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## Relationship between sepsis, systemic inflammatory response syndrome and body mass index among adult trauma patients at University Hospital in Cairo

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**Background:** Sepsis is a major cause of mortality and morbidity in trauma patients. Body mass index was reported as a predictor of injury pattern and complications among critically ill injured patients.

**Aim:** The main aim of the study is to investigate the relationship between body mass index and the development of sepsis, systemic inflammatory response syndrome among adult trauma patients.

**Research design:** The design used is a descriptive correlational study.

**Research questions:** What is the relationship between the development of sepsis, systemic inflammatory response syndrome and body mass index among adult trauma patients?

**Sample & Setting:** Purposive samples of 52 adult trauma patients with revised trauma score 10 to 12 were selected from the Emergency Hospital - Cairo University.

**Tools:** Various tools were used such as Socio demographic and medical data tool, Systemic inflammatory response syndrome assessment tool, Revised Trauma Score tool, and Sequential organ failure assessment tool.

**Results:** No significant statistical relationship was found between body mass index and occurrence of systemic inflammatory response syndrome ( $r=2.89$  and  $P=0.23$ ). However, sequential organ failure assessment scores were affected significantly by body mass index and found mean of initial and last sequential organ failure assessment score for underweight, normal and obese where  $t=7.24$  at  $p=0.000$ ,  $t=16.49$  at  $p=0.000$  and  $t=9.80$  at  $p=0.000$  respectively.

**Conclusion:** Underweight trauma patients showed significantly higher rate of developing sepsis.

**Recommendations:** Carrying out further studies in order to assess the other risk factors influencing trauma outcome and incidence of its complications. Establishment of standardized guidelines for managing underweight traumatized patients with sepsis is necessary.

### Biography

Mohamed Hendawy Moussa Said Ahmed had completed his Master's degree in Critical Care and Emergency Nursing with excellence degree from Cairo University – Faculty of Nursing. He is an Assistant Lecturer of critical care and emergency nursing. He published one paper in *Egyptian Nursing Journal* 2015, volume 11.

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