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The AIIVL Consensus Group

Aesthetics finds out more about the new Aesthetics Interventional Induced Visual Loss Consensus Group

Cases of visual loss

Most practitioners would agree that, although rare, visual loss is likely to be the most serious complication that can occur as a result of vascular occlusion following dermal filler treatment. Last month, a new group was launched that aims to support aesthetic practitioners in preventing and managing cases of blindness following a dermal filler treatment. Aesthetics asks, why is this needed and how can it help the specialty? In 2015, a review of the world literature on all reported cases of vision changes from fillers was conducted in order to highlight key aspects of the vascular anatomy to be aware of, as well as discuss prevention and management strategies.[1]

The results showed that 98 cases of vision changes from filler had been identified globally, with 65 of those leading to unilateral vision loss and only two cases being reversible. Autologous fat was the most common filler type to cause vision changes (47.9%) amongst the cases identified, while hyaluronic acid was indicated as the second most common cause; responsible for 23.5% of the complications. The sites that were high risk for complications were the glabella (38.8%), nasal region (25.5%), nasolabial fold (13.3%) and forehead (12.2%).[1]

According to the literature reviewed, no treatments were found to be consistently successful in treating blindness. The authors concluded that, 'although the risk of blindness from fillers is rare, it is critical for injecting physicians to have a firm knowledge of the vascular anatomy and to understand key prevention and management strategies'.[1]

What advice is available?

A number of training courses, associations and literature do offer advice on how to prevent and manage a visual loss complication; for example, a study published in February 2017 in *Aesthetic Plastic Surgery* highlights the case of a 64-year-old female who suffered blindness and hemiparesis following injection. As a result, it recommends the incorporation of a 'blindness safety kit' in aesthetic clinics, which details a step-by-step protocol to follow in the event of a complication.[2]

In addition, a review committee of plastic surgeons, aesthetic practitioners, ophthalmologists and dermatologists from Singapore, published an article in August 2016 in the *Singapore Medical Journal* that proposes a course of action based on existing knowledge. The article notes, 'It is proposed that injectors must be trained to recognise symptoms, institute immediate actions and refer patients without delay to dedicated specialists for definitive and supportive management'.[3]

So while there is guidance, advice and suggestions to prevent and manage visual loss complications from a range of respected and valuable sources, two years on from the world literature review of cases, there is still no standard protocol for aesthetic practitioners to follow.

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Concerned about these possibilities, a group has formed that aims to provide guidelines and offer advice on how to manage this serious complication. The Aesthetics Interventional Induced Visual Loss (AIIVL) Consensus Group launched last month after being formed by consultant plastic, reconstructive and aesthetic surgeon Mr Dalvi Humzah, consultant ophthalmic surgeons Mr Raman Malhotra and Mr Saj Ataullah from the UK, chief orbital and ophthalmic surgeon Dr Robert Goldberg from the US and plastic surgeon Dr Andy Chaing from China. Mr Humzah says, "Working together over the last year it became clear that there is no consistent management pathway for this rare but life-changing complication. Many practitioners will not be aware of any management pathways for this problem that is an extreme emergency." The group has analysed the literature and experimental work surrounding visual loss complications and, based on the results, has produced a management pathway for patients experiencing visual loss following a dermal filler treatment. According to Mr Humzah, one of the main sources of their advice has been based on the research conducted in 1999 by Rumelt *et al*.[4] He said that, "We looked at their principles and what you can learn from it. They advised that you need to be quick and aggressive in your treatment; based on their research, it is suggested that to preserve complete vision the patient would needed to be treated within 97 minutes. To save partial vision, they would need to be treated within six hours."

Mr Humzah says, "The suggested guideline from the AIIVL covers general advice as well as specific interventions to help both the practitioner and patients. We will continue to review the literature and cases in order to develop our recommendations."

What does the group advise?

Along with providing clinical advice on how vision loss can occur and prevention methods practitioners should take to minimise the risk of blindness during or after a dermal filler treatment, the AIIVL Group outlines a protocol to follow should the complication present.

As a matter of priority, the group emphasises the importance of practitioners checking their dermal filler consent forms and ensuring that the risk of blindness is made clear. Mr Humzah says, "Practitioners should also ensure that this is discussed in consultation so patients are fully aware of the risks. Remember that the whole facial network is interrelated; you don't consent patients at your own peril." He also emphasises the need for practitioners to keep clear and accurate notes of all treatments, as well as taking high quality before and after photographs, so that they can provide evidence of their safe practice should a claim arise. The AIIVL Group then outlines the two scenarios

in which practitioners will become alerted to a case of visual loss – while the patient is still in clinic and when they are at home – and how to handle each situation.

For both, the group members instruct that the practitioner should call the emergency services immediately. If the patient is in clinic, then the practitioner should stop injecting straightaway. They then advise that the practitioner should then get the patient to 'rebreathe' through a paper bag, which aims increase the C02 level in the blood, which will cause the retinal arteries to vasodilate and could help dislodge any blockage causing the visual loss. As well as this, the group suggests that patients should take oral aspirin to stop blood clotting and the practitioner should perform an ocular massage, again to help move any blockage. For patients at home, the practitioner should tell the patient or their friend/family member how to perform an ocular massage.[5] The AIIVL Group acknowledges that many hospitals will be unfamiliar with this type of emergency so has put together specialist guidance, which is freely available to all aesthetic practitioners, to keep in their clinics and pass on to staff and the ophthalmic surgeon dealing with the case, should it occur.

What happens next?

Mr Humzah emphasises that once a practitioner has followed the protocol and handed the patient over to emergency services, their responsibility doesn't end there. "You must provide ongoing support to the patient and their family," he says, explaining, "This will be a very traumatic time for them so the worst thing their practitioner can do is disappear. Make sure they understand that you are doing your best and working with the hospital team to provide the very best medical care. Don't forget you will also need to inform your insurance provider, the manufacturer of the product and the Medicines & Healthcare products Regulatory Agency (MHRA)."

As discussed, while the chance of being faced with a visual loss complication is rare, the AIIVL is determined to make practitioners as prepared as possible for this worst-case scenario. The group's members say that they will continue to work together to produce and share the safest, most up-to-date recommendations for the aesthetic community – the aim is to have the guidance peer-reviewed and published on a freely accessible open source as soon as possible. Mr Humzah concludes, "We need to talk openly about cases of blindness when they happen – the more we talk about complications happening, the more we can learn from each other. Ideally, if practitioners keep documenting their experiences and pointing out what they do differently in each case, then we could eventually find the golden key as to what works best. Hopefully the AIIVL Consensus Group's guidance gives people a starting block to work from, which will be continually updated and moved forward in an evidence-based way."

Note: This article is not inclusive of all the AIIVL Consensus Group's guidelines and should not be used in place of them or any other medical training. For more information, please contact the group directly.

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