

Results: In 46 patients undergoing peritoneal dialysis, 27 (55.1%) of them were male with 32.22 + 15.81 years of mean age. Twenty-seven (55.1%) patients had documented peritonitis. Peritonitis occurred once in 14 (26.9%) patients, twice in 7 (13.4%) patients, thrice in 3 (5.7%) cases, four times in 2 (3.8%) cases and seven times in 1 (1.9%) of all the patients. Bacterial peritonitis was observed in 46 (88.4%), chemical peritonitis in 3 (5.7%), fungal peritonitis in 2 (3.84%), and tuberculosis peritonitis in 1 (1.92%) of all the patients. Staphylococcal peritonitis was the most common form of bacterial peritonitis. There was a correlation between hypoalbuminemia and peritonitis that was not statistically significant ($P=0.373$). Correlation between peritonitis and anemia that was statistically significant was observed ($P=0.000$). There was not any correlation between diabetes mellitus and peritonitis ($P=0.299$).

Conclusion: Peritonitis is one of the most common complications of peritoneal dialysis. More than 50% of our patients revealed this complication after peritoneal dialysis. Staphylococcal peritonitis was the most common bacterial infections. Further studies are required to determine the anti-microbial resistance of the organisms responsible for peritonitis in these circumstances

<http://dx.doi.org/10.1016/j.ijid.2012.05.815>

Type: Poster Presentation

Final Abstract Number: 45.024

Session: Bacterial Infections

Date: Friday, June 15, 2012

Time: 12:45-14:15

Room: Poster & Exhibition Area

Bacterial meningitis in the intensive care unit: a ten-year cohort study

D. Fernandes^{1,*}, C. Conceição², A. Monteiro², J. Goncalves Pereira², P. Povo²

¹ Hospital de Egas Moniz, CHLO, Lisbon, Portugal

² Hospital de São Francisco Xavier, CHLO, Lisbon, Portugal

Background: Bacterial meningitis constitutes a medical emergency with a significant burden of morbidity and mortality. Patients admitted to the intensive care unit (ICU) usually present a severe disease with multiple organ failure and a higher mortality rate. Nevertheless the impact of meningitis in intensive care is largely unknown.

Methods: We conducted a retrospective descriptive study at a polyvalent adult ICU from a tertiary university hospital over a ten-year period (2002–2011). Patients admitted with bacterial meningitis were segregated for further analysis.

Results: We selected 31 patients (1.15% of the ICU admitted patients) with a median age of 54 years (range 23–79) and a median APACHE II score of 23 (range 6–44). Seizures were noted in 22.6% of patients and fever (temperature > 38 °C) in 77.4%. An altered mental status was common (median Glasgow Coma Score (GCS) 8, 80.6% with a GCS < 12). Underlying central nervous system (CNS) disease was identified by CT scan in 35.5% of patients. Most patients required ventilatory support (77.4%). Microbiological documentation was obtained in 51.6% of patients, 68.8% of whom with *Streptococcus pneumoniae*. Clinical and laboratory criteria were used in the remaining patients according with CDC definitions. The most frequently used empiric antibiotic therapy was a third generation cephalosporin (83.9%). Corticotherapy was

Conclusion: In this cohort of bacterial meningitis an altered mental status was the most common finding. Although a relatively low ICU mortality rate was noted, the in-hospital mortality remained high. An underlying disease of the CNS was a common finding.

<http://dx.doi.org/10.1016/j.ijid.2012.05.816>

Type: Poster Presentation

Final Abstract Number: 45.025

Session: Bacterial Infections

Date: Friday, June 15, 2012

Time: 12:45-14:15

Room: Poster & Exhibition Area

Borrelia burgdorferi sensu lato as activators of the complement system in in vitro model

M. Tokarska-Rodak¹, H. Fota-Markowska^{2,*}, T. Chmielewski³, M. Kozioł-Montewka¹, K. Tomaszewicz², S. Tylewska-Wierzbanowska³

¹ Medical University, Lublin, Poland

² Medical University, Lublin, Poland

³ National Institute of Hygiene, Warsaw, Poland

Background: The aim of this study was to examine the degree of activation of the complement component C5a by determination of its level in whole blood stimulated with *Borrelia* in in vitro model and to verify the assumption that the intensity of the response of the complement system as a result of the first contact with *Borrelia* is different from the response after the second contact.

Methods: The study group included 5 patients diagnosed with Lyme disease and hospitalized in the Department of Infectious Diseases, Medical University of Lublin, and 10 healthy individuals. The serum levels of C5a and the C5a levels after stimulation of the whole blood samples with LPS from *E. coli* serotype O26: B6(Sigma-Aldrich), *B. burgdorferi* s.s. B31(ATCC 35210), *B. garinii*, 20 047(ATCC 51383), *B. afzelii*, VS461(ATCC 51567) were determined.

Results: Among healthy individuals, the serum levels of C5a after stimulation with LPS, *B. afzelii*, *B. burgdorferi* and *B. garinii* were 19.2 ng/ml, 20.2 ng/ml, 35.1 ng/ml ($p < 0.05$), and 57.6 ng/ml ($p < 0.05$), respectively. In patients with Lyme disease the levels of C5a after stimulation were significantly ($p < 0.05$) higher than the serum level of C5a before stimulation (22.4 ng/ml) and accounted 50.4 ng/ml for LPS, 54.5 ng/ml for *B. afzelii*, 59.1 ng/ml for *B. burgdorferi*, and 59.7 ng/ml for *B. garinii*. In patients with Lyme disease statistically significant ($p < 0.05$) increase in C5a in response to stimulation of *B. afzelii* and *B. burgdorferi* was observed in comparison with healthy controls.

Conclusion: 1. The results of the study suggest that the primary activation of the complement system is dependent on the genospecies of *Borrelia* and is most intense in case of contact with *B. garinii*.

2. In patients with Lyme disease, the activation of the complement system expressed as the level of C5a in case of experimental contact with *Borrelia* was not dependent on the *Borrelia* genospecies but it was still high.

<http://dx.doi.org/10.1016/j.ijid.2012.05.817>