CROHN'S DISEASE CELL TRANSPLANT STEMS IBD

High-dose cyclophosphamide and autologous stem cell transplantation (SCT) can induce remission in patients with refractory Crohn's disease, according to researchers in Germany.

Studies of patients with leukaemia and concomitant Crohn's disease who underwent SCT indicated that the Crohn's disease might improve. "We thought this procedure could be a therapeutic option for patients with refractory Crohn's disease," says lead investigator Wolfgang Kreisel.

The researchers recruited 12 patients with refractory Crohn's disease and adopted a treatment protocol previously developed for systemic sclerosis. Treatment with immunosuppressive cyclophosphamide was followed by granulocyte-colony stimulating factor to induce proliferation and mobilization of CD34⁺ stem cells into peripheral blood. The stem cells were then harvested and cryopreserved before immunoablative conditioning therapy was initiated, which consisted of 4 days of high-dose cyclophosphamide. The stem cells were reinfused 2 days later. "The idea was that this approach would reset the immune system," explains Kreisel.

Patients were hospitalized and given prophylactic antimicrobial agents during conditioning and until they achieved haematological recovery. Follow-up assessments were carried out at 1, 3, 6 and 12 months, and then at least annually for up to 10.3 years.

Stem-cell harvest was successful in 11 patients, resulting in improvement of their condition in seven participants. Autologous SCT was performed in nine patients and was well tolerated. Clinical and endoscopic remission was achieved in five patients and although relapses occurred, they were easily managed by immunosuppressants that had previously been ineffective. "This therapy induced complete remission in most patients, which might last for years," comments Kreisel. "In about half of the patients we saw clinical and endoscopic remission—a predictor of favourable outcome in Crohn's disease therapy."

Kreisel and colleagues are planning a multicentre, randomized trial comparing autologous SCT for Crohn's disease with a less aggressive conditioning regimen.

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