



AB019. PS01.01. Diagnostic and prognostic implications of fibrinogen, neutrophil to lymphocyte ratio and platelet to lymphocyte ratio in thymic epithelial tumors

Stefan Janik, Thomas Raunegger, Philipp Hacker, Bahil Ghanim, Elisa Einwallner, Jose R. Matilla, Walter Klepetko, Jan Ankersmit, Bernhard Moser

Division of Thoracic Surgery, Department of Surgery, Medical University Vienna, Vienna, Austria

Abstract: A total of 122 patients with thymic epithelial tumors (TET) were recruited for this cohort study in order to study the utility of serum fibrinogen concentrations and the use of neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) as prognostic indicators. There were 75.4% thymomas and 24.6% thymic carcinomas. Seventy percent presented in Masaoka-Koga stages I and II. Fibrinogen serum concentrations were significantly higher in patients with TETs (390.2 ± 11.4 mg/dL) compared to healthy volunteers (314.8 ± 10.7 mg/dL; $P < 0.001$). We also detected significantly elevated NLR and PLR in patients with TETs (NLR 3.4 ± 0.3

and PLR 179.8 ± 12.1) compared to controls (NLR 1.8 ± 0.1 and PLR 133.4 ± 7.1 ; $P < 0.001$ and $P = 0.010$); respectively. After differentiating tumors into those with early tumor stage (stage I-II) and those with advanced tumor stage (stage III-IV), we found significantly higher Fibrinogen levels, NLR and PLR in patients with advanced tumor stages compared to those with early tumor stages ($P = 0.002$, $P = 0.040$ and $P = 0.008$; respectively). High Fibrinogen serum concentration was associated with significantly worse cause-specific survival (CSS) and freedom-from recurrence (FFR) in patients with TETs ($P = 0.001$ and $P = 0.043$). Patients with high NLR showed significantly worse FFR ($P = 0.008$), while those with high PLR showed significantly worse CSS ($P = 0.032$). Patients who developed tumor recurrence had significantly higher NLR ($P = 0.024$) and PLR ($P = 0.042$) at follow-up compared to patients without recurrence.

Keywords: Fibrinogen; platelet to lymphocyte ratio; prognosis; thymic epithelial tumors (TET)

doi: 10.21037/med.2017.AB019

Cite this abstract as: Janik S, Raunegger T, Hacker P, Ghanim B, Einwallner E, Matilla JR, Klepetko W, Ankersmit J, Moser B. Diagnostic and prognostic implications of fibrinogen, neutrophil to lymphocyte ratio and platelet to lymphocyte ratio in thymic epithelial tumors. *Mediastinum* 2017;1:AB019. doi: 10.21037/med.2017.AB019