Letter to the Editor

Autologous haematopoietic stem cell transplantation in a patient with refractory Crohn’s disease

Dear Sir,

Recent series reported successful autologous bone marrow-derived mesenchymal stromal cells transplantation in 10 patients with fistulising Crohn’s disease (CD).1 We wish to provide a relative experience on the long-term successful autologous haematopoietic stem cell transplantation (HSCT) in a patient with refractory CD who has completed a 31-month follow up. A 39-year-old male with moderate–severe CD, first diagnosed in 1994 involving the jejunum, ileum and colon was treated for eight years with conventional treatment schedules including corticosteroids mainly in disease relapses, mesalazine and one immunosuppressor (azathioprine). Because of a severe relapse in 2002, the patient was successfully treated by surgery (right colectomy/sigmoidectomy). He remains disease free for two years while on treatment with mesalazine and azathioprine. In 2004 the patient experienced a new relapse, was referred to our clinic and was treated by a biological agent (i.e., infliximab 5 mg/kg) and continued azathioprine 100 mg/day for 2 years. In 2006, he experienced a severe relapse and, despite escalation of infliximab dosage to 10 mg/kg, he retained a high Crohn’s Disease Activity Index (CDAI) score ~420, and thus infliximab was discontinued. In January 2007, adalimumab was introduced and because of its lack of response and a severe side effect, i.e. demyelinating disease of the optical nerve leading to a decrease in visual acuity in both eyes, adalimumab was promptly discontinued. A few months later the patient experienced a new severe relapse requiring partial colectomy and a jeuno-colonic fistula resection. The following year he received immunosuppressive therapy with methotrexate with no response. In June 2008 the patient had ~22–24 liquid stools daily, and a body mass index 15 with disability in performing simple everyday tasks and remarkable weakness. His CDAI score was 452 with severe anaemia (Hb = 7 g/dL) and hypoalbuminaemia (1.1 mg/dL) and was considered eligible for HSCT. The patient was hospitalised in the Department of Haematology (George Papanicolaou Hospital of Thessaloniki, Greece) and, after written informed consent, was given a high-dose immunosuppressive regimen followed by haemopoietic stem cell rescue (transplantation; HSCT) according to the Institutional Ethics Committee approved protocol. In brief, cyclophosphamide at 200 mg/kg was administered over four days along with a total of 10 mg of rabbit antithymocyte globulin followed by infusion of 4.6 × 10^6/kg autologous hemopoietic stem cells previously harvested after mobilization with cyclophosphamide at 4 g/m² plus granulocyte colony stimulator factor at 5 μg/kg/day. The procedure was well tolerated with no complications. Over a follow-up period of 31 months the patient initially achieved and has maintained clinical, endoscopic and histological remission without further treatment and with an excellent quality of life; his body weight increased by ~40 kg and he returned to his former occupation. Apart from successful autologous bone marrow-derived mesenchymal stromal cells transplantation, HSCT without CD34+ cell selection has recently been proposed as an innovative form of treatment in 4 cases of refractory CD, showing good safety and promising efficacy.2 However, clinical relapses may occur at the post-HSCT period. Our case report is based on a different methodology compared with the aforementioned case series with relatively short term follow-up (median follow-up 16.5; range 11–20 months)2; our patient has remained in clinical remission and free of relapse without any treatment for 31 months. Nevertheless, comparative studies are needed to elucidate whether the aforementioned HSCT method is a treatment approach superior to conventional therapies in terms of safety and long-term CD remission.

References


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