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Research Article **Published Date:- 2023-12-19**

Lecture: "First Aid to the Population in Case of Thermal Burns during Accidents, Catastrophes, Natural Disasters and Terrorist Attacks" of the Subject "Life Safety" for Humanitarian and Technical Universities

To prepare the population to provide first aid for thermal burns in emergency situations, algorithms for modern didactics of the educational topic “Thermal burns” are proposed. The following educational issues are highlighted: 1) Local exposure to high temperature. Burns. Kinds. Classification according to the depth of the lesion; 2) Rules for determining the area of burns; 3) Signs of thermal burns; 4) The concept of burn disease; 5) First (pre-hospital emergency) aid to burnt people; 6). Domestic burns from boiling water; 7) Features of burns in children; 8) Treatment of burns; 9) Prevention of thermal burns.

Research Article **Published Date:- 2023-11-28**

To Examine the Effects of Risk Factors Associated with Kidney Stones in Determining the Disease by Considering their Combinations

Aim: Kidney stone disease, which can affect people of all ages and whose incidence increases day by day, is becoming a public health problem due to treatment costs. This study aims to determine how factors related to kidney stones affect the diagnosis of the disease when taken together, rather than determining their relationship with the disease one by one.
Materials and methods: An open-access dataset containing kidney stone status and associated factors was used in the study. Mann Whitney U test and independent sample t-test were used in data analysis. Logistic regression was performed with the backward variable selection method to determine the factors associated with kidney stones. ROC analysis was used to determine the power of the variables that were significant as a result of logistic regression analysis, individually and together, in discriminating kidney stones.
Results: According to the results of logistic regression analysis, gravity, cond, and urea calc variables were found to be associated with kidney stones. With ROC analysis, it can be said that urea, calc, and gravity variables with AUC values above 0.60 can distinguish kidney stones. When the combinations of these variables are examined, the AUC values of the binary combinations are between 0.734 and 0.759, while the AUC value obtained for the triple combination is 0.831.
Conclusion: According to the results obtained from the article, it can be said that while the factors associated with the disease and used in the diagnosis have little effect on the diagnosis of the disease alone based on the AUC values obtained from the ROC analysis, it can be said that considering them together increases the accuracy in diagnosis. Therefore, considering the factors thought to be associated with the disease together may be more appropriate in diagnosis and may give more accurate results.

Research Article **Published Date:- 2023-08-14**

The Predictive Value of Diaphragm Thickness Fraction on Postoperative Pulmonary Complications after Digestive Cancer Curative Surgery

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Background: Postoperative Pulmonary Complications (PPCs) escalate mortality, hospitalization, and costs. This study aimed to predict PPCs after curative digestive cancer surgery using thickness fraction (TFdi) determined by ultrasonography.
Methods: A prospective study was conducted over a period of 9 months. Diaphragmatic ultrasound was performed pre-surgery and repeated postoperatively (within 24 hours of ICU admission, then day 3). Right and left hemidiaphragm thickness at end-expiration (TEE) and peak-inspiration (TPI) were measured using ultrasonography. The maximal diaphragm thickening fraction during inspiration (TFdi,max) was calculated: TFdi,max = (TPI–TEE)/TEE. Patients were classified into No-PPCs and PPCs groups.
Results: 159 patients participated, 55 (34.6%) developed PPCs. ICU stay was longer in PPCs patients with more deaths. TFdi,max decreased postoperatively and remained lower in PPCs patients [44.83% ± 11.07 vs. 31.54% ± 8.45; $p < 0.001$]. The receiver operating characteristic curve yielded an area under the curve of 0.83 [95% IC: 0.754 – 0.887]. TFdi,max < 37% had 72.7% sensitivity (95% IC: 59.0% – 83.8%) and 80.8% specificity (95% IC: 71.8% – 87.8%), Positive and negative Likelihood Ratios were 3.7 (95% IC: 2.4 – 5.7) and 0.3 (95% IC:0.2 – 0.5), respectively. In multiple logistic regression, preoperative risk factors for PPCs included TFdi,max < 37% [OR: 7.10; 95% CI: 1.71 – 18.60; $p < 0.001$] and supramesocolic surgery [OR: 9.94; 95% CI: 3.62 – 27.29; $p < 0.001$]. Epidural administration was protective [OR: 0.21; 95% CI: 0.052 – 0.87; $p = 0.031$].
Conclusion: A low preoperative TFdi,max identifies high-risk PPCs patients after digestive cancer surgery, aiding targeted preventive strategies like inspiratory muscle preoperative training.

Review Article **Published Date:- 2023-07-28**

Extracorporeal Membrane Oxygenation in Acute Aluminum Phosphide (AlP) Poisoning

Introduction: Aluminum Phosphide (AlP) poisoning is a life-threatening condition that commonly occurs in developing countries, often resulting in cardiac, respiratory, and metabolic complications, leading to multi-organ failure and mortality. Extracorporeal Membrane Oxygenation (ECMO) has been proposed as a potential therapy for severe AlP poisoning cases refractory to conventional management, though its use remains controversial.
Methodology: for this literature review, we conducted a comprehensive analysis of existing literature concerning the utilization of ECMO in patients with severe AlP poisoning. We meticulously examined available publications to explore the relationship between ECMO initiation and patient outcomes.
Discussion: The review reveals that early ECMO initiation within 6 hours of presentation is associated with better outcomes and higher survival rates in severe AlP poisoning cases. However, uncertainties persist regarding the optimal timing and duration of ECMO support, and potential complications, including bleeding, acute renal injury, and ventilator-associated pneumonia, need careful consideration.
Conclusion: Despite promising results in certain cases, the risks and benefits of ECMO in AlP poisoning require meticulous evaluation. Ethical considerations, encompassing resource allocation and implications for other patients, necessitate appropriate patient selection criteria.

Case Presentation **Published Date:- 2023-07-19**

Review Article on the All-On-Four Treatment Concept in Dental Implants

Edentulism, a condition characterized by the absence of teeth, significantly impacts facial aesthetics, eating efficiency, and speech fluency, thereby diminishing the quality of life. This paper aims to explore the All-On-Four Treatment Concept in Dental Implants, a promising solution to this issue. The All-On-Four approach, though complex, offers a pathway to restore smile and functionality by using four strategically positioned implants to hold a temporary prosthesis. This prosthesis is later replaced by a permanent version after approximately four months. This swift oral restoration technique significantly enhances a patient's self-confidence and overall life quality. The significance of this treatment lies in its potential to provide a less invasive and more affordable solution for severe jawbone atrophy, where the proximity of critical anatomical structures and compromised bone conditions may hinder other prosthetic solutions. The paper concludes with a discussion on the potential of the All-On-Four treatment to revolutionize dental implant procedures, offering a beacon of hope for individuals suffering from edentulism.
