

Interest in the PNN/lymphocyte ratio: new marker of inflammation during vascular thrombosis in Behcet's disease?

Hajar Khibri, Meriem Bourkia, Naima Moatassim, Wafaa Ammouri, Mouna Maamar, Hicham Harmouche, Mohamed Adnaoui, Redouane Abouqal, Zoubida Tazi Mezalek

Introduction :

Behcet's disease is an inflammatory vasculitis characterized by stimulation of neutrophils and T lymphocytes and inflammatory sites. The PNN/Lymphocyte ratio is considered an inflammation marker of the systemic inflammatory response. We evaluated the diagnostic performance of the PNN/Lymphocytes ratio during the inflammation accompanying the vascular thrombosis of Behcet's disease through specificity and sensitivity tests.

Methods:

This study is a monocentric retrospective descriptive and analytical study spanning from 2003 to 2022 including the files of patients followed for Behcet's disease associated with vascular thrombosis.

Discussion :

- We collected 136 cases.
- The average age of our patients was 40.6 years +/- 11.4 .
- Sex ratio was : 5.18 (114 M/22 F).
- Deep venous thrombosis was present in 108 cases (79%) and arterial thrombosis in 28 cases (21%).
- The median CRP was 36 mg/l (10-76) and the erythrocyte sedimentation rate was 22 (6-30).
- The median PNN was estimated at 7320 ele/mm³ (4825-8811), and the median of lymphocytes was 1895 ele/mm³ (1100-2560). The median PNN/LYM ratio was 4.51 (2.39 - 6.31).
- The statistical analysis did not identify significant statistical links between this ratio of PNN/LYM and sex; CRP and ESR as well as the different clinical presentations of thrombosis (venous – arterial), (superficial – deep), (proximal – distal).
- The sensitivity of the PNN/lymphocyte ratio was estimated at 62.2% and its specificity was estimated at 66.7%. Its positive predictive value was estimated at 92.2% and its negative predictive value was estimated at 22.2%. the positive likelihood ratio of this marker was low and estimated at 1.86. the negative likelihood ratio was low at 0.56, suggesting that the diagnostic gain when the test is positive or negative is low. The ratio of air under the curve was low at 0.5.

Conclusion :

These results imply that the PNN/Lymphocyte ratio is a useless test in the diagnosis of inflammation during vascular thrombosis in patients followed for Behcet's disease.