that MARS treatment of patients with EAD after OLT is safe.

On the strength of these preliminary findings, a multicenter, randomized, clinical trial has been initiated to determine whether MARS treatment improves mortality and retransplantation rate, or enhances graft regeneration, in patients with EAD.

Original article Hetz H *et al.* (2006) Molecular adsorbent recirculating system in patients with early allograft dysfunction after liver transplantation: a pilot study. *Liver Transpl* **12:** 1357–1364

Apheresis is a promising adjunct to conventional therapy for IBD

Previous studies have suggested that leukocyte apheresis, which selectively removes about 65% of activated granulocytes and 55% of activated monocytes from peripheral blood, can improve IBD symptoms in patients who cannot tolerate conventional treatments. Muratov *et al*. have now confirmed that apheresis is well tolerated, and could be used as an adjunct to conventional IBD treatment.

Their unblinded, uncontrolled study enrolled patients (age range 27–51 years) with either Crohn's disease ($n = 7$) or ulcerative colitis ($n = 3$), from a single Swedish institute; all patients had mild-to-moderate, chronically active disease. Patients' pre-existing anti-inflammatory regimens were maintained throughout the study, except for prednisolone, which was tapered in patients who responded to apheresis. All patients received five, 1 h, weekly apheresis sessions, and were followed up after 7 weeks and 12 months. Nine patients responded to apheresis, of whom three had a sustained response and five achieved clinical remission by the 12 month follow-up. No severe adverse effects were observed.

Patients with Crohn's disease underwent colonoscopy with biopsies at baseline and after 7 weeks to assess the effects of apheresis on expression of proinflammatory cytokines in mucosal tissue. Clinical improvement was associated with reduced leukocyte infiltration and interferon-γ production, which predicted a sustained response to apheresis. The authors speculate that apheresis could have a previously unrecognized immunomodulatory effect on interferon-γ-producing lymphocytes, which might not be solely attributable to mechanical removal of certain leukocytes.

Original article Muratov V *et al.* (2006) Down-regulation of interferon-γ parallels clinical response to selective leukocyte apheresis in patients with inflammatory bowel disease: a 12-month follow-up study. *Int J Colorectal Dis* **21:** 493–504

Low-dose warfarin improves survival in patients with inoperable pancreatic carcinoma

Pancreatic carcinoma is associated with thromboembolism, caused by increased levels of coagulation factors and decreased thrombolysis. Warfarin prolongs survival and improves the response to treatment in a subset of patients with small-cell carcinoma of the lung, which shows similar tumor-related activation of coagulation; Nakchbandi and colleagues, therefore, investigated whether warfarin might have similar beneficial effects in patients with pancreatic carcinoma.

Nakchbandi and colleagues retrospectively analyzed data from 180 patients with inoperable pancreatic carcinoma who had undergone one of seven different chemotherapy regimens; of these, 111 patients had also received 1.25 mg warfarin daily. The mean duration of disease from the time of initial diagnosis to presentation was 7.7 ± 0.8 months (median 4.8 months). Treatment with warfarin resulted in significantly prolonged survival of patients treated with all chemotherapy regimens—the median survival from presentation was 5.0 months with warfarin versus 2.3 months without warfarin ($P < 0.0001$). The chemotherapy regimen associated with the longest survival included regional treatment with gemcitabine and mitomycin-C as well as systemic gemcitabine; the addition of warfarin to this regimen improved survival further (7.1 months with warfarin versus 3.6 months without warfarin; $P = 0.05$). Warfarin administration did not result in an increase in bleeding complications.

The authors conclude that warfarin improves survival irrespective of the chemotherapy used, and suggest that these data provide a rationale for a definitive study on the use of warfarin combined with regional and systemic chemotherapy in patients with pancreatic carcinoma.

Original article Nakchbandi W *et al.* (2006) Effects of low-dose warfarin and regional chemotherapy on survival in patients with pancreatic carcinoma. *Scand J Gastroenterol* **41:** 1095–1104