

octapharma

For the safe and optimal use of human proteins

Satellite Symposium
Friday,
September 5, 2008
12.15 h – 13.45 h

Hörsaal 2

Lunch boxes provided

- 12:00 h Chairman`s introduction
Prof. S. Meuer, Heidelberg
- 12:20 h Immunthrombocytopenia as the first model for biological treatment with IVIG in chronic inflammatory and autoimmune diseases
Prof. P. Imbach, Basel
- 12:45 h Intravenous Immunoglobulins: mechanisms of action and options for improvement of therapeutic efficacy
Prof. Nimmerjahn, Erlangen
- 13:10 h Basic research in human immunology creates new therapeutic options
Prof. S. Meuer, Heidelberg
- 13:30 h Concluding remarks and discussion

Immune modulation with intravenous immunoglobulin: the established and the advances

In 1980 a boy with long-term, severe ITP bleeding and secondary hypogammaglobulinemia due to immunosuppressive treatment showed dramatic platelet increase after substitution of antibody concentrate from healthy blood donors, and so did 12 consecutive normogammaglobulinemic children with ITP treated with intravenous immunoglobulin G (IVIg). This observation was confirmed by a controlled multicenter study. This was the first targeted immunomodulation with IVIg, a concept that since then has been adopted also in other immune-mediated disorders. In ITP the maintenance of self tolerance and the effective immune response seems to be altered in the presence of an inflammatory or autoimmune process; circulating antibodies and/or immune complexes adsorb to the platelet specifically via the Fab region of the antibody to e.g. glycoprotein-epitopes on platelets or via the Fc part of the IgG molecules resulting in early opsonophagocytosis and destruction by macrophages. As in ITP, also in other immune-mediated disorders where IVIg is indicated, multiple possibilities of disturbances on the different levels of the immune cascade are documented and ITP may be considered as a model indication for the potential of immune modulation with IVIg. Today the mechanisms that lead to the establishment of humoral tolerance and the effector functions responsible for mediating the pro- and anti-inflammatory activities of immunoglobulin G antibodies in vivo are even better understood. Novel techniques facilitating the investigation of cellular immunology in the human system, particularly regarding immunoregulation and the molecular aspects of immune recognition by T-lymphocytes and their activation, have created a better understanding of the mode of action of IVIg and the possibility of clinical immune intervention. It has also been shown that Fc-receptors act as central regulators of antibody activity in vivo. Novel anti-inflammatory activity associated with immunoglobulin G glycovariants has been described and may create new opportunities for IVIg based treatment in the future.