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**CORRELATION BETWEEN THE MEASUREMENTS OF SERUM AND ARTERIAL BLOOD GAS (ABG) ELECTROLYTES IN PATIENTS ADMITTED TO THE INTENSIVE CARE UNIT AT KING ABDUL-AZIZ MEDICAL CITY, RIYADH, SAUDI ARABIA**

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The values of electrolytes are measured by both the arterial blood gas analyzer and the auto-analyzers, in arterial and venous blood respectively. Literature reports suggest controversies in comparisons between the results. Concerns have been increased about the precision of the instrument due to differences in results of laboratories, in addition to the time consumed. **Materials and Methods:** This is a prospective observational study of serum and ABG electrolytes on samples from 53 (34 Male and 19 Female) patients admitted to ICU at King Abdul-Aziz Medical City (KAMC). The analysis was done in Central Laboratory. The results from patients' file were uploaded to SPSS from excel sheets and statistical analysis was done. **Results and Conclusion:** The age of patients varied between 14 years and 87 years in both the sexes. The sex wise frequency was 64.151% (males) and 35.85% (females). The pathological reports showed the highest incidence of post-Motor Vehicle Accidents (MVA) followed by Community Acquired Pneumonia (CAP) and Respiratory Failure (RF). Comorbidities were infrequent. However; the highest incidence was related to Diabetes (DM) + Hypertension (HTN), followed by HTN alone and subsequently DM alone. SPSS analysis showed a correlation between serum electrolytes and ABG electrolytes was significant at 0.01 levels. Correlation between serum and arterial electrolytes was significant, however; related to the time it was weakly negative. We conclude that critical decisions can be made by trusting the values obtained through both ABG and Serum levels of the electrolytes.

### Biography

Omar Alsultan has been graduated from Dammam university. Now he is working as intern in King Abdulaziz Medical City Hospital.

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