IMMUNOLOGICAL STATUS IN ACUTE STROKE

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Introduction

Inflammatory markers are increased in cerebrovascular diseases. Previous infections are reported and an increased susceptibility to infections is observed during hospitalization.
The aim of our study was to assess inflammatory markers, blood cells and proteinogram in cerebrovascular patients.

Materials and Methods

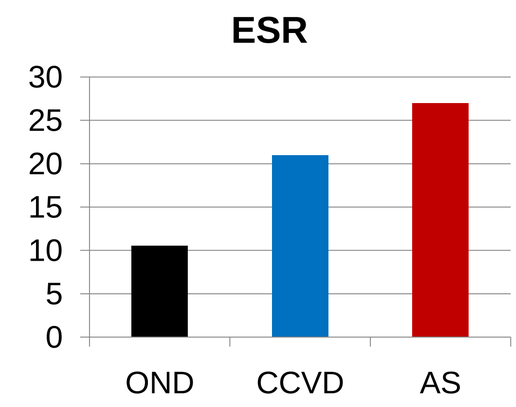
So far we recruited 333 acute strokes (AS), 167 chronic cerebrovascular diseases (CCVD) and 76 other neuropsychiatric diseases (OND) patients. Blood withdrawals were performed within 24 hours.

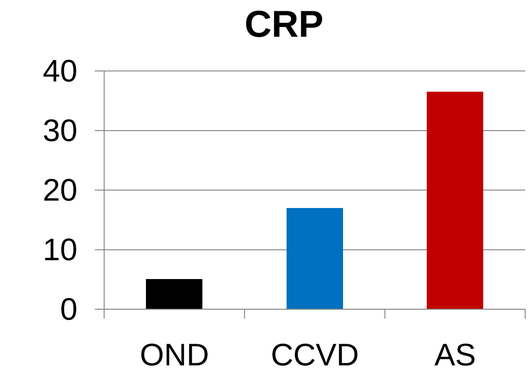
Results

We detect increased erythrosedimentation rate (mm) and C Reactive Protein (mg/l) in CCVD (20,96 sd 19,27, 16,92 sd 31,92, p 0,0001) and AS (26,98 sd 22,2, 36,5 sd 133,79, p 0,01) compared to OND (10,54 sd 11,3, 5,05 sd 10,14). The percentage of gamma globulins was higher in AS (16,14 sd 3,93, p 0,001) and CCVD (15,95 sd 4,09, p 0,008), compared to OND (14,61 sd 2,64). A tendency to leukocytosis was present in AS (12,07 sd 3,69 x 10^3, p 0,08) compared to OND (6,65 sd 0,35 x 10^3), mainly constituted by neutrophils.

Conclusions

Humoral immunity represents the first line of defense against microorganisms. Cellular immunity is a second line response, reinforcing brief and long term immunocompetence. Both may promote or hinder immunoregulatory mechanisms. Inflammatory markers and gammaglobulins reflect an activation of humoral immunity in AS. Likely, because of exhaustion/suppression by cortisol, it fails in stimulating cellular immunity. The relative lower number of lymphocytes in AS compared to OND may stand for a state of cellular immunodepression with further increased risk of infections and worst outcomes, although it may be a protective factor against autoimmunity.





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