S25-2 Enteric bacteria and ulcerative colitis

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The ulcerative colitis (UC) is intractable inflammatory bowel disease with uncertain etiology. Recently, number of patients suffering from UC increased remarkably. Elucidation of pathogenetic mechanism and development of the therapy are ultimately required. The limitation of the lesion to the colon suggested the participation of enteric bacteria in UC development. On the mouse model of dextran sulfate sodium (DSS)-induced UC, we have investigated the involvement of enteric bacteria in the pathogenetic mechanism. The UC was induced by administering 4% DSS mixed with drinking water. There, we found that lincomycin (LCM) given for 6 days prior to the start of DSS treatment suppressed the UC development strongly, while antibiotics having no activity to anaerobe did not show such suppressive effect. There was, however, observed again the development of UC in the LCM-treated mouse by infusing bacteria into their colon through the anus, which was prepared from normal mouse fecal specimen. The bacteria harvested from anaerobic culture for the fecal specimen also had the potency to cause the UC but not those obtained from aerobic culture. Number of proliferating cells in the colon crypt was remarkably decreased by the DSS treatment. The administration of LCM prevented the decrease of proliferating cells considerably and the UC development thereafter. In the present paper, we will describe that the anaerobiotic enteric bacteria are involved in the development of DSS-UC in mice.