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P2501 Role of inherited thrombophilic profile on survival of septic patients

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Background: The existence of various coagulation and/or fibrinolytic system disorders (such as inherited thrombophilia) in patients with sepsis, could possibly modify host response to infection as well as patient outcome. The aim of the study is to investigate inherited thrombophilic profile in patients with sepsis.

Materials/methods: Eighty-three patients with sepsis admitted at the Department of Internal Medicine of the University General Hospital of Patras, Greece were included. Thrombophilic profile [factor V G1691A (Leiden), factor V H1299R (R2), prothrombin G20210A, MTHFR C677T, MTHFR A1298C, factor XIII V34L, β-Fibrinogen -455 G-A, PAI-1 4G/5G] was evaluated using the CVD StripAssay based on DNA isolation, polymerase chain reaction (PCR) and reverse-hybridization. Data were collected from patients' chart reviews.

Results: Seventy patients (84.3%) from the 83 enrolled had at least one thrombophilic mutation. The most common mutations were heterozygous for β-Fibrinogen -455 G-A (43.4%), heterozygous for factor XIII V34L (32.5%), PAI-1 4G/4G (26.5%), homozygous MTHFR C677T (22.9%), heterozygous factor V H1299R (R2) (13.3%) and homozygous MTHFR A1298C (12.0%). Only 34 infections (41.0%) had microbiological confirmation of the pathogen; 29 were caused by gram-negative bacteria and five gram-positive. The most common types of infections were urinary tract infection (36 patients, 43.4%), pneumonia (26 patients, 31.3%) and abdominal infections (13 patients, 15.7%) while the remaining eight infections were skin and soft tissue infections and endocarditis. Fifteen patients (18.1%) developed bacteremia. Thirty-day mortality was 14.5%. Multivariate analysis revealed that mortality was independently associated with SAPS II score upon admission, pneumonia and fibrinogen upon admission. Nine patients (10.8%) developed septic shock. Coagulation disorders upon admission, bacteraemia and PAI-1 genotype 5G/5G were independently associated with development of septic shock.

Conclusions: The presence of thrombophilic mutations in patients with sepsis may affect their clinical response and future studies are needed in order to elucidate the role of isolated thrombophilic mutations in patients with sepsis or septic shock.