

P-20 **Peritoneal Fluid from Endometriosis Patients Switches
Differentiation of Monocytes from Dendritic Cells
to Macrophages**

Seung Chul Kim, Kyu Sup Lee

Department of Obstetrics and Gynecology, School of Medicine, Pusan National University

Objectives: This study has examined the effects of peritoneal fluid obtained from patients with endometriosis (ePF) on the phenotypic characteristics of macrophages and dendritic cells (DCs) derived from monocytes.

Methods: Monocytes were obtained from healthy young volunteers and cultured with ePF (n = 12) or a control PF (cPF) (n = 5) in the presence or absence of macrophage-colony stimulating factor (M-CSF) or IL-4 plus granulocyte macrophage-colony stimulating factor (GM-CSF). The ePF was demonstrated to increase expression levels of CD14 and CD64 on isolated monocytes in the presence or absence of M-CSF. Compared with cPF, addition of 10% ePF to GM-CSF plus IL-4-treated monocytes significantly down-regulated CD1a expression and up-regulated CD64 expression, but did not enhance expression levels of class II MHC. ePF had no effect, however, on tumor necrosis factor- α induced maturation of DC. Levels of IL-6, IL-10 and M-CSF production were higher in ePF-treated than cPF-treated monocytes for both cell culture conditions with GM-CSF plus IL-4 and M-CSF.

Results: 1. ePF enhanced the differentiation of monocytes into macrophages. 2. ePF enhanced expression of CD14 and CD64 on monocyte-derived macrophages. 3. ePF inhibited the development of DCs from monocytes. 4. ePF had no effect on TNF- α induced maturation of iMDDCs. 5. IL-6, IL-10 and M-CSF production by ePF on DC and macrophage differentiation of monocytes. 6. IL-6 neutralizing Ab blocked the effect of ePF on DC differentiation of monocytes into macrophages.

Conclusion: ePF favorably induces monocyte differentiation toward macrophages rather than DCs, and that this effect is mediated by IL-6. A reciprocal mode of cell differentiation between macrophages and DCs in response to ePF may be related to the pathogenesis of endometriosis.