HLA-B27 acute anterior uveitis, clinical presentation and treatment

HLA-B27 is statistically associated with about 50% of cases with acute anterior uveitis (AAU), the most common form of uveitis and defines a clinically distinct subset of AAU. Certain clinical features of HLA-B27-positive AAU distinguish it from B27-negative disease. B27-positive AAU is of acute onset, relapsing, unilateral alternating, non-granulomatous with cellular and proteinaceous exsudation including fibrin and hypopyon. B27-positive AAU is associated with systemic ankylosing spondylitis and more severe and sight-threatening ocular complications. This includes posterior synchiae, cataract, increased intraocular pressure, cystoid macular edema, vitritis and papillitis.

The onset of disease is usually in the second to fourth decade of life, males are more frequently affected than females. The number of relapses and the time between attacks varies greatly. Duration of remissions between few months and decades have been observed.

The value of typing for HLA-B27 is under discussion. Regarding the specific clinical characteristics of this entity, especially if a history of relapses is available, it seems that HLA-typing is of no additional use, unless the result might help to guide the proper diagnosis of unspecified lower back pain. In the western world 8-10% of the general population is HLA-B27 positive. This population may also have any other type of uveitis, but if the clinical characteristics described above are not fulfilled, their uveitis should not be diagnosed as being HLA-B27 associated.

Treatment options for most patients with AAU include topical and regional steroids and cycloplegics. The most powerful topical steroids are prednisolone acetate and dexamethasone. Topical treatment must be given as early as possible, and patients with relapses should be advised to start using eye drops when they experience the early and typical prodromal signs. Prodromal symptoms like pain or redness may even occur before the characteristic cells and haze appear in the aqueous humor. Frequent relapses or complications of anterior uveitis may require immunosuppressive medication. Sulfasalazine reduces frequency of ocular as well as articular relapses, while methotrexate is only effective for ocular involvement. Systemic TNF-blocking agents especially the monoclonal antibodies infliximab and adalimumab are therapeutically effective. The value of chronic topical or systemic treatment with non-steroidal anti-inflammatory drugs for the prevention of relapses is unclear.

The treatment of secondary glaucoma includes topical β-blockers, carboanhydrase-inhibitors and α-mimetics. Prostaglandin analogues are associated with high risk of inducing cystoid macular edema and should be avoided. In most patients glaucoma is secondary to inflammation and not to corticosteroids. Therefore the value of „soft steroids“ like rimexolone or loteprednol etabonate has been over estimated.