In search of intraocular antibody production to parvo B19 virus and adenovirus in intermediate uveitis

EDITOR,—In the majority of patients with intermediate uveitis the aetiology of ocular inflammation is unknown. Some cases are associated with systemic diseases, such as sarcoidosis or multiple sclerosis. There is also evidence that viral infections are involved in the pathogenesis of intermediate uveitis. Infections with parvoviruses occur worldwide with 40-60% of adults showing evidence of previous infection. Parvovirus is associated with erythema infectiosum (fifth disease) and a wide variety of other syndromes such as polyarthritis, vasculitis and neurological syndromes, but an infection may also occur without any symptoms. An indication for parvo B19 virus involvement in ocular inflammation is a case report of a patient with bilateral uveitis during an acute phase of parvo B19 infection. Adenoviruses may also occur frequently in the community. Of the respiratory viruses, adenoviruses cause the widest variety of illnesses, but in half of the cases the disease is asymptomatic. Ocular syndromes, caused by adenovirus infections are epidemic keratoconjunctivitis and acute haemorrhagic conjunctivitis, sometimes accompanied by a mild anterior uveitis.

To investigate whether parvo B19 virus and adenovirus are involved in the pathogenesis of intermediate uveitis sera of patients with intermediate uveitis, and no evidence of associated diseases, were tested for the presence of specific IgG antibodies to parvo B19 virus (18 sera) and adenovirus (10 sera). The ocular disease existed for at least 1 year. Subsequently, the ocular fluids of patients with circulatory diseases were tested for the presence of specific antibodies. The ocular fluid samples had been collected for other diagnostic reasons. The antiviral antibodies were detected with specific enzyme linked immunosorbent assays (Parvovirus IgG ELISA, Phadeb, Paris, Germany; Adenovirus ELISA: Virotech, Germany).

Six of the 18 sera (33%) were positive for IgG antibodies to parvovirus and nine of the 10 patients (90%) were positive for antibodies to adenovirus indicating previous contact with these viruses. Viscous fluid (n=2) and aqueous humour (n=4) of the six patients positive for parvovirus in serum and viscous fluid samples of two patients negative for parvovirus in serum were tested for anti-parvoviral antibodies. Three of the serum positive patients (50%) and two of the three parvovirus antibodies in their ocular fluids, whereas the two controls were negative. To detect whether these patients had intraocular antibody production to parvovirus or whether the presence of these antibodies is due to a shared permeation of the blood-ocular barrier, the specific anti-body titre were compared with the total IgG in ocular fluid and serum by calculation of the Goldmann-Witmer coefficient. A Goldmann-Witmer coefficient >3 is considered to be positive. The patients reached this level for parvovirus. Six aqueous humour samples of patients positive for adenovirus in serum were tested for antiadenovirus antibodies in aqueous humour but none of the ocular samples were positive.

The majority of the patients we investigated had serological evidence of a previous adenovirus infection and one third of the patients of a previous parvovirus infection, but none of the patients tested had signs of an intraocular infection with either of these viruses. Therefore, there was no evidence in the chronic stage of intermediate uveitis that parvo B19 virus or adenovirus infections were commonly involved in the pathogenesis of this inflammatory eye disease.

The authors

J H DE BOER
R J W DE KEIZER
A K JILSTRA
The Netherlands Ophthalmic Research Institute, PO Box 124/1, 1100 AC Amsterdam, The Netherlands.

BOOK REVIEWS


This book deals in a very specialised manner with the cosmetic aspects of this topic. The illustrations and artwork make an immediate impact; they are of interest as one of the main authors is the artist involved, and they reflect a very keen approach to both exact and surface anatomy. The reproduction of these illustrations is excellent and consistent with the very high standard expected and set by this particular publisher. The two main authors enlist only a further three specialists for assistance, and the whole style and concept established by them is maintained, making the reading of the accompanying text very straightforward—unlike many multi-author texts.

The book is quite distinctively designed for a colourfully oriented surgical market and practice. It deals in turn quite specifically with the varying racial types that surgeons with a mixed-practice would encounter and examines nuances of skin, muscle, and bone.

The surgical disciplines which will benefit from this particular anatomical text are that of maxillofacial, orthotonygological, and orthoplastic plastic surgery, and as an adjunct to surgical text in these disciplines, it is of excellent value. The relative anatomy is not particularly detailed in this book, but seems to reflect a need. As a review of cadaveric dissections in these disciplines, the text is excellent, and deals well with the superficial anatomy in great detail.

This textbook, I fear, is not one for the beginner, but is an excellent addition to surgical texts, particularly for those surgeons dealing with a large cosmetic or reconstructive practice. In this regard there are very few books that deal with this form of comparative anatomy, and at this excellent level of illustration. These alone make the book good value for money. I recommend, however, that this book should not be used alone!

EWAN G KEMP


This book provides an imaging anatomical atlas of the orbit and those parts of the brain relevant to ophthalmology using magnetic resonance (MR) and computed tomography (CT) images.

The first chapter, which takes up one quarter of the whole book, deals with the basics of MR and CT imaging. The description of MR, like those which seem to appear in all imaging texts mentioning MR, struggles between coverage of the subject and brevity and would, I think, confuse the uninstructed and does not contribute to the subject matter of the book. The emphasis on MR compared with CT in this chapter (37 compared with 5½ pages) is reflected in the rest of the book.

The other chapters consist of approximately 140 annotated MR and CT images of normal anatomy accompanied by a short explanatory text. The image quality is good and the annotation clear. The index is comprehensive and easy to use. A short self-assessment examination completes the book.

This book may be of occasional use to the radiologist in training though current imaging atlases cover most of the areas studied. The ophthalmologist may find the book helpful in providing an illustration of current imaging possibilities.

OLIVE ROBB


This book, by Paul Ajamian, a professor of ophthalmology who works in Atlanta, Georgia, is primarily aimed at American ophthalmologists. It is intended to inform them about the current status of cataract surgery and to equip them to monitor patients up to the time they require surgery and to follow their postoperative period after the cataract has been removed. It achieves this aim in a wholly satisfactory manner.

He begins with an overview of cataract which contains some very clear descriptions and illustrations of the different types of cataract an ophthalmologist is likely to come across. This section is very comprehensive.

He then works through the preoperative evaluation in which he sets out the features within the case history that would indicate that the time for cataract surgery had arrived. Again this section is characterised by his comprehensive style. He not only includes very occasionally used devices, but also takes pains to explain that such devices are only rarely used and a reader of this section has no difficulty understanding what the common and routine examinations are, and what examinations may be peculiar only to a few surgeons or a few research centres. This clarity is a feature of the book throughout and there is therefore little