A492 - Role of neutrophil cd64 (ncd64) and monocytic hla-dr (mhladr) as newer biomarkers of sepsis management in adult patients admitted in icu

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Introduction:
The aim of study is to measure and correlate the expression of nCD64, mHLA-DR, PCT(Procalcitonin) and qCRP (Quantitative C-reactive protein) to predict development of sepsis and its outcome.

Methods:
In this tertiary centre based longitudinal cohort study, a total 110 patients were enrolled in whom sepsis was suspected on the basis of clinical diagnosis and supported by lab investigations. They were divided into two groups sepsis/case and non-sepsis/control. Disease severity in ICU was assessed by Sequential organ failure score (SOFA). Blood samples for routine lab investigations and biomarkers were taken at the time of admission in ICU before administration of first dose of antibiotics at time D0/D1. Assessment of biomarkers was done simultaneously with TLC at D0/D1, D3 and during follow up of patients till their final outcome.

Results:
There was no significant (p>0.05) mean change in PCT, qCRP, SOFA, nCD64, mHLA-DR from Day 1 to Day 3, however, mean change was higher among cases than controls. On comparison of mHLA-DR between the groups across time periods, mHLA-DR was significantly (p=0.0001) lower among septic patients than controls at both Day 1 and Day 3. All biomarker correctly predicted cases among different percentage of patients with different sensitivity and specificity. There was no significant (p>0.05) association of mortality with the study biomarkers except for PCT.

Conclusion:
In our study, diagnostic value of PCT in differentiating sepsis from non-sepsis was similar to nCD64 among all biomarkers studied. No advantage of nCD64 or mHLA-DR was found over PCT in diagnosis and correlation with disease progression and mortality.