Results: The average age of all patients was 61.4±11.77 years (p=0.007) with predominant female gender in all groups, 81.3% (p=0.139). Anti-EBNA1 IgG antibodies were present in 95%, 92%, and 98% (p=0.474), anti-EBV-CA IgG antibodies in 95%, 80%, and 100% (p<0.001), anti-EBV-CA IgM antibodies in 25%, 40%, and 4% (p=0.008), anti-EBV-EA IgG antibodies in 14.1%, 20%, and 4% (p=0.084), and anti-EBV-EA IgM antibodies in 20%, 16%, and 6% (p=0.094) in RAa, RAb, and OA, respectively. There was statistically significant difference in the titers of anti-EBV-CA IgM and IgG antibodies between all three groups (p=0.001 and p=0.007, respectively). According to serology findings active EBV infection was present in 47%, 40%, and 12% in RAa, RAb, and OA, respectively (p=0.001). On the other hand, corresponding to PCR results only, active EBV infection was detected in 6.3%, 0%, and 20% in RAa, RAb, and OA, respectively (p=0.010). There was statistically significant difference in way of detecting active EBV infection based on serology or PCR only (p=0.001). Further analysis showed that over 80% of all RA patients (81% in RAa and 96% in RAb), whilst 48% of OA had elevated values of sedimentation (SE) (p<0.001). C-reactive protein (CRP) was raised in 93% RAa (79% in RAs and 100% in RAb) and in 26.5% of OA patients (p=0.001). The majority of all RA patients had elevated rheumatoid factor (RF) and ACPA (84% and 92%) with no difference between RAa and RAb patients (p=0.361 and p=0.203, respectively). Among patients with active EBV infection (based on both serology and PCR results), there was a significantly higher level of antitriiodollid IgG (p=0.012) and antitriiodollid IgM (p=0.009) autoantibodies in RAa patients, while the level of SSA autoantibodies (p=0.024) was higher in RAb patients. On the other side, there was no significant difference in the level of any autoantibody or factors of acute inflammation (SE and CRP) in patients with past EBV infection.

Conclusion: This study demonstrated linkage between an active EBV infection and elevation of some autoantibodies in RA pathogenesis. As EBV DNA was not found only in a group of RA patients under immunosuppressive therapy, it is suggested that EBV clearing from blood could be direct consequence of methotrexate use. Collectively, these findings indicate that determining of EBV activity must be based on both serology and molecular methods in order not to oversee EBV reactivation during follow-up of these patients.

REFERENCES

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