P0900

Paper Poster Session IV

Viral infection and disease

Latent cytomegalovirus and *Toxoplasma* infections in patients with rheumatic inflammatory diseases treated with biological agents: preliminary results

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Objectives. Several lines of evidences suggest that long-term treatment with biological agents has an effect on susceptibility to opportunistic infections including those related to virus, bacteria, parasites and fungi, in patients with chronic inflammatory diseases.

Methods. We retrospectively analyzed PBMC specimens from 50 patients of which 36 (72%) females, with a mean age of 53.2±2.2 years (range 29-78 years), enrolled at the Unit of Rheumatology of our University, from February 2009 to March 2014 for rheumatic inflammatory diseases [*i.e.,* rheumatoid arthritis (ReA), psoriatic arthritis (PA), ankylosing spondylitis (AS)], diagnosed on the basis of the local clinical expert's opinion and receiving anti-TNF-α drugs (Infliximab, Adalimumab, Rituximab, Etanercept, Abatacept) from at least 5 years. Most patients had a serology for tuberculosis (Quantiferon TB-Gold), B and C hepatitis and HIV but only few patients had a serology for Cytomegalovirus (CMV) and Toxoplasma gondii (Tg). After informed consent had been obtained from each patient and approval from the Institutional Local Ethic Committee, samples were tested at Section of Infectious Diseases by a qualitative in-house nested-PCR (n-PCR) for CMV, Tg, Pneumocystis jiroveci, according previous described methods. Primer pairs targeting B1 gene or Mag1 gene encoding for the 65 kDa cyst-surface antigen, were employed for T. gondii PCR.

Results. A total of seven (14%) out 50 patients consisting of 3 males and 4 females, mean age 55.1 years (range 44-71 years) (median duration of TNF-a antagonist treatment at onset of infection was 45.5 weeks (range, 16-73 weeks), gave PCR positive results. Of these, under infliximab treatment since 5 years, 4 had ReA, 3 AS. Six (12%) and 1 (2%) of them did detect CMV DNA or T. gondii DNA (Mag1), respectively and had a positive serology for both CMV and T. gondii. All patients, asymptomatic for CMV or T. gondii infection except for periodic fever, had suffered from other severe concomitant comorbidities and had previously treated with other immunosuppressive drugs including steroids. No specimen was positive for Pneumocystis jiroveci.

Discussion. Treatment with biological drugs may be associated with increased susceptibility to viral and parasitic infections. Although descriptions of CMV reactivation in course of anti-TNFα are rare, physicians should pay attention to the possibility of CMV infection during treatment with infliximab regimens especially in presence of unexplained fever. Infliximab might facilitate reactivation of some latent viruses such as CMV as it can block TNF-a, interfere with the recruitment of lymphocytes, and decrease interferon-Y levels, which are involved in control of the antiviral state. The reactivation of T. gondii infection following infliximab administration that also interfere with host defense against toxoplasmosis, has been revealed by MAG1 DNA detection. This is a specific marker of bradyzoyte stage which could have predictive value in toxoplasmic reactivation.