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Title:	An Approach to Control Relapse of Inflammatory Lesions after Discontinuation of Primary Therapy
Authors:	Sehrawat, S. (/jspui/browse?type=author&value=Sehrawat%2C+S.)
Keywords:	Inflammatory Immunopathological Proinflammatory cytokine
Issue Date:	2014
Publisher:	Public Library of Science
Citation:	PLoS ONE,9(5)
Abstract:	Long-term treatment with the fungal metabolite drug FTY720 (Fingolimod) was shown to be highly effective in controlling viral immunopathological lesions. However, in this report we show that the anti-inflammatory effect of FTY720 in herpes simplex virus-1 (HSV-1) induced ocular inflammation is lost upon the discontinuation of treatment and lesions rapidly recurred. The lesions that developed after FTY720 treatment withdrawal involved mainly Th17 cells rather than Th1 cells explained in part by differential expression of surface CD103, an integrin that permits migration of effector cells to inflammatory sites. The expression of IL-6, a proinflammatory cytokine involved in the generation of Th17 cells, was found to be increased in FTY treated mice as compared to controls and this effect could be abrogated upon administration of neutralizing antibody to IL-6. Furthermore, IL-17RKO mice failed to show the recurrence of stromal keratitis (SK) lesions upon FTY720 withdrawal. These results indicate that approaches such as neutralization of proinflammatory cytokines might be considered along with FTY720 treatment if interruption of drug therapy becomes necessary.
Description:	Only IISERM authors are available in the record.
URI:	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0098051">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0098051</a> ( <a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0098051">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0098051</a> ) <a href="http://hdl.handle.net/123456789/2964">http://hdl.handle.net/123456789/2964</a> ( <a href="http://hdl.handle.net/123456789/2964">http://hdl.handle.net/123456789/2964</a> )
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