Title:

Critically ill systemic lupus erythematosus patients referred to the intensive care unit of Fayoum University Hospital: frequency، complications and outcome

Abstract:

Aim of the work: To determine the frequency of critical complications of systemic lupus erythematosus (SLE) admitted to the intensive care unit (ICU), study the risk factors and outcome.*Patients and methods:* Fifty SLE patients consequently admitted to the ICU were prospectively studied.The SLE Disease Activity Index (SLEDAI) was assessed.*Results:* The mean age of the patients was 29.3 ± 8.7 years; they were 42 females (84%) and diseaseduration of 4.9 ± 3.4 years. The overall mortality was 24% (12 patients) and tended to be higher inmales (37.5% vs 21.5%). The commonest causes of death were infection ($p < 0.001$) and pulmonarycomplications ($p = 0.04$) in all non-survivors. Metabolic acidosis was significantly increased in deceasedpatients (75%) compared to survivors (23.7%) ($p = 0.003$). Cardiac and CNS complications weresignificantly increased in non-survivors ($p = 0.04$ and $p = 0.03$ respectively). Acute renal failure wassignificantly more frequent in mortality case 9/12 compared to survivors (28.9%) ($p = 0.007$) as wellas abnormal arterial blood gases (100% vs 57.9%; $p = 0.005$). The SLEDAI was significantly increasedin non-survivors (41.8 ± 8.2) compared to survivors (21.4 ± 5.1) ($p = 0.001$). There was a significantcorrelation between mortality and SLEDAI ($r = 0.58$, $p = 0.001$) and inversely with the pH ($r = 0.38$), ($p = 0.01$). On multiple regression, only increasing SLEDAI was a significant predictor of mortality (b0.26،OR 1.29, 95%CI 1.12–1.49; $p < 0.0001$). Mortality prediction by SLEDAI showed at a cut-off of 28.5; sensitivity84% and specificity 90% ($p = 0.001$). *Conclusion:* SLE patients admitted to the ICU are at an increased risk of mortality especially those with highdisease activity. The main causes of mortality were infection, respiratory, cardiac and neurologicalcomplications.