CORRESPONDENCE

Authors' response

We would like to thank Dr Parisinos for his letter and interest in our study on the role of Th17 cells in sarcoidosis.[1] His recent report on the development of sarcoidosis in two patients affected by Crohn's disease and treated with natalizumab[2] further highlights the indubitable link existing between the immune pathogenesis of the two disorders. In fact, sarcoidosis and Crohn's disease are both characterised by an abnormal cell-mediated immune response to still unknown factor(s) that ultimately leads to granuloma formation and tissue damage. Furthermore, in both diseases Th1 and Th17 cytokines play a crucial role in the development of immune reactions taking place in the involved organs. Interestingly, the presence of IL-17-producing T cells marks out other immune-mediated and chronic inflammatory diseases that have been described to be associated with sarcoidosis, such as systemic lupus erythematosus, autoimmune chronic hepatitis, multiple sclerosis, coeliac disease and ulcerative colitis.

In the cases described by Parisinos *et al*, the use of natalizumab might represent an intriguing therapeutic option for its direct function (ie, the inhibition of the α4-mediated adhesion of leucocytes to their counter-receptors) and even for its effects on T cells, particularly on regulatory T cells (FoxP3 +Tregs), that are expanded by the treatment with natalizumab.[3] This issue raises a number of questions that should be addressed. First, considering that sarcoidosis is characterised by an abnormal expression of Tregs that, from a functional point of view, are unable to totally suppress TNFα and IFNγ secretion and granuloma formation,[4] it remains to be established whether the induction of a strong Treg response may really favour the recovery of the disease. Furthermore, keeping in mind that cytokines that are released during both Crohn's and sarcoid inflammatory processes, such as IL-6, TGF-β and IL-1β, are able to convert naive T cells and/or Tregs into Th17 lymphocytes via STAT3 expression,[5] the effect of natalizumab on Th17 and Treg plasticity has to be tested in both diseases.

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