Case 12.1 Conjunctival infection

A 22-year-old man was involved in a motorcycle accident and suffered a severe closed head injury that produced diffuse cerebral injury and a fracture of the left temporal bone. He was admitted to a neurosurgical intensive care unit and required artificial ventilation for 17 days. A tracheostomy was performed to assist with ventilation. He gradually became independent of the ventilator, and regained consciousness and was eventually transferred to the neurosurgical ward. He was noted to have a left facial nerve palsy (caused by the fracture) and to be restless and confused, but no other focal neurological defect was identified. The facial nerve palsy impaired his ability to blink on the left. While unconscious both his eyes had been taped shut to prevent injury and infection. Attempts were made to tape the left eye shut on the ward, but he persistently removed the dressing. Three days after his transfer to the ward the left eye was noted to be red with crusted swollen lids. The cornea was hazy and he was photophobic. A clinical diagnosis was made of *infective conjunctivitis and keratitis* secondary to exposure. Swabs taken from the eye grew Pseudomonas aeruginosa. He was treated vigorously with topical antibiotics and the eyelids were temporarily sutured together. Despite this, he suffered considerable corneal scarring with loss of visual acuity in the left eye.

Case 12.2 Allergic conjunctivitis

A 23-year-old student vet presented with a history of intermittent redness and itching of the eyes, associated with some swelling of the eyelids. These episodes occurred only when he was involved in small-animal work, particularly when handling rabbits. Each episode lasted for several hours and several recent episodes had been associated with sneezing and running of the nose, but no wheeze. He had also noticed that large, itchy weals developed on his skin if he was scratched by a rabbit. He had a history of mild hay fever. Skin-prick testing showed a marked positive response to rabbit proteins and moderate levels of rabbit-specific IgE were found in his blood. A diagnosis of *allergic conjunctivitis and rhinitis* due to rabbit hypersensitivity was made. He was able to limit the problem by taking a non-sedative antihistamine on the days when he was likely to be exposed to rabbits.

Case 12.3 Stevens–Johnson syndrome

A 17-year-old girl was admitted as an emergency with a 3-day history of severe ulceration of her lips, ‘sticky’ eyes, sore feet, diffuse itching and an erythematous rash. Following a major epileptic fit 8 days previously, she had been put on carbamazepine. On admission, she was pyrexial with extensive haemorrhagic ulceration of the mouth, which became too sore even to take fluids. A *clinical diagnosis of Stevens–Johnson syndrome* was made and she was treated immediately with systemic corticosteroids (45 mg daily). She improved symptomatically, but when an ophthalmologist was asked to see her 3 weeks later she was found to have severe conjunctival ulceration and punctate keratitis. The conjunctival ulcerations required ‘rodding’ to prevent adhesion of the raw surfaces and she was also treated with topical antibiotics to prevent infection. Unfortunately, she then developed cicatricial entropion (inward-turning eyelids), with resulting corneal trauma. The lid deformity was surgically corrected and further corneal ulceration prevented by an extended-wear contact lens. Another late complication of this syndrome is obliteration of the conjunctival sac, leading to ‘dry eye’, corneal scarring and even blindness.

Essentials of Clinical Immunology, Sixth Edition. Helen Chapel, Mansel Haeney, Siraj Misbah, and Neil Snowden.

Case 12.4 Behçet's disease

A 21-year-old man from a Turkish family presented with a painful left eye for 2 days associated with blurred vision. He also gave a 3-month history of relapsing and remitting ulceration of his mouth and scrotum. Three days later the right eye also became involved.

Ophthalmological examination showed a florid anterior uveitis of such severity that neutrophils in the anterior chamber settled out to form a fluid level visible to the naked eye: a hypopon (Fig. 12.3). There was no posterior uveitis at this stage. A clinical diagnosis of *Behçet's disease* was made. He was treated with oral and topical (ocular and mucosal) corticosteroids and a low dose of colchicine. The eye changes and ulceration gradually settled.

However, 3 months later he developed painless deterioration of vision in the left eye and was found to have a severe retinal vasculitis. This was treated aggressively with oral corticosteroids and azathioprine with little response. Despite treatment with ciclosporin, mycophenolate mofetil and infliximab over the following year, he also developed vasculitis in the right retina. He then presented with a left hemiparesis due to cerebral vasculitis. His treatment was switched to pulsed intravenous cyclophosphamide. This gradually controlled the ocular inflammation and he has developed no further neurological symptoms. His vision remains severely impaired.

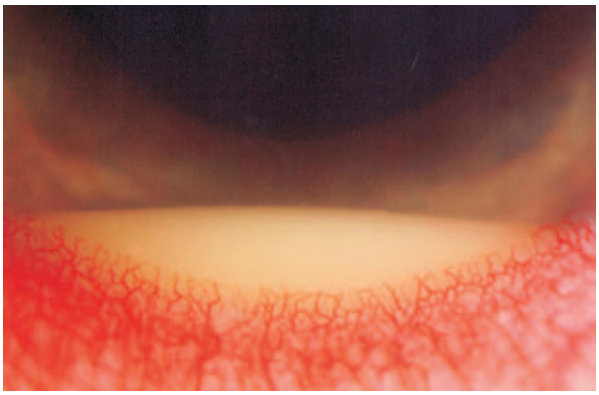

Fig. 12.3 Hypopyon due to severe anterior chamber inflammation in Behçet's disease. Courtesy of Mr N. P. Jones.

Case 12.5 Lens-induced uveitis

A 73-year-old woman had a left-sided extracapsular cataract extraction and lens implant, although the cortical lens material was never completely removed. She made an uneventful post-operative recovery but 2 weeks later developed a severe uveitis in the same eye. Two years after the operation, she still has to use topical steroids to suppress the uveitis. The presumed diagnosis is *lens-induced uveitis*.