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Basiliximab

A Viewpoint by Björn Nashan

Medizinische Hochschule Hannover,
Hannover, Germany

Basiliximab is a new, chimaeric monoclonal antibody, directed against the α subunit of the interleukin-2 receptor (CD25) on lymphocytes. The interleukin-2/CD25 system has a pivotal role in the expansion of lymphocytes upon allorecognition. Thus, the major therapeutic use for basiliximab is as immunoprophylaxis following organ transplantation. Clinical studies in renal transplant patients have shown the complementary immunosuppressive effect of basiliximab in combination with cyclosporin microemulsion and steroids given for baseline immunosuppression. In these studies, a significant reduction in the incidence of acute rejection as well as in the need for additional immunosuppressive therapy was observed. The significantly lower doses of corticosteroids in these patients throughout the first 4 weeks were particularly promising.

The adverse effect profile of basiliximab is comparable to that of placebo. It is noteworthy that neither specific reactions, such as cytokine release syndrome, nor allergic reactions have been observed in any of the treated patients to date. In addition, no increase in infections, particularly viral infections, was observed in patients receiving the antibody. So for the first time in immunosuppression, an effective drug without demonstrable adverse effects is available.

According to chimaerisation, the xenogeneic response against this antibody is negligible and its pharmacokinetic properties are tremendously improved in comparison with the murine monoclonal antibody. Basiliximab 20mg, administered on the day of transplantation and again 4 days later, provides measurable concentrations sufficient to coat CD25 for 5 to 6 weeks.

Currently, clinical trials in liver transplant patients, as well as with different drug combinations, are in progress to assess further the potential of basiliximab. ▲