%) and IgA vasculitis 10(21.74%) and MPA 2(4.24%) and 1 GCA. Mean age was 42.0±15.977 and mean age at diagnosis was 38.43±16.47, male-female ratio 32.6:67.4. Last visit mean BVAS1(new/worse), BVAS2 (persistent) and VDI were 3.82±4.358, 1.30±2.030 and 1.20±0.447 respectively. Rash 16(34.8%), arthritis 12(26.1%), renal involvement 11(23.9%), fever 10(21.75%) and abdominal pain 10(21.75%). Treatment revealed steroid 43(93.5%), CYC 23(50%) and MTX16(34.8%). Only 2 patients died as they lost follow-up. Among secondary vasculitis, SLE 26(74.3%), RA 5(14.3%), MCTD 2(5.7%) and scleroderma 2(5.7%) . Mean age was 32.09±10.832, mean age at diagnosis was 26.97±11.344, male-female ratio 3:32. Arthritis 22(62.9%), rash 15(42.9%), oral ulcer 15(42.9%) , and fever 12(34.4%). HCQ 30(85.7%), steroid 29(82.9%), AZA 13(37.1%) and MTX 12(34.3%) were the commonest drug treatment. Only 2 SLE patients died, who were on irregular medications.

Conclusion:
Primary vasculitis is much commoner than secondary vasculitis. Clinical characteristics are almost similar and outcome is favorable with effective treatment.

Keywords:
Vasculitis; BVAS-Birmingham vasculitis activity score; VDI-Vasculitis damage index

Abstract ID: 283

Impact of acute hospitalization on long-term pharmacotherapy in multimorbid patients – retrospective multicenter study

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Objectives:
With the ageing of the European population, the number of multimorbid patients is gradually increasing and the issue of polypharmacotherapy is becoming more important.

Methods:
In 43 European centers (Spain, Czech Republic, France, Portugal, Poland), we retrospectively analyzed the pharmacotherapy of patients admitted acutely to an internal/geriatric medicine ward from 15 January to 15 February 2020. We also monitored medication according to the STOPP/START (Screening Tool of Older Persons' Prescriptions/Screening Tool to Alert to Right Treatment) version 2 criteria.

Results:
In total, the pharmacotherapy of 3583 patients was analyzed. The mean age of the cohort was 79 years (±12 years), 48.1% were male and 51.9% were female, and the mean length of hospital stay was 10.0 days (±14.4 days). Polypharmacotherapy as defined by WHO (5 or more chronically used drugs) was present in 82.8% of subjects on admission. The prevalence of polypharmacotherapy at discharge was higher (86.3%, P<0.001), and 44.9% of patients (n=1610) had more medications at discharge than at admission (20.7% less, 34.3% same). The number of potentially inappropriate medications decreased from a mean of 1.0 medication on admission to 0.8 (P<0.001), and the number of medications appropriate even at advanced age increased from a mean of 1.4 medications to 1.5 medications (P<0.001).

Conclusions:
Our analysis shows that the already initially high prevalence of polypharmacotherapy often increases further at the end of acute hospitalisation in internal/geriatric wards. A positive trend is the adjustment of the drug spectrum according to STOPP/START criteria.

Keywords:
polypharmacotherapy; multimorbidity; STOPP/START criteria; medication

Abstract ID: 302

Relationship between Helicobacter pylori infection, age, and gender with incidences of gastric polyp in Makassar, Indonesia : A cross-sectional study

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ABSTRACT
Introduction:
Helicobacter pylori infection (HPI) and demographic factors affecting gastric environment were associated with pathologies of polyps.

Objective:
Explain the relationship between HPI, age, and gender with gastric polyps.

Methods:
A cross-sectional study among patients performed upper gastrointestinal endoscopy (UGIE) in Dr. Wahidin Sudirohusodo Central Hospital from 2011 until 2020.

Results:
HPI was a risk factor with gastric polyp risk [OR 1.99 (1.19-3.32) p=0.01]. Age more than 40 years old was a polyp risk [OR 2.32 (1.31-4.10) p=0.00].

Conclusion:
HPI and age significantly affect UGIT pathologies as risk factors.

Keywords:
Helicobacter pylori infection; age; gender; gastric polyp

Abstract ID: 314

Prediction of significant fibrosis in patients with type 2 diabetes mellitus and non-alcoholic fatty liver disease using machine learning

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Objectives

Twenty percent of patients with type-2 diabetes(T2DM) and fatty liver progress to advanced chronic liver cell disease(ACLD) with time. Stage of liver fibrosis is the main indicator of disease progression. It is recommended to start liver directed therapy on patients with significant liver fibrosis(SF) to prevent disease progression. Therefore, annual screening of patients with diabetes and fatty liver to detect SF using FIB-4 score and vibration-controlled transient elastography (VCTE) has been recommended. However, VCTE is not freely available in resource-limited settings. Therefore, we aimed to develop a model to predict SF with freely available information.

Methods

We developed a model by machine learning(ML) of data of a cohort of Sri Lankans with T2DM and non-alcoholic fatty liver disease(NAFLD) designed to identify risk associations for fatty liver progression to ACLD. We trialled several ML-based algorithms with balancing Methods. The model with highest accuracy and precision was selected as the best model.

Results

The model fitted with Adaboosting algorithm on upsampled data had 91.8% accuracy, 0.91 precision and 0.88 recall and was selected as the best. It had 88% positive predictive value and 93% negative predictive value. Increasing FIB-4 score, BMI, age, duration of diabetes, HBA1C, waist size, presence of diabetes complications, chronic kidney disease, dyslipidaemia and hypertension were important factors associated with SF in descending order.

Conclusion

New ML-based model could predict SF with 92% accuracy. This could be used to triage patients needing VCTE for confirmation of SF in resource-poor settings.

Keywords

Significant Fibrosis; Fatty Liver; Diabetes; Machine Learning; Fibroscan

Abstract ID: 332

Personalized management of patients with diabetic kidney disease with the focus on determining approaches to diagnostic and treatment

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Objectives.
Diabetic kidney disease (DKD) is a severe complication of diabetes and one of the leading causes of end-stage chronic renal failure, defined by persistent albuminuria and progressive decline in glomerular filtration rate (GFR). Detection of the tubular biomarker N-acetyl-β-D-glucosaminidase (NAG) in urine indicates kidney damage and reflects the risks of progression of DKD.

Methods.
Standard clinic-laboratory Methods were used for diagnosis of the patients with type 2 diabetes mellitus and DKD. Venous blood and urine were collected with a detailed clinical history. We investigated the relationship between urinary NAG level, glycemic control and kidney function status (GFR, urine albumin to creatinine ratio (ACR)). Patients were given SGLT-2 inhibitor dapagliflozin 10 mg/day. Data evaluation was performed with the standard statistical Methods.

Results.
We included 72 participants, (55.5% females), mean age 65.19±10.6, with mean BMI 31.65 (28.45-33.68) kg/m2, glycated hemoglobin was 7.92±1.54%. Most patients (53.1%) had the degree of renal dysfunction to CKD G3a, 59.4% of patients an increase in ACR level. NAG level in urine was 19.33 (8.34-38.08) ng/ml. We observed a positive correlation between albuminuria and NAG (rs = 0.61, p = 0.02); ACR with NAG (rs = 0.61, p = 0.02). The positive effect of dapagliflozin on the course of the disease: slowing the progression of nephropathy, weight loss. Adverse events, including cardiovascular events, were not observed.

Conclusion.
NAG is associated with early and reliable signs of kidney damage in diabetes. Timely diagnosis and therapy DKD improving the prognosis and quality of life of the patients.

Keywords.
diabetic kidney disease; personalized management; NAG; dapagliflozin;

Abstract ID: 339

TTM for different ROSC timing in OHCA patients

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Objective
This is an observational retrospective study to evaluate the impact of time to return of spontaneous circulation (ROSC) and targeted temperature management (TTM) in out-of-hospital cardiac arrest (OHCA) patients.

Method
The study included 124 OHCA patients with ROSC in Taipei Hospital, Ministry of Health and Welfare, between January 2023 and April 2024. Patients were divided into groups based on ROSC achieved before or after hospital arrival and those who received TTM. Outcome analyses include survival odds, Cerebral Performance Category (CPC) scale and length of hospital stay. Statistical analyses were performed using SPSS 28.

Result
We analysed 114 patients achieved ROSC. 23 of 34 patients (68%) in the ROSC-before-hospital-arrival group had survived to hospital discharge, and 13 of 80 (17%) in the ROSC-after hospital-arrival group (odds ratio 2.59; 95% CI, 1.79 to 3.75; P < 0.001). Mean hospital stay was 7.79 days (95% CI, -1.10 to 16.70) for ROSC-before-hospital-arrival group, shorter than 19.77 days (95% CI, 5.06 to 34.48) for ROSC-after-hospital-arrival group (P < 0.001).CPC score was worse for ROSC-after-hospital-arrival group (P = 0.012). Comparing TTM and non-TTM groups, no significant differences were shown across mortality (P = 0.569), hospital stay (P = 0.266), or CPC scale (P = 0.950). Conclusion and Literature In patients after cardiac arrest, TTM did not lower the incidence of death, but rather ROSC achieved before arrival to hospital showed lower mortality and better neurologic outcomes. Our finding is consistent with other studies (Elbadawi A et al., 2022) and trials (TTM1/2).

Keywords
OHCA; ROSC; TTM; Hypothermic therapy; Cerebral Performance Category (CPC) scale

Abstract ID: 344

Provision of medical Same Day Emergency Care services within the UK

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Objectives:
To evaluate current provision and utilisation of medical Same Day Emergency Care (SDEC) services within the UK, recommended nationally for delivering assessment and management of unplanned internal medicine attendances without overnight inpatient admission.

Methods:
Survey data was collected through the Society for Acute Medicine Benchmarking Audit, using an annual day of care survey collecting anonymised patient-level data describing patient demographics, admission pathways and assessment processes. Hospitals accepting unplanned medical attendances within the UK were included, between 2019-2023.

Results:
Data was included for 34,948 unplanned and 4342 planned attendances, across 188 hospital sites. In 2023, 29.8% of unplanned medical attendances received their medical assessment within SDEC services; the proportion increased over time, from 22.1% in 2019. Most hospitals (82%) accepted referrals from Emergency Department triage into SDEC services, and 63% accepted referral directly from paramedic teams; 38% of hospitals did not use a selection criteria to identify suitable patients. Assessment in SDEC services was less likely in male patients (adjusted odds ratio: 0.83, $p<0.005$) and older adults (e.g. adjusted odds ratio for patients aged 70-79: 0.39, $p<0.005$). 82.4% of patients assessed in SDEC services were discharged without overnight admission. Overall, 34.7% of attendances discharged without overnight admission received their medical assessment in locations other than SDEC.

Conclusions:
Medical SDEC assesses one third of patients seen through acute internal medicine services, but these services are more likely to be utilised for younger, non-frail patients. There remains scope to improve selection of appropriate patients, directing patients to the most relevant acute service.

Keywords:
admissions; acute medicine; ambulatory

Abstract ID: 347

Ursodeoxycolic acid has no effection on survival in MASLD

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Background and Aim:
Ursodeoxycholic acid (UDCA) is recognized for its potential therapeutic effects in various liver diseases, attributed to its ability to alleviate endoplasmic reticulum (ER) stress, enhance insulin sensitivity, inhibit apoptosis, and modulate bile acid metabolism. This study aimed to investigate the biochemical benefits of UDCA in MASLD patients, its impact on fibrosis assessed by Fib-4 score, and its influence on survival.

Materials and Methods:
A cohort of 216 MASLD patients receiving UDCA and 213 untreated MASLD patients, matched for age and gender, were analyzed. Blood values at baseline, first year, third year, and final visit were analyzed, retaining 325 patients after exclusions.

Results:
After one year, significant reductions in AST, ALP, and GGT levels were observed in UDCA-treated patients. While ALT levels decreased, but not statistically significant. UDCA-treated patients initially presented with more advanced disease stages. Survival analysis revealed longer survival in the untreated group, but propensity score matching balanced baseline fibrosis levels, showing no significant survival difference. Discussion: Worse baseline parameters and survival outcomes in the UDCA group suggest its preferential prescription for patients with perceived poorer prognosis. Our findings align with previous UDCA studies, albeit few have explored survival, particularly in large cohorts. This study contributes significantly by evaluating survival in a substantial patient population.

Conclusion and Recommendations:
UDCA induces short-term biochemical improvements in MASLD patients but does not notably affect fibrosis or overall survival. Long-term, multicenter prospective studies with larger and diverse cohorts are imperative to elucidate UDCA's prolonged effects and potential benefits.

Keywords:
Metabolic Dysfunction Associated Steatotic Liver Disease, steatosis, ursodeoxycholic acid, bile acid

Abstract ID: 374

The metabolomic signature of salt intake

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Objectives
Untargeted analysis of the circulating metabolome offers new opportunities for uncovering mechanisms between sodium intake and cardiometabolic risk. We investigated associations between estimated sodium intake and plasma metabolite profiles in a large community-based cohort.

Methods
Urinary sodium concentrations in spot urine samples were measured and 24-hour sodium excretion (est24hNa) was estimated using the Kawasaki formula in the Swedish Cardiopulmonary bioImage Study (SCAPIS, mean age 50-64years, n=8,957). Plasma metabolites were measured with untargeted liquid chromatography mass spectrometry (Metabolon Inc.). 896 metabolites were grouped into 9 super pathways (SP) based on their biological role. Principal component analysis (PCA) for each SP was conducted. We used the first principal component as response variable and est24hNa, age-, sex- and cardiovascular risk factors as predictors and modelled with splines and used ANOVA for model statistics. Specific associations between estimated est24hNa and all individual metabolites were also analyzed.

Results
Est24hNa was highly significantly associated with both the lipid and energy super pathways (p<0.00001 for both). Associations between est24hNa and individual metabolites in these pathways were predominantly negative with splines showing a negative slope that flattened from approximately 4000 mg est24hNa. In addition, est24hNa was associated with 270 individual metabolites where 2S,3R-dihydroxybutyrate from the lipid SP portrayed the strongest association (β=-0.0004, p=8.2x10-38).

Conclusion
In the largest study to date, higher sodium intake was linked to changes in energy and lipid metabolism. Our findings confirm and extends previous experimental studies suggesting a role of increased sodium intake for weight gain and associated cardiometabolic risk increase.

Keywords
salt; sodium; cardiovascular risk; metabolism; metabolomics

Abstract ID: 390

The power of blood count, creatinine, and NT pro-BNP ratios in predicting Heart Failure exacerbations

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Literature:

Heart failure (HF) represents considerable morbidity and mortality, accompanied by a burden for hospital occupation and budget. Therefore, it is important to develop Methods that can predict these exacerbations and avoid the hospitalization of patients, such as blood count ratios, which have been already evaluated in multiple diseases.

Objectives:

Evaluate the predictive value of blood count, creatinine, and NT pro-BNP ratios, with the aim to predict HF exacerbations.

Methods:

This is a retrospective, observational and ongoing study, with collection of information from electronical health records from an internal medicine consult for HF, in 2023. Descriptive and inferential statistics were applied. Statistical significance obtained when p-value < 0,05.

Results:

The cohort had 60 patients, 53% female and the median age was 78 ± 8 years. 31,6% of the patients have a III/IV NYHA score and the median FEVE was 47 ± 16,7%. It was observed a statistically significancy in neutrophil-to-creatinine ratio between exacerbators vs non-exacerbators (p-value = 0,0126). In HF patients more prone to exacerbate, the lymphocyte-to-NT pro-BNP ratio showed a difference between higher vs lower exacerbators (p-value = 0,0227). Neutrophil-to-lymphocyte (p-value = 0,0106), Leucocyte-to-hemoglobin (p-value = 0,0162) and Neutrophil-to-creatinine (p-value = 0,0) ratios were dissimilar in stable versus exacerbated patients.

Conclusions:

Blood count, creatinine and NT pro-BNP ratios can be used to predict patients at higher risk of exacerbating HF. These are analytical values widely used, economical and accessible, that can be successfully employed in a more personalized medicine that can prevent worse HF outputs and avoid patient hospitalization.

Keywords:

Heart Failure; Exacerbations; Blood count ratios; Personalized Medicine

Abstract ID: 395

Cefepime versus Piperacillin-Tazobactam in Empirical Treatment for Hospitalized Patients with Bacterial Infection: A Systematic Review and Meta-Analysis

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Background:
In a year 13.6% of all deaths around the world were linked to bacterial infection (BI). The best empiric antibiotic treatment remains unknown for hospitalized patients. We performed a meta-analysis comparing cefepime versus piperacillin-tazobactam (tazocin) in empirical treatment for BI in acute patients who were hospitalized.

Methods:
We systematically searched PubMed, Embase, and Cochrane databases for studies comparing the use of cefepime versus tazocin in acute patients with BI that warranted hospitalization. The outcomes were All-Cause Mortality (ACM), Intensive Care Unity Admissions (ICU), and Acute Kidney Injury (AKI). We pooled risk ratios (RR) for binary outcomes with 95% confidence intervals (CI) with a random-effects model. We used R version 4.3.2 for all statistical analysis.

Results:
From 8 studies, 2 Randomized controlled trials, and 6 cohorts comprising 21,051 patients, of whom 6,248 were divided to cefepime. The mean patient age was 67.5 years and 12,401 were male (58.9%). Cefepime didn't show a significant statistical difference in ACM (RR 0.98; 95% CI: 0.85 to 1.15; p=0.03) and ICU admissions (RR 0.92; 95% CI: 0.83 to 1.02; p<0.01) and the incidence of AKI (RR 0.87; 95% CI: 0.76 to 1.00; p=0.12).

Conclusion:
In hospitalized patients with BI cefepime, when compared to tazocin, showed no significant statistical differences in mortality, AKI, and ICU admissions. Larger randomized controlled trials are warranted to assess this difference

Keywords:
Cefepime; Tazocin; Mortality; Antibiotics; Hopitalized

Abstract ID: 396

Effectiveness of Polycythemia Vera Screening in Patients with a Hemoglobin Value of 16/16.5 gr/dl with New Diagnostic Criteria

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Objective:
Polycythemia Vera (PV) is diagnosed according to the diagnostic criteria published by the WHO in 2016. In the diagnostic criteria of 2008, the hemoglobin (hgb) levels were set at >18.5 g/dl for men and >16.5g/dl for women, while the 2016 revision adjusted these levels to >16.5 g/dl for men and >16 g/dl for women. Our study aimed to assess the effectiveness of these changes in the diagnostic criteria in diagnosing the condition.

Materials and Methods:
Our study was designed as a retrospective, single-center, cross-sectional, and observational study. Patients who were referred for the investigation of PV to our hospital between May 2019 and May 2023 were included in the study. Patients' demographic characteristics, symptoms, comorbidities, and laboratory test Results were recorded.

Results:
Among the 700 patients included in the study,31 (4.43%) were diagnosed with PV, while 669 (95.57%) were diagnosed with secondary polycythemia. The average age of patients diagnosed with PV was 62,and 58% of these patients were male. When evaluated according to ROC analysis, the cut-off value for hgb in diagnosing PV was found to be 18.3 g/dl for men and 16.9 g/dl for women. It was observed that 5.4% of patients referred for polycythemia underwent bone marrow biopsy, of which 52.6% were diagnosed with secondary polycythemia.

Conclusion:
In our study, we found that if hgb levels are less than 18.3 g/dl in men and less than 16.9 g/dl in women, causes of secondary polycythemia could be considered as primary.

Keywords:
Polycythemia Vera; Secondary Polycythemia; Erythrocytosis; Myeloproliferative Neoplasms

Abstract ID: 397

Massive upper gastrointestinal bleeding: The impact of a prompt approach of the critic patient

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Literature:
Massive upper gastrointestinal bleeding (MUGB) represents a life-threatening condition if not immediately approached once the patient arrives at the emergency department. Therefore, it is important to evaluate the reality of a central hospital to understand the impact of a prompt response and follow-up.

Objectives:
Evaluate the therapeutic approach to MUGB at the emergency department through comparison of hemogram and coagulation values at admission and afterwards.

Methods:
This is an ongoing retrospective, observational and ongoing study, with collection of information from electronical health records from an emergency department, between 2018 and 2023. Descriptive statistics were applied.

Results:
The cohort had 20 patients, 80% male patients, with a median age of 67 ± 17 years. Only 45% have identified the origin of the bleeding, with 10% from gastric ulcer and 10% from malignancy. 50% of the patients had a previously diagnosed gastrointestinal disease, with 30% having chronic liver disease. Blood bank was contacted only for 15% of patients, sending more than 2 units packed RBCs in 64,7% of the situations. Moreover, there was a need for platelets units and further blood products in 10% of the patients. 20% of the patients required emergent endoscopic treatment, without anyone needing surgical approach. The median hemoglobin value at admission was 7,7 ± 3,7 g/dL and afterwards was 8,6 ± 1,9 g/dL.

Conclusions:
MUGB represents a considerable challenge amongst emergency teams and so, there is a need to establish a more precise and standardized approach for improving patient recovery outcomes.

Keywords:
Bleeding; Approach; Emergency

Abstract ID: 400

Fistulous walled off necrosis: a case presentation

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A 50-year-old male patient presented to the emergency department with jaundice and fever. These symptoms had started 2 days before. The patient had a cholocystectomy 3 months ago and had lost 14 kg in the last 3 months. Physical examination revealed abdominal tenderness and jaundice. Laboratory Results were ALP:263U/L, GGT:231U/L, Total/Direct Bilirubine:3,7/2,4 mg/dL, Wbc:11,71x109/L, Neu:9,38x109/L, Crp:168,8 mg/dL. The CT scan shows that the intrahepatic bile ducts are wide and contain air voids. There is contrast enhancement of the choledochal wall. Abscess formation is seen at the level of the pancreatic duct with air-fluid levelling in association with the gastric lumen. ERCP performed with a preliminary diagnosis of walled-off-necrosis(WON) showed that haemorrhagic edematous area in the bulbus.4*7 cm WON cavity was cannulated and abundant pus mixed with bile was drained with balloon. A double pigtail stent was placed from the fistula line to the WON cavity. The pancreatic duct was cannulated and leakage was observed from the tail to the won cavity. Second stent was placed in the pancreatic duct. While trying to cannulate the choledoch, it was seen that the wire from the papilla went directly into the won cavity. It was seen that the given opaque was filled directly into the won cavity from the choledochal dystal (fistula to the biliary system). Third stent was placed in the choledochal cavity. On day 10, another ERCP was performed and the pancreatic stent was removed. Laboratory findings improved and the patient was discharged without fever on the 13th day.

Keywords:
Walled off necrosis (WON), ERCP, Fistula, Stent

Abstract ID: 404

Efficacy and Effects of Krill Oil for Osteoarthritis: A Systematic Review and Meta-Analysis of Randomized Controlled Trials.

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Background:

Osteoarthritis (OA) is a major cause of chronic pain and disability worldwide. Current treatments, including NSAIDs and other analgesics, often lead to adverse effects. Krill oil is being explored as a potentially safer alternative. However, the efficacy of krill oil in managing OA symptoms remains unclear.

Methods:

MEDLINE, Embase, and Cochrane databases were searched for studies until May 2024 that compared Krill Oil versus placebo for osteoarthritis. A total of 1091 articles were screened following the PRISMA protocol. End-points were knee pain and levels of HDL, LDL, and TG. A likelihood random-effects model with odds ratio (OR) and 95% confidence intervals (CI) was employed for binary endpoints, while mean difference (MD) was used for continuous endpoints. Heterogeneity was evaluated through Thompson's I2 statistic.

Results:

We included 5 Randomized Controlled trials (RCTs) with 619 patients supplemented with Krill Oil for osteoarthritis. All groups had similar demographics and physical status classifications. The mean age of patients was 59.2 years, and 48.6% were female. The only statistically significant finding was an increase in HDL (RR 0.26; CI 95% CI 0.04 to 0.48; p=0.21). While the other Results LDL (RR 0.07; 95% CI -0.24 to 0.38; p=0.03), decrease in TG (RR -0.35; CI 95% CI -0.77 to 0.08; p<0.01) knee pain scores (RR -0.12; CI 95% CI -0.29 to 0.05; p=0.59) were not significant.

Conclusion:

Krill oil supplementation in patients with osteoarthritis appears to have effects on lipid profiles, including increases in HDL and LDL, and decreases in TG levels. However, the impact on knee pain was not statistically significant. More high-quality RCTs are needed to confirm these findings.

Keywords:

Krill oil; Osteoarthritis; Knee Pain; Meta-Analysis

Abstract ID: 409

Prophylaxis of Ventilator-Associated Pneumonia Using β-Lactam in Patients with Brain Injury: A Systematic Review, Meta-Analysis and Trial Sequential Analysis

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Objectives:

We performed a systematic review, meta-analysis and trial sequential analysis of randomized controlled trials (RCTs) to assess if Beta-lactam antibiotics (BLA) are effective in preventing Ventilator-associated pneumonia (VAP) in brain injury patients.

Methods:

We systematically searched PubMed, Embase, and Cochrane databases for RCTs comparing the use of BLA against placebo in Mechanic ventilated patients with brain injury. The outcomes were all-cause mortality and VAP incidence. We pooled risk ratios (RR) for binary outcomes with 95% confidence intervals (CI) with a random-effects model. Statistical analyses were performed using Trial Sequential Analysis (TSA) version 0.9.5.10 and R Studio version 4.3.2.

Results:

We included 3 RCTs for the final analysis, comprising 457 patients, of whom 58% were male, and the mean age was 52.6 years. Compared with control, BLA showed a significant decrease in VAP incidence (RR 0.53; 95% CI: 0.40 to 0.71; p=0.60;), for this endpoint, TSA suggested a low risk of type 1 error; therefore, this result may be conclusive. However, there were no significant differences in all-cause mortality (RR 0.82; 95% CI: 0.55 to 1.23; p=0.30;).

Conclusion:

In patients in MV and with brain injury, BLA significantly reduced VAP incidence. However no significant association was found with mortality. Therefore, more powerfull randomized trials are needed to assess this endpoint. Literature: Ventilator-associated pneumonia is a recurrent complication in patients with brain injury who undergo mechanical ventilation. Beta-lactam antibiotics have emerged as an alternative to prophylaxis to prevent the occurrence of this event, but their effectiveness is still under-researched.

Keywords:

Pneumonia; Brain Injury; Beta-Lactams; VAP; Ventilator-associated Pneumonia

Abstract ID: 410

Influence of frailty and major neurocognitive disorders on rehabilitation success after hip fracture surgery in an Italian orthogeriatrics unit

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Objectives.

To assess the influence of frailty and pre-existing major neurocognitive disorders (MND) on rehabilitation success in a cohort of Italian patients undergoing hip fracture (HF) surgery.

Methods.

All subjects aged ≥70 years admitted to the Orthogeriatrics Unit (OGU) at Sondrio Hospital (Italy) were prospectively enrolled between 2011 and 2019. Inclusion criterion was a diagnosis of HF with indication for surgery. We administered a comprehensive geriatric assessment and calculated a frailty index (FI) using 16 variables according to the following formula: FI=number of deficits/16. FI scores were categorized in: non-frail (FI<15, reference category), mildly (0.15<FI<0.34) and moderately-to-severely frail (FI>0.34).

Results.

Our cohort included 818 patients (males/females ratio=1:4; mean age 85.6 years), 21.6% of whom had a diagnosis of MND. Rehabilitation success was expressed by a Rehabilitation Efficiency Index (REI)>0.5, and was obtained by 70% of the enrolled patients. Through a multivariable logistic regression analysis, we found that some factors independently and negatively influence rehabilitation success, namely age ≥90 years (OR 0.37, 95% CI: 0.21-0.64), MND (OR 0.14, 95% CI: 0.10-0.21), and frailty (both categories). We observed that the influence of frailty on rehabilitation success decreases as age increases, i.e. severe frailty does not limit obtaining REI>0.5 in those aged ≥90 compared to the younger age group.

Conclusions.

Although it seems counterintuitive, frail individuals and those with a diagnosis of MND should be prioritized and targeted with early and specific physiotherapy programs regardless of age, because a prompt initiation of the intervention will improve their chances of rehabilitation success.

Keywords.

orthogeriatrics; hip fracture; frailty; major neurocognitive disorder; dementia;

Abstract ID: 411

Chronic Kidney Disease in Young Adult: A Case Report

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Objectives:
A 23-year-old white female, with a previous medical history of BMI 34, ovarian teratoma, and hypothyroidism. She has consanguineous parents and a family history of kidney disease (father with end-stage kidney disease, and maternal grandmother suffered from renal neoplasms). Followed up in hepatology consultation due to hepatic steatosis. Five years later, she presented chronic kidney disease of unknown origin.

Methods:
The patient referred that sometimes she has flank pain but denied other complaints such as macroscopic hematuria, polyuria, edema, anorexia, changes in body weight, consumption of non-steroidal anti-inflammatory drugs, antibiotics, or other drugs than levothyroxine 50 mcg and ethinylestradiol 0.02 mg with gestodene 0.075 mg. Therefore, she was referred for nephrology consultation, and a kidney biopsy was performed. The age of onset of this kidney disease, absence of known risk factors for a secondary cause, and family history of kidney diseases in family raised the suspicion of a genetic cause.

Results:
The genetic study showed one variant in the SDCCAG8 gene in probable homozygosity, which is described in the literature in patients with Bardet-Biedl syndrome and Senior-Loken syndrome. Therefore, genetic analysis was requested from the parents to confirm the homozygous state.

Conclusion:
Early identification of familial genetic diseases is important for early clinical follow-up and multidisciplinary care. Furthermore, prenatal diagnosis is available for changes associated with Senior-Loken syndrome. Literature: F. Maria, et al, "Adolescents and Young Adults with Chronic or End-Stage Kidney Disease". Blood Purif. 2016;41(1-3):205-10.

Keywords:
Chronic Kidney Disease; Young Adult; Consanguineous parents; Hepatic steatosis; Genetic study;

Abstract ID: 412

Acupuncture for the Treatment of Chronic Itchiness: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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We performed a systematic review and meta-analysis of randomized controlled trials (RCTs) comparing acupuncture and the nonuse of acupuncture (placebo or conventional treatment).

Methods:
MEDLINE, Embase, and Cochrane databases were searched for studies that compared acupuncture versus no acupuncture for chronic itchiness. A total of 549 articles were screened following the PRISMA protocol. Endpoints were the itchiness score assessed with VAS and DLQI scales. A restricted maximum likelihood random-effects model with standard mean difference (SMD) and 95% confidence intervals (CI) was employed. Heterogeneity was evaluated through Cochrane's Q statistic and Higgins and Thompson's I^2 statistic. All tests were two-tailed, and significance was defined as a p-value < 0.05.

Results:
We included 7 RCTs with 634 patients. The mean age of patients was 38.4 years, and 66.82% were female. The variance of VAS score for measuring itchiness (SMD -3.60; 95% CI -7.70 to 0.51; p=0.09; I^2=99%) and DLQI variation (SMD -1.48; 95% CI -4.44 to 1.49; p=0.33; I^2=99%) were not statistically different between groups. Similarly, the final VAS score (SMD -18.03; 95% CI -45.54 to 9.48; p=0.2; I^2=98%) was statistically similar between the acupuncture group and the placebo group.

Conclusion:
In patients with chronic itchiness, acupuncture does not seem to be beneficial in reducing itchiness compared to a control group. Literature: Chronic itchiness is a distressing symptom that impairs quality of life. Acupuncture has been suggested as an alternative treatment, and may be superior to pharmacological treatment according to oriental medical literature.

Keywords:
Chronic itchiness; Acupuncture; Systematic review; Meta-analysis; Randomized controlled trials.

Abstract ID: 414

The Efficiency of Oseltamivir in Reducing Mortality in Patients with COVID-19: A Systematic Review and Meta-Analysis

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Objective:
A systematic review and meta-analysis to try to assess the efficacy and safety of Oseltamivir for patients with COVID-19 was performed.

Methods:
We systematically searched Pubmed, Embase, and Cochrane databases for studies assessing the efficacy and safety of oseltamivir in patients with COVID-19. We calculated event prevalence for binary outcomes along with 95% confidence intervals (CI). Statistical analysis was performed using R version 4.3.2. A random-effects model was used for all outcomes, and heterogeneity was assessed with I2 statistics.

Results:
We screened 2,011 studies where we included 4 cohorts in our meta-analysis comprising 21,821 patients, of whom 12,261 were male and the mean patient age was 61.1 years. The data showed the incidence of death in hospitalized patients who used oseltamivir was 17.16% (95% CI: 3.81 to 52.00; $p<0.01$).

Conclusion:
In this systematic review and meta-analysis, oseltamivir did not show a decreased incidence of all causes of mortality compared with the index mortality in hospitalized patients with COVID-19 around the world. The lack of randomized controlled trials and uniformized control groups limited the effectiveness of this meta-analysis. Literature: The COVID-19 pandemic has caused until this moment 15 million deaths worldwide. Effective and secure treatments for the disease are still under research. In this scenario, antiviral drugs, such as oseltamivir, emerged as a potential alternative.

Keywords:
Covid-19; Osetalmivir; Tamiflu

Abstract ID: 427

An Updated Meta-Analysis of Randomized Controlled Trials of DAPT Versus Aspirin in Patients with Stroke or Transient Ischemic Attack

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BACKGROUND & RATIONALE
In this updated meta-analysis, we explore the efficacy and safety of Dual Antiplatelet Therapy (DAPT) for individuals diagnosed with stroke or Transient Ischemic Attack (TIA), incorporating the latest insights from randomized controlled trials (RCTs). The emerging evidence surrounding dual antiplatelet therapy in stroke and TIA plays a pivotal role in guiding clinical decisions.

METHODS
Our study included all RCTs featuring patients who received antiplatelet treatment (aspirin+P2Y12 inhibitor) within 72 hours of acute stroke or TIA. The primary focus was on efficacy outcomes, specifically the occurrence of new strokes, and safety outcomes, particularly the incidence of major bleeding. Secondary outcomes included the risk of cardiovascular events, recurrent ischemic, and haemorrhagic strokes. The pooled odds ratio was computed using a random effects analysis model.

RESULTS
We analyzed five RCTs involving 27,559 patients. DAPT significantly reduced stroke recurrence (OR, 0.75; 95% CI, 0.68–0.82; P<0.001, I2=0%) but increased major bleeding risk (OR, 2.20 [95% CI, 1.38–3.51], P=0.0009, I2=30%). It lowered major adverse cardiovascular events (OR, 0.76; 95% CI, 0.67–0.85; P<0.001, I2=5%) and recurrent ischemic events (OR, 0.73 [95% CI, 0.66–0.80], P<0.001, I2=0%) but raised hemorrhagic stroke risk (OR, 2.09 [95% CI, 1.14–3.84], P=0.02, I2 =8%).

CONCLUSION
In Conclusion, initiating DAPT, combining aspirin with either ticagrelor or clopidogrel, within 72 hours of a high-risk TIA or mild-moderate ischemic stroke, proved superior to aspirin alone in reducing the risk of recurrent stroke. Nonetheless, this approach also comes with a higher risk of major bleeding. Stroke", "Ischemic Stroke", "Ischemic Attack, Transient", "Cerebral Infarction", ", "Aspirin", "Clopidogrel" and "Dual Anti-Platelet Therapy

Abstract ID: 448

Is Risk Factor Paradox a myth?

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Background:
Risk factor reversal or reverse epidemiology or Risk factor paradox in terms of obesity and chronic comorbid conditions in geriatric population is still a debate. The term "body mass index" paradox refers to the observation that, although BMI is a major contributing factor in the development of cardiovascular disease, diabetes, Kidney failure and stroke,when acute cardiovascular decompensation occurs, for example, in congestive heart failure, obese patients may have a survival benefit compared to their lean counterparts. There is paucity of literature in describing the mechanism behind body mass index and its dual association in risk factor and prognostic outcome in chronic conditions like CKD and stroke. A literature review of electronic library was made in order to make a review of association between body mass index and Heart Failure, CKD and Stroke. More than 300 records were identified but 75 research articles were used in this review. Out of 75 experimental publications that were reviewed, 12 showed the existence of paradox in heart failure, 13 explained about the body mass index and its influence in outcome of chronic kidney conditions and 16 highlighted the existence of paradox in stroke. This review noticeably identified a significant role of body mass index and its outcome in conditions like HF,CKD and Stroke. Though various classical explanations have been hypothesized to explain their association in prognosis, it still deserves further attention because treatment with sodium glucose cotransporter 2 inhibitors(SGLT2i) may interfere with body mass which inturn might influence the outcome.

Keywords:
Body mass Index, Heart Failure, Chronic Kidney Disease, Stroke

Abstract ID: 451

Artificial intelligence driven lifestyle change positively impacts type II diabetes and prediabetes.

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Introduction:
Lifestyle change is a class I indication for chronic disease management, including diabetes/prediabetes. Given practical time constraints of health professionals, access to persistently available lifestyle change for patients is lacking. We have developed an Artificial intelligence-driven lifestyle change digital therapeutic, that is personalized and scalable for managing the components of the metabolic syndrome, MAFLD and PCOS. We report on three primary care networks in the UK in managing patients with type II diabetes and prediabetes with this digital therapeutic. Objective: how many patients with diabetes would achieve HbA1c <48; with prediabetes HbA1c <42 mmol/mol, after 8-12 weeks of lifestyle intervention?

Methods:
Patients were enrolled (presenting sample) with a diagnosis of type II diabetes (n=130) or prediabetes (n=42). After ethical approval/informed consent, patients were weighed at enrolment and had their HbA1c measured. The Controldtx App provided continuous lifestyle advice to subjects.

Results:
patients with diabetes had an average weight loss of 5.2 kg (5.3 % weight) and a HbA1c reduction of 11.8 mmol/mol (19.1%); 48 patient reached a target HbA1c <48 (45%). Prediabetes subjects had an average weight loss of 4.5 kg (6.5 % weight) and a HbA1c reduction of 3 mmol/mol (6.7%); 13 patient reaching a target HbA1c <42 (42%). Compliance was 82% for diabetes and 74% for prediabetes.

Conclusions:
An Artificial intelligence driven lifestyle change application, provided to patients, can individualize their dietary and caloric needs and have a positive impact in the control of weight, BMI and HbA1c in type II diabetes and prediabetes.

Keywords:
Diabetes, Prediabetes, Artificial intelligence, Lifestyle

Abstract ID: 466

Development of rivaroxaban capsules with reliable absorption in various meal regimes.

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Objectives:
The aim of this research was to develop rivaroxaban 20mg capsules with increased dissolution compared to standard crystalline rivaroxaban products and thus improved oral bioavailability in fasted state. This is important as the current Xarelto 20mg product must be given with food in order to achieve sufficient exposure and efficacy. Non-compliance with this requirement Results in inadequate efficacy and potential thromboembolic events in patients.

Methods:
Two pharmacokinetic studies were performed on prototypes containing 20mg of rivaroxaban. These were open label, randomized, single oral dose, cross-over studies on healthy human volunteers. Test products were administered under fasting and fed conditions and the reference Xarelto product was administered under fed conditions. Rivaroxaban plasma levels were analyzed using a validated HPLC-MS/MS Method.

Results:
All three tested prototypes displayed improved total rivaroxaban exposure AUC in fasted state and were bioequivalent to Xarelto in fed state. One prototype also displayed bioequivalent maximal concentration, while the remaining prototypes had more-than-bioequivalent cmax. In general, the medication was well tolerated with 17 AEs reported (most common headache, vomiting and elevated prothrombin time) and no SAEs reported.

Conclusions:
Chronic rivaroxaban therapy is an important prevention of systemic thromboembolism in patients treated for atrial fibrillation or venous thromboembolism. A reliable and effective level of absorbed drug, regardless of food intake, is important to ensure this effect. This is because elderly patients in particular are being treated, where full adherence to treatment instructions cannot be expected (necessitating ingestion of Xarelto at the same time as food).

Keywords:
Rivaroxaban; Improved Bioavailability; Reliable Absorption;

Abstract ID: 468

Therapeutic plasma exchange in patients with rheumatic diseases: single centre experience.

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Objectives:
Therapeutic Plasma Exchange (TPE) is a medical procedure where a patient's blood is passed through an apheresis device to filter and remove plasma. The red blood cells are then returned to the patient with a replacement fluid, such as plasma or albumin. This study presents our experience with TPE in treating various rheumatological diseases, summarizing a 14-year experience of Riga 1st Hospital Apheresis Centre regarding the indications and outcomes of TPE in the treatment of rheumatic diseases.

Materials and Methods:
This retrospective study covered TPE procedures from December 2014 to January 2024. A total of 808 TPE sessions were performed in 175 patients aged 24 to 76 years. Clinical and laboratory investigations were carried out before and after TPE, and its effects were assessed through patient phone interviews.

Results.
Of the 175 patients, 88.6% were females and 11. 4% were males. TPE indications included 24 disorders, with the majority being systemic lupus erythematosus (21.1%/37), psoriatic arthritis (17.7%/31), seropositive rheumatoid arthritis (13.7%/24) and osteoarthritis (11.4%/20). Most patients (81.7%) underwent five or more TPE sessions, 6.9% of had two or less sessions. Adverse events occurred in 8 (4.6%) patients, with allergic reactions (3/8) being the most common. Among 131 patients who evaluated the efficacy of TPE, 61.7% reported clinical improvement ($p = 0.004$) according to Visual Analogue Scale (VAS). Improvements in inflammatory markers, liver and kidney functional parameters, and immunological changes correlated positively with TPE.

Conclusions:
TPE is a safe and effective supplementary treatment for rheumatological diseases, especially those associated with autoantibodies. Literature: Altobelli C. et al. Therapeutic Plasmapheresis: A Revision of Literature. Kidney Blood Press Res. 2023;48(1):66-78. doi: 10.1159/000528556.

Keywords:
Therapeutic plasma exchange; rheumatological diseases; autoantibodies; systemic lupus erythematosus; Visual Analogue Scale.

Abstract ID: 481

Do fibromyalgia and neuropathy play role in biologic switch in sPA and RA?

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Objectives:
This study aimed to investigate the correlation between treatment switch decisions, primarily with biologic agents, and the presence of fibromyalgia (FM) or neuropathy in a long-term cohort of spondyloarthritis (sPA) and rheumatoid arthritis (RA) patients.

Methods:
The retrospective analysis included 387 sPA and 247 RA patients who were on biologics at the time of the study, excluding those with additional autoinflammatory conditions or pre-existing neuropathy or FM. FM was diagnosed using the Fibromyalgia Rapid Screening Tool and neuropathies included conditions such as lumbar radiculopathy and diabetic neuropathy. Drug switches related to intolerance, hypersensitivity or pregnancy were excluded.

Results:
9% had FM and 5% neuropathy over a mean disease duration of 134.27 months. Patients with FM or neuropathy were significantly more likely to undergo treatment switches (OR: 10.9, 95% CI:2.77-42.93, p<0.001 for >1 change vs. 0 change; OR: 4.91, 95% CI:1,17-20,53, p=0.029 for 1 change vs. 0 change), adjusted for disease duration and age. In ankylosing spondylitis patients (n=308), FM increased the likelihood of at least one treatment switch (OR: 3.7 95% CI:1,13-8,26).

Conclusions:
FM and neuropathy correlate with increased biologic treatment switch decision in sPA and RA patients. HLA-B27 positivity for AS, presence of chronic disease, and gender showed no association with treatment switch. 1. Moltó A et al. Evaluation of the impact of concomitant fibromyalgia on TNF alpha blockers' effectiveness in axial spondyloarthritis. Ann Rheum Dis. 2018 Apr;77(4):533–40. 2. López-Medina C et al. Comorbid pain in axial spondyloarthritis, including fibromyalgia. Ther Adv Musculoskelet Dis. 2020 Oct 16;12:1759720X20966123.

Keywords:
treatment switch, fibromyalgia, spondylarthropathy

Abstract ID: 487

Post Dengue Fatigue Syndrome (PDFS) : A study of 100 patients in a Tertiary Care Hospital of Bangladesh

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Post Dengue Fatigue Syndrome (PDFS): A study of 100 patients in a Tertiary Care Hospital of Bangladesh Professor Tazin Afrose Shah, Professor of Mrdicine, Uttara Adhunik Medical College Hospital (UAMCH) Objective: To study the underlying contributing factors of Post Dengue Fatigue Syndrome (PTFS) in a Tertiary Care Hospital of Dhaka, Bangladesh

Methods:
496 patients between the ages of 18 to 65 years who suffered from serologically confirmed dengue fever between 45 to 90 days ago were interviewed over telephone using the Validated Fatigue Questionnaire (FG), and a total of 109 patients who fulfilled the selection criteria were enrolled in the study. Follow-up with some basic baseline investigations like CBC, RBS, SGPT, S. Electrolytes, and S. Vitamin D level were done. 9 patients dropped out of study due to various reasons. This was a retrospective study conducted in the OPD of UAMCH between 1st September 2023 and 31st January 2024.

Results:
Among the 100 patients, 66 % were female and 34 % were male.64 % patients were known diabetics, 86% had Vitamin D Deficiency, 32 % were anemic, and 8 % had persistently altered SGPT levels.

Conclusion:
Incidence of PDFS was found to be significantly higher in female patients, and in those with some sort of co-morbidity like Diabetes mellitus, and Vitamin D deficiency, among others. Literature: PDFS refers to a cluster of symptoms like severe fatigue, muscle and joint pain, depression and cognitive impairment that persists beyond 6 weeks of resolution of the acute dengue infection and may significantly impact an individual’s quality of life.

Keywords:
Post Dengue Fatigue Syndrome (PDFS); female patients; co-morbidity; WCIM; 2024

Abstract ID: 488

Disparities in Chronic Care Management between Males and Females: Study of 500 patients in private hospital of Dhaka, Bangladesh

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Objectives
To identify the prevalence and causes of gender disparity in chronic care healthcare between male and female patients in a private hospital of Dhaka, Bangladesh

Methods
a total of 500 patients suffering from 2 chronic diseases, that is, Diabetes and Hypertension, of almost identical socio-economic background were sorted into 2 groups of 250 patients each according to their gender. This study was carried out in the OPD of UAMCH for period of 11 months from December 2022 to November 2023. The monthly income and expenditure of the family of each participant was evaluated by means of a questionnaire- patients who were on 4-6 medicines daily shortlisted for the study. Patients who had other comorbidities like CKD, IHD,CVD, COPD were excluded from the study.

Results
Males were found to be more punctual regarding their treatment and follow-up. Almost 46% of the female patients were taking lesser drugs than prescribed, as compared to only 6% in male group. On Routine follow-up, 78% of the male patients and only 42% of the female patients did all the tests as advised.

Conclusions
There was significant disparity regarding availability of adequate treatment and routine follow-up between male and female patients. Economic dependence on the male partners, lack of awareness, and self-neglect were identified as the major underlying cause of this discrepancy. Literature - Health is significantly determined by social, economic, and environmental factors that is beyond the health sector, such as poverty, education, employment .Gender inequality, an important determinant of health remains a challenge in Bangladesh

Keywords
Chronic Care; Gender disparity ;Bangladesh

Abstract ID: 494

Reducing hyperuricemic events with SGLT2 inhibitors: an updated systematic review and meta-analysis with meta-regression

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Objectives:

Although sodium-glucose cotransporter-2 inhibitors (SGLT2i) were shown to lower hyperuricemic events in patients with type 2 Diabetes Mellitus (T2DM), the extent of this effect in the general population is yet to be fully investigated. We performed an updated systematic review and meta-analysis in a large sample of patients with and without T2DM to evaluate the influence of SGLT2i therapy on clinically relevant hyperuricemic events, defined as the composite of acute gout flare episodes, acute anti-gout management or urate-lowering therapy initiation and conducted a multivariate meta-regression to assess the relationship between different covariates and the pooled effect size (Reference: ENDINU-D-23-00344R1).

Methods:

PubMed, Scopus and Cochrane databases were systematically searched for randomized controlled trials, observational studies and posthoc analyses from inception until August 2023, that reported outcomes of interest in patients receiving SGLT2i (PROSPERO: CRD42023442077).

Results:

Data from seven randomized controlled trials and seven observational studies was included with 464009 patients, of whom 13370 patients without T2DM. 50% of the included patients were receiving SGLT2i. The pooled analysis demonstrated that SGLT2i reduce clinically relevant hyperuricemic events by 33% (HR 0.67; 95% CI 0.59-0.77; I2=83%) regardless of the concomitant diagnosis of T2DM. The multivariate metaregression on chronic kidney disease (CKD) showed a positive correlation on the pooled effect size.

Conclusions:

SGLT2i reduce the risk of developing hyperuricemic events regardless of the concomitant diagnosis of T2DM. The multivariate meta-regression on CKD showed a significant impact on the main outcome. Further studies are essential to investigate more conclusively the extent of these beneficial effects.

Keywords:

Sodium-Glucose Transporter 2 Inhibitors; Gout; Diabetes Mellitus, Type 2; Heart Failure; Meta-Analysis

Abstract ID: 495

To the point of bloodshed... or an inventive solution of AIHA-induced acute kidney injury

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Abstract
Autoimmune hemolytic anemia (AIHA) can be associated with hematologic malignancies or with infections, tumors, drugs and autoimmune diseases. In intravascular hemolysis, erythrocytes disintegrate and free circulating hemoglobin precipitates in the kidney tubules, forming crystals and mechanically obturating them. Acute kidney injury (AKI) is a rare and potentially life-threatening complication of severe AIHA. In this case report we describe a patient with lymphoma (in remission) and recurrence of severe autoimmune hemolytic anemia of unclear etiology, refractory to high doses of glucocorticoids and rituximab. The condition was complicated by acute oliguric kidney injury based on free haemoglobin obstruction induced tubulopathy. Due to this specific and rare etiology of AKI, we expanded conventional hemodialysis by the use of a medium-cut-off dialysis membrane (MCO). MCO membrane is uniquely designed to have pores larger than those of standard high-flux membranes but smaller than those of membranes used in hemodiafiltration. This optimal pore size allows efficient removal of the breakdown products of free hemoglobin without undesirable high albumin losses. We extended this therapy by incorporating plasma exchange with albumin replacement. The aim of this step was to remove whole free hemoglobin molecules that would not be efficiently filtered due to the physical properties of MCO. The resulting effect was surprisingly positive when combined with effective immunosuppression – renal functions have been almost completely repaired. We suggest that using the unique combination of MCO membrane and plasma exchange in the setting of AIHA- induced acute kidney injury is an innovative, previously not described therapeutic approach. Keywords autoimmune haemolytic anaemia, acute kidney injury, intermittent hemodialysis, medium-cut-off membranes, plasma exchange

Keywords:
autoimmune haemolytic anaemia, acute kidney injury, intermittent hemodialysis, medium-cut-off membranes, plasma exchange

Abstract ID: 497

Are We Over-Reliant On Hba1c? A Three-Year Case Of Diabetes Mellitus With Masked Hereditary Spherocytosis

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Abstract
Glycated hemoglobin A1c (HbA1C) is an essential laboratory marker for the diagnosis, treatment, and monitoring of diabetes mellitus (DM). Despite its significance, it can mislead clinicians under certain conditions. Hereditary spherocytosis (HS) is one of the diseases in which the HbA1c value is falsely low due to the shortened lifespan of the red blood cells. Diagnosing diabetes in patients with HS, like in this case, can be quite challenging.

Case Description
A 47-year-old woman with HS presented with complaints of postprandial tiredness, burning in the hands, and weakness. Over the last 3 years, she had recurrent consultations with fasting blood glucose levels of 109-100-95mg/dl and HbA1c values of 4-3.9-4% respectively. Her medication regimen was not consistent. The laboratory data showed a fasting blood glucose of 130mg/dL, a postprandial blood glucose of 247mg/dL, an HbA1c level of 4.1%, a hemoglobin of 11.1g/dL, a fructosamine of 374 µmol/L. The metformin prescription was initiated after a diagnosis of DM. Under the metformin regimen, her issues resolved and normal levels for blood glucose were attained.

Discussion
HbA1c is commonly used for diagnosis and treatment because it is easily accessible, affordable, and does not require fasting or show daily variability. However, conditions such as chronic blood loss, hemoglobinopathies, hemolytic anemia, erythropoietin use, blood transfusion, splenomegaly, and pregnancy can result in falsely low HbA1c levels. In Conclusion, clinicians should be consider that HbA1c may be misleading under certain conditions and the necessity of additional diagnostic tests such as fructosamine, the 75g oral glucose tolerance test, and continuous glucose monitoring should be keep in mind for differential diagnosis.

Keywords
Hereditary spherocytosis; Diabetes mellitus; Glycated hemoglobin A1c

Abstract ID: 522

Effectiveness of sacubitril/valsartan for the treatment of congestive heart failure in patients with atrial fibrillation

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Congestive and acute heart failure(HF) is one of main problems in patients with arterial hypertension(AH) complicated with atrial fibrillation(AF). We estimated effectiveness of treatment with sacubitril/valsartan(S/V) in 45P with AH, AF and HF(NYHAII-III). 15men, 30women, aged56-85years. None had sever mitral regurgitation or aortic stenosis, GFR was≥45mL/min/1.73m2. We divided P into 2 groups. Both groups were treated similarly (amlodipine, metoprolol, rivaroxaban, torasemide), but Igroup -25P was given S/V instead of ACE+Spironolactone, used in II group -20P. S/V starting dose 24/26mg BID, doubled in2-4 weeks if HF signs were not decreased. Quitting of titration was done when potassium level began increase(3cases), hypotension(4) or cough(4cases) occurred. These P were left at starting dose. P were evaluated before and 3 months after treatment. No P from I group developed acute HF or needed hospitalization, while 3 P from II group were hospitalized. Quality of life(QL) was significantly improved in 20 P from I group (80%), in these P ejection fraction(EF), cardiac index was increased evidently while end-diastolic volume(EDV) was decreased and distance traveled in 6 minutes was increased. QL was improved in10P from II group(50%) with some tendency of improvement of EF, distance traveled in 6 minutes and decreasing of EDV. Effectivnes of treatment with S/V is obvious, but future studies should be done if inclusion of S/V in treatment of AH before onset of AF and HF will diminish development of these complications.

Keywords:
Sacubitril/valsartan; Heart failure; Atrial fibrilation

Abstract ID: 528

Relationship between health literacy levels and chronic complications of diabetes mellitus in diabetic patients

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[2)]University of Health Sciences, Hamidiye Vocational School of Health Services, İstanbul
[4)]Bezmialem Vakif University Faculty of Medicine, Department Of Biostatistics And Medical Informatics, İstanbul

Objectives:
Our study aims to examine the impact of health literacy levels on the development of chronic complications in diabetes.

Methods:
The study is a prospective,cross-sectional,single-center study. Participants included all patients aged 18 and over with type1 diabetes mellitus (DM) for at least 5 years and all patients with type2 DM over a 3-month period.We recorded demographic data and laboratory values.Patients completed the DN4 score assessment and the Turkish Health Literacy Survey (TSOY) and were evaluated for chronic complications of diabetes. Results were analyzed with appropriate statistical Methods.

Results:
The study included 207 patients(91 males,116 females)with a mean age of 55.32 years. The mean fasting blood glucose (FBG) was 149.29mg/dl,postprandial blood glucose (PPG) was 202mg/dl,and HbA1c was 8.097%.Of the patients,76.3% were married,and 46.4% had primary education.Over 60% had diabetes for at least 5 years,and 32.8% had chronic microvascular complications.Regarding treatment adherence;53.1% were moderately,35.7% well,and 11.1% poorly adherent.Social media usage was 55.1%, and 53.6% used the internet for selecting doctors.The mean DN4 score was 2.42, and the mean TSOY score was 29.83.A significant negative correlation was found between TSOY and DN4 scores(p=0.050;r=-0.133).Significant differences in TSOY scores were observed for education levels(p=0.007),social media use,internet use for doctor selection(p=0.015,p=0.024).

Conclusions:
No significant correlations were found between TSOY scores and chronic diabetes complications or laboratory values such as HbA1c,FBG,and PPG.This may be due to the small sample size,variability in diabetes duration,and the lower number of patients diagnosed for over 10 years(38.2%).

Keywords:
Health literacy; Diabetes mellitus; chronic complications of DM

Abstract ID: 529

Determinants of Falls in Patients Hospitalized in the Internal Medicine Wards

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Objective:
Falls are among the leading cause of injury death among older adults(1). In this study, we aimed to investigate clinical factors related with falls.

Methods: In this cross-sectional study, 246 female and 168 male patients over the age of 65 who were hospitalized in the internal medicine ward was included. Falls in the last 12 months were recorded. Frailty, nutrition, daily and instrumental living activity data were collected with geriatric evaluation tests A descriptive analysis was performed between patients who fell. Two-sided independent sample T-test and Mann-Whitney-U, Pearson Chi-square and Fisher tests were used. Logistic regression analyzes were performed to identify fall-related clinical factors.

Results:
In the study, 45.4% (n:188) of the patients experienced fall in the last 12 months. Malnutrition score, general life and instrumental life activities scores were found significantly lower in patients who experienced a fall compared to patients who did not($p<0.001$). Sarcopenia risk was significantly higher in patients who experienced falls($p<0.001$). In multivariate analyses; possible sarcopenia (OR:6.17,$p<0.01$), age (OR:1.05,$p<0.01$), urinary incontinence (OR:2.58,$p<0.01$) were found independently associated with falls.

Conclusion:
Age, urinary incontinence, and sarcopenia risk were observed independently associated risk factors for falls. Fall-related factors mentioned in the study are modifiable and therefore, routine screening for these clinical syndromes would be cost-effective. The weighted effects of interventions associated with falls on fall incidence should be investigated with further studies.

References:
1-MorelandBL, et.al.,Descriptive Analysis of Location of Older Adult Falls That Resulted in Emergency Department Visits in the United States,2015.AmJLifestylEMed.2020Aug7;15(6):590-597.doi:10.1177/1559827620942187.

Keywords:
Fall; frailty; sarcopenia; elderly

Abstract ID: 539

The Role of NT-proBNP as a Prognostic Marker in Intensive Neurorehabilitation

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Objectives

The Intensive Neurorehabilitation Unit (IRU) focuses on the complex pathophysiology of brain damage in patients with Severe Acquired Brain Injury (SABI). NT-proBNP is widely utilized in cardiology as a biomarker for assessing clinical complexity and prognostic stratification. This study aims to investigate the potential role of NT-proBNP as a prognostic marker in SABI.

Methods

We examined 124 patients with SABI admitted between 2022 and 2023 to the IRU of the Don Carlo Gnocchi Foundation in Florence. The study cohort was stratified into two groups using an NT-proBNP threshold of 600 pg/mL, as per the European College of Cardiology criteria. Age, sex, NT-proBNP level, CHADS-VASC score, etiology, comorbidities, rehabilitation outcome scales, and patient outcomes were compared between the two independent groups (BNP<600 vs BNP>=600) using the Mann-Whitney U test and chi-square test. Analyses included both clinical and biomarker data.

Results

Significant differences were observed between the two groups in initial and final rehabilitation assessment scales, as well as in post-discharge outcomes, indicating poorer outcomes in patients with higher NT-proBNP values, including higher rates of transfer to long-term care (30% vs 13.5%) and mortality (8% vs 1.4%). The analysis did not reveal statistically significant differences in NT-proBNP values among different SABI etiologies (p-value 0.611).

Conclusions

In this context, NT-proBNP > 600 pg/mL serves as a threshold identifying a higher-risk patient population. The incorporation of readily measurable biomarkers, even in rehabilitation settings, is critical in clinical practice, suggesting promising avenues for tailored adaptation of rehabilitation strategies and prognostic classification.

Keywords

NT-proBNP, NeuroRehabilitation, Severe Acquired Brain Injury, WCIM2024, Prognosis

Abstract ID: 551

Risk Factors for Falls Following Hospitalization: Insights from a Prospective Cohort of Older Patients Admitted from the Emergency Department

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Introduction:
Falls are highly prevalent, affecting 30% of individuals over 65 years of age in the community. In older patients admitted to the hospital, the risk of falls appears to increase after discharge, as well as the incidence of serious injuries resulting from them.

Methods:
A prospective cohort study with patients aged 65 and over admitted from the ED. Following hospitalization, conducted telephone interviews 30, 60, and 180 days after admission. Outcomes of interest were recorded, including the occurrence and number of falls, and any injuries resulting from them. Multivariate logistic regression models explored the associations between these variables and the primary outcome.

Results:
This study included 655 patients with an average age of 77±8 years, 54% male and 92.2% white. 65 patients (10%) experienced 111 falls, mainly in the first three months after admission. 84.3% of those who fell during follow-up reported injuries. Fractures occurred in 74.4%, with the femoral neck being the most affected region (37.5%). In a multivariate regression analysis, fall history and difficulty cutting toenails were independently associated with the main outcome, conferring a 131% and 99% higher risk of falls after discharge.

Conclusion:
Our investigation observed a heightened risk of falls and subsequent injuries among older patients post-hospitalization, shedding light on the critical window of vulnerability that exists in the initial months after discharge. This study not only reaffirms the importance of identifying those at elevated risk but also underscores the necessity for healthcare systems to implement targeted interventions aimed at mitigating these risks.

Keywords:
falls; elderly;

Abstract ID: 554

Pneumonia Severity Index Score as a predictor of community acquired pneumonia mortality

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Objectives
To characterize patients admitted for community acquired pneumonia (CAP) and compare actual in-hospital mortality rate to that predicted using Pneumonia Severity Index (PSI) score.

Methods
Retrospective study by consultation of medical records of patients admitted for CAP from January through February 2023, excluding aspiration, nosocomial and SAR-CoV-2 pneumonia. Analysis of clinical evolution, comorbidities and mortality.

Results
From a total of 107 patients, aged 81,6 ± 9,7 years, 53,3% were female. Most were independent (40,2%), 19,6% institutionalized. Mean length of hospitalization was 9,4 ± 9,2 days, the global mortality rate 17,8%. 2 patients scored II (1,9%), both independent and with one-year survival (100%). 6 patients scored III, 66,7% male, aged 75,0 ± 10,3, 16,7% institutionalized, one with lung disease. There was no in-hospital mortality in this group. 37,4% of patients scored IV, with a higher mean age (81,6 ± 9,8) and higher prevalence of comorbidities (10,0% active cancer, 32,5% heart failure, 50,0% lung disease, 17,5% diabetic), 12,5% institutionalized. Mortality was higher (7,5%). Most patients scored V (55,1%), 52,5% male, 25,4% institutionalized, aged 84,3 ± 9,56, with the highest morbidity rate (23,7% active cancer, 59,3% heart failure, 33,9% diabetic, 25,4% renal disease). Mortality rate was 27,1%.

Conclusions
This study found PSI score a good predictor of severity and mortality, as our sample had similar mortality rates as those predicted in literature.

Keywords
CAP; PSI Score; CAP mortality; Retrospective study

Abstract ID: 555

Baroreflex dysfunction in postural tachycardia syndrome and vasodepressor form of orthostatic intolerance

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Objective:
The baroreflex (BR) is a key homeostatic mechanism in the regulation of blood flow. Baroreflex sensitivity (BRS) and baroreflex efficiency index (BEI) are the most commonly used Methods to assess BR function. The aim of the study is to evaluate BRS and BEI parameters, heart rate (HR) and mean blood pressure (BP) in subjects with symptoms of postural tachycardia syndrome (POTS) and fall in BP in vasodepressor group (VADE) during the head-up tilt test (HUTT).

Methods:
62 subjects (43 females) aged 17-73 years with a history of syncope were divided according to the HUTT Results into 3 groups: POTS (n = 22), VADE (n = 20) and CONTROL (n = 20) without pathological findings.

Statistical analysis:
Fisher's exact test, Mann-Whitney U test, significance level 0.05. Significance values were corrected according to Bonferroni.

Results:
BRS and BEI values at 60° in CONTROL vs POTS (BRS 8.7 vs 6.1, p=0.013; BEI 70.5 vs 46.8, p=0.0001) and VADE (BRS 8.7 vs 6.4, p=0.031; BEI 70.7 vs 44.5, p=0.002) groups. SF values in the POTS vs CONTROL in supine (81.4/min vs 70.2/min; p = 0.018) and 60° (87.6/min. vs 118.3/min; p < 0.0001). Mean BP values at 60° in the VADE vs the CONTROL group (92.1 mmHg vs 99.2 mmHg; p = 0.034).

Conclusion:
Abnormal BR values during orthostasis were found in dysautonomia with and without a decrease in BP. The OI syndrome in VADE is explained by cerebral hypoperfusion during hypotension, in POTS it is probably a more complex mechanism beyond baroreflex.

Keywords:
baroreflex, dysautonomia, postural orthostatic tachycardia, vasodepressor, orthostatic intolerance, HUTT

Abstract ID: 558

CURB-65 score as a predictor of community acquired pneumonia mortality

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Objectives
Characterize patients admitted for community acquired pneumonia (CAP) and assess in-hospital mortality rate. Analyzed co-morbidities, presentation and clinical evolution in function of CURB-65 Score.

Methods
Retrospective study by consultation of records of patients admitted for CAP from January through February 2023, excluding aspiration, nosocomial and SAR-CoV-2 pneumonia. Analysis of clinical evolution, comorbidities and mortality.

Results
From a total of 107 patients, aged 81,6 ± 9,7 years, 53,3% were female, 40,2% independent and 19,6% institutionalized. Hospitalization duration of 9,4 ± 9,2 days, with a mortality of 17,8%. 9.3% had a score of 1, one institutionalized. Lung disease was the most common comorbidity (30.0%). There was no in-hospital mortality. 23.4% classified as score 2, 52.0% male, 24.0% institutionalized. There was an increase in comorbidities (active neoplasia, 20.0% and lung disease 36.0%) and mortality (12.0%). 42.1% classified as score 3, with an increase in the institutionalized (13,3%), comorbidities (cerebrovascular disease - 13.3%, heart failure - 51.1%, lung disease - 35.6% and diabetes - 40.0) and death (17.8%). 19.6% had a score 4: 38,1% institutionalized patients, high prevalence of comorbidities, and mortality of 23.8%. 5.6% classified as score 5, with highest mean age value (88.8 ± 9.7 years). Half died and lung disease was a frequent comorbidity (66.7%).

Conclusions
This study found that the CURB-65 score is a good predictor of mortality. The Results are similar to those reported in literature, except score 4 with a lower mortality than predicted (41.5% score vs. 28.6% study).

Keywords
Community acquired pneumonia; CURB-65 score; Mortality

Abstract ID: 564

Monocyte Distribution Width as a mortality indicator in septic patients

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Objectives:
Our aim was to investigate the role of MDW in patients hospitalized with sepsis as a prognostic / diagnostic biomarker and a mortality indicator.

Methods:
A comparative, prospective study was carried out with 68 septic patients from the General Hospital of New Ionia Konstantopouleio- Patision and Eginitio. The patients were divided into two groups: those with possible infection and worse prognosis with a qSOFA score ≥2 and those with a q SOFA score < 2. Several sepsis indicators were studied (PCT, IL-6, CRP) including the MDW of monocytes. Morning blood samples were drawn on the 1st, 3rd and 5th day. Statistical analyses were conducted using SPSS statistical software (version 26.0)

Results:
A Mono Mean-C value over 123.5 at day 3 and under 121 at day 5 and a Mono-SD-V above 29.3 at day 1, 28.4 at day 3 and above 29.2 at day 5 could predict a worse outcome (death) at septic patients with 90% and 80.6%, 77.8% and 72.7%, 64.7% and 88.2% and 100% and 83.9% sensitivity and specificity respectively.

Conclusion:
Our Results show that MDW, which is easily measured from a common CBC test, can be used for septic patients not only to detect sepsis but also to predict their final clinical outcome. Literature: L. Agnello, G. Bivona, M. Vidali, C. Scazzone, R.V. Giglio, G. Iacolino, A. Iacona, S. Mancuso, A.M. Ciaccio, B. Lo Sasso, M. Ciaccio, Monocyte distribution width (MDW) as a screening tool for sepsis in the Emergency Department, Clin. Chem. Lab Med. 58 (2020) 1951–1957.

Keywords:
sepsis; MDW; prognosis; death

Abstract ID: 574

Association of Nutritional Status in the Quality of Life Among Patients with Gastrointestinal Cancer Undergoing Treatment in Government Hospital

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INTRODUCTION.
Malnutrition is a strong predictor for mortality and morbidity through poor response to therapy, and quality of life among Gastro-intestinal (GI) cancer patients. Despite routine malnutrition screening in Tagum City government hospital with a cancer center, no prior studies have conducted on determining the association between nutritional status and quality of life among GI cancer patients.

OBJECTIVES.
This study generally aims to determine if nutritional status is associated with the quality of life among adult Filipino patients with GI cancer undergoing therapy in a tertiary government hospital.

METHODOLOGY.
A quantitative, observational, cross-sectional, survey analytical, and predictive type of research was done. WHOQOL-BREF questionnaire was utilized to determine the quality of life of cases. Logistic regression analysis was used for the association between the demographic, clinical, and nutritional profile of GI cancer patients.

RESULTS.
Among respondents 160 respondents, majority were male (61.9%), married (77.5%), and Roman Catholic (81.1%). Colon Adenocarcinoma (43.125%), Stage 4 (40.6%), and overweight (34.4%) were predominant. In terms of SGA grading, 38.1% had severe level. On quality of life scores varied across domains with notable dissatisfaction in financial sufficiency and frequent experiences of negative emotions. A significant association between age, cancer diagnosis, BMI status, and nutritional status relative to the quality of life among adult cancer patients was documented.

CONCLUSION.
Modifiable factors such as BMI status, and nutritional status, identified as key predictors of quality of life in GI cancer patients, public health interventions may play a critical role on these factors to improve patient survival and outcome.

KEYWORDS.
malignancy, gastrointestinal, SGA, clinical nutrition, quality of life