Conclusion These data suggest a possible role of CXCR3-binding chemokines and their receptor in the aetiopathogenetic recruitment of lymphocytes in PBC and a new mechanism of action of UDCA.

Competing interests None.
Keywords CXCR3, primary biliary cirrhosis.

BSG LIVER SECTION AND BASL SYMPOSIUM: 'Hepatic Encephalopathy'

OC-075 CXCR3 AXIS IN PATIENTS WITH PRIMARY BILIARY CIRRHOSIS: A NOVEL MECHANISM OF ACTION OF URSODEOXYCHOLIC ACID

doi:10.1136/gut.2011.239301.75

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Introduction *Background and Aim*: The CXC chemokines, MIG, IP-10 and I-TAC, are known to attract CXCR3+ T lymphocytes. CXCR3 gene generates two distinct mRNAs, CXCR3A and CXCR3B, by alternative splicing. In Primary Biliary Cirrhosis (PBC), intrahepatic bile ductules are destroyed by T lymphocytes. We investigated therefore the CXC chemokine axis in this disease.

Methods Mig, IP-10 and I-TAC mRNAs expression was studied by RT-PCR in 20 liver biopsies from PBC patients (Ludwig stage II/III) and compared with normal biopsies (NCs = 20). Serum chemokines were assessed by ELISA in 44 PBC patients (Ludwig stage II/III) and 20 normals. Measurements were repeated six months after Ursodeoxycholate (UDCA) treatment. CXCR3A and CXCR3B mRNAs expression were examined in immunomagnetically sorted CD3+ peripheral blood lymphocytes (PBL) by RT-PCR, pre and post treatment. Flow cytometry evaluated the expression of CXCR3+ in PBL of NC and patients.

Results A marked mRNA expression of MIG and IP10, but not of I-TAC, was found in PBC patients. Serum MIG (72.86 pg/ml) and IP-10 (660.1 pg/ml) were significantly increased in PBC, compared to NC (33.47 pg/ml and 37.58 pg/ml, respectively). There was a significant reduction of these proteins after treatment with UDCA (40.95 pg/ml for MIG and 289.2 pg/ml for IP-10). I-TAC was not different between groups. CXCR3A mRNA expression was found in PBLs from PBC patients and NCs. CXCR3B mRNA was expressed in 4/20 (19%) NCs and 20/20 PBC patients. Flow cytometry revealed a significantly lower CXCR3 expression in NCs (13.5%) than in PBC (37.2%) which was reduced (28.1%, $p < 0.01$) after UDCA administration.