regime was continued for 3 months. After 9 months, his left visual acuity was recorded as 6/24.

Comment

In two recent systematic reviews of endogenous endophthalmitis, two-thirds of patients had predisposing factors or underlying illnesses, including diabetes mellitus, valvular heart disease, recent abdominal surgery, intravenous drug abuse, renal failure, malignancy, asplenia, indwelling catheters, burns, and immunocompromised states.^{1,3} Diabetes mellitus is one of the commonest concurrent medical conditions, being present in 40% of cases.^{1,2}

In the West, the commonest source of endogenous endophthalmitis was found to be endocarditis.^{2,4} Other common reported sources include pulmonary and urinary tract infections, skin and wound sepsis, meningitis, septic arthritis, and intra-abdominal sepsis.¹⁻⁴ Hepatobiliary tract infection is a particularly common source in the East Asian population.¹

Endogenous endophthalmitis associated with iliopsoas abscess has not, to the best of our knowledge, been described previously. Iliopsoas abscess, in the absence of pancreatitis, is uncommon.⁶ Patients usually present with fever, hip or abdominal pain and WBC, ESR and serum urea nitrogen level elevation, while blood cultures are positive in 71%.⁷ This potentially life-threatening condition is usually associated with gastrointestinal, renal, or spinal disease.⁶ CT is the imaging study of choice.^{6,7} In many cases, the source of this infection is not identifiable.⁶⁻⁸ The predominant bacterial isolate from patients with primary iliopsoas abscesses is *S. aureus* (75–90% of cases).^{6,7}

Reported positive vitreous cultures from cases of endogenous bacterial endophthalmitis vary between 36%¹ and 74%.² Early recognition and prompt and intense intravenous antibiotic therapy with broad-spectrum antibiotics at the maximum recommended dose are the keys to successful treatment.^{3,4} Intravitreal antibiotics are also crucial in the management of severe bacterial endogenous endophthalmitis, while surgical intervention may be beneficial in selected cases.⁴ Only 30% of the eyes achieve final visual acuity of counting fingers or better and 17% are enucleated.^{1,3} Better final visual outcomes were reported when the disease was 'focal' on presentation: either a discreet uveal, subretinal or retinal infiltrate (such as in our case) or confined to the anterior segment.^{3,4}

This case illustrates that iliopsoas abscess should be considered as a potential infectious source in the case of endogenous endophthalmitis. It may run a chronic course with insidious symptoms and is a potentially

life-threatening entity, its diagnosis being therefore very important. Antibiotic coverage against *S. aureus* is mandatory when this condition is suspected.

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Sir,

Dermatochalasis: a potential pitfall in botulinum rejuvenation

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Since the first publication of the cosmetic use of botulinum toxins by Carruthers and Carruthers, the use of botulinum toxin has gained popularity as a safe and reversible method of achieving periorbital rejuvenation.¹ While ptosis and subcutaneous haematoma are recognised as complications other unwanted effects of treatment can occur.² This letter describes two cases

where botulinum toxin treatment unmasked latent dermatochalasis. The proposed mechanism of this unwanted effect is discussed and the steps to be taken to recognise those at risk of developing the complication are offered.

Case 1

A 48-year-old woman complained of sensation of heaviness of the eyelids and distortion of the upper lids 1 week following botulinum toxin injection to the upper forehead. A total of 15 U of Botox (Allergan) were diffusely injected into the forehead wrinkles. Examination revealed a smooth forehead with absent frontalis action. The eyebrows were in normal position and lid closure was unaffected. However above both skin creases, there were redundant folds of skin overhanging the skin creases (Figure 1). Manual elevation of the eyebrows caused the skin to disappear (Figure 2). Reviewing of the photographs taken before the treatment showed bilateral high eyebrows with apparent frontalis overaction. Paralysis of the frontalis led to unmasking

Figure 1 Bilateral dermatochalasis following botulinum injection to the frontalis.

Figure 2 Manual elevation of forehead reduces the dermatochalasis.

of latent dermatochalasis. The patient was given the choice of upper lid blepharoplasty. However, she decided to wait for the effect of treatment to disappear before deciding on surgery.

Case 2

A 52-year-old woman complained of upper lid heaviness, and noticing excess of skin when applying eye make-up 2 weeks following injection of botulinum toxin to the upper forehead. She underwent the injection in the hope that it may prevent the development of future forehead wrinkles. Examination revealed absent frontalis action with normal eyelid position but with folds of redundant skin overhanging the skin creases (Figure 3). Manually elevating the lids removed this overhang, and a diagnosis of latent dermatochalasis unmasked by botulinum rejuvenation was again made. She also declined upper lid blepharoplasty. When the frontalis action returned 3 months later there was disappearance of the dermatochalasis (Figure 4). The patient did not undergo further botulinum toxin injection.

Figure 3 Bilateral dermatochalasis following botulinum injection to the frontalis.

Figure 4 Reduced dermatochalasis at 3 months post-injection.

Discussion

Overactivity of facial muscles in actions such as frowning, squinting, and raising the eyebrows can lead to premature signs of ageing such as forehead frownlines, glabellar creases, and crow's feet. The onset of these facial features of ageing can be slowed by the use of botulinum toxin-induced chemodenervation of the muscles of facial expression.^{3,4} Botulinum toxins are toxins produced by *Clostridium botulinum*. There are seven serotypes (A–G) of botulinum toxins. Of these, A is the most potent and was the first to be made commercially available for therapeutic use. In the UK, botulinum toxin type A (BTX-A) is available in two forms: Botox (produced by US company Allergan Inc.) and Dysport (produced by the UK company Ipsen Ltd). The potency of the two products is not directly comparable unit for unit; as Botox being three to five times more potent than Dysport.⁵ The toxin produces a nondepolarising block at the level of the neuromuscular junction by binding to acetylcholine receptors of the striated muscle leading to a flaccid paralysis. The onset of action begins after about 72 h, while the duration of action ranges between 3 and 8 months with a mean of 4 months. The effect is only temporary because the muscle generates extrajunctional acetylcholine receptors and the nerve, in turn, sprouts and reinnervates the muscle.^{6,7} To date, there have been no long-term adverse effects to the use of BTX-A.

In dermatochalasis, there is redundant skin between the skin crease of the upper lid and the eyebrows that can lead to a sense of heaviness in the eyelids, and in severe cases can be cosmetically unsightly and even impair visual function. Upper lid blepharoplasty is a safe and effective procedure of treating the condition.^{8,9} In a subsection of patients, there is a latent dermatochalasis because of the elevating action of frontalis. Consequently, loss of frontalis action can make this excess skin become apparent as a manifest dermatochalasis.

To anticipate the possibility of this occurring is an important part of the assessment of the patient prior to the use of botulinum toxin for cosmetic purposes. It is therefore important to assess the effect of frontalis action on the periorbital regions. By relaxing frontalis and then stabilising the muscle manually, it is possible to assess whether there is any significant redundant skin above the lid crease that could lead to a subsequent dermatochalasis following otherwise successful treatment of forehead wrinkles. If there is this risk then the patient can be counselled and treated accordingly either by reducing the dose of the botulinum toxin given or performing upper lid blepharoplasty if the dermatochalasis fails to improve.

The unmasking of latent dermatochalasis is a potential complication of the use of BTX-A in the treatment of forehead wrinkles. Thorough preoperative assessment of these patients can identify those at risk of this problem and thus reduce the risk of the complication.

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Sir,

Dehiscence of radial keratotomy incision during phacoemulsification

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Patients with previous radial keratotomy (RK) have radial incisions of unknown depth, often extending to the limbus, limiting the space for safe placement of a corneal

section for phacoemulsification. We report a case of dehiscence of an RK incision during phacoemulsification.

Case report

An 85-year-old male with high myopia presented with a best-corrected visual acuity (BCVA) of 6/36 in either eye. Examination revealed bilateral RK with eight incisions in each eye and significant bilateral lens opacity. The RK, performed 14 years earlier, reduced his myopia (spherical equivalent) from –17.00 to –5.50 D in the right eye and –19.50 to –6.00 D in the left eye.

Phacoemulsification in the right eye was carried out through a superior clear corneal section. During phacoemulsification one of the RK incisions adjacent to the section started to dehisce resulting in profuse leak and anterior chamber shallowing. A 10/0 nylon suture perpendicular to the RK incision apposed the gape preventing further extension of the dehiscence (Figure 1).

Phacoemulsification was completed without further complication with insertion of a foldable silicone intraocular lens (IOL). In the absence of pre-RK refraction or keratometry, we used the standard Holladay formula with axial length measurements from B-scan ultrasound and keratometry from a Nidek handheld keratometer. The IOL selected was predicted to give a –1.67 D postoperative refraction. Postoperative recovery was uneventful and corneal topography was stable at 2 weeks (Figure 2a) and 10 weeks (Figure 2b) postoperatively. Suture removal was deferred to maintain wound integrity and to limit corneal flattening in the axis of the incision. Myopic degeneration limited the BCVA to 6/12 with a manifest refraction of –0.75 –1.25 × 131 at 3 months after surgery. Uneventful phacoemulsification was carried out using a superior scleral tunnel for the left eye. Insertion of a foldable silicone IOL produced a BCVA of 6/12 with a manifest refraction of –1.75 –1.00 × 26 at 3 months.

Figure 1 Nylon suture perpendicular to the dehisced radial keratotomy incision.