IMMUNOGLOBULIN TREATMENT IN HUMAN AND EXPERIMENTAL EPILEPSY

The paper of van Engelen et al mentions some positive effects of intravenous immunoglobulins (IVlg) in the treatment of refractory epilepsy. No reference about our experience in that field is mentioned; however, in the medical literature reviewed by van Engelen and others, the concept of paradoxical hypersecretion is intriguing but one would not expect a dry mouth to result. Duct paralysis best explains the combination of symptoms and signs in this patient.

The inhibitory action of botulinum toxin is not confined to the neuromuscular junction. All the autonomic cholinergic fibres including the major secretomotor fibres to salivary glands are similarly blocked. Local diffusion and "chemodenervation" of the parotid glands leading to reduction of salivary flow and the development of chronic recurrence of dry mouth is no more likely explanation for this patient's symptoms. Dickson and Shevky in 1923 showed that tympanic nerve-induced salivary flow was blocked by the toxin in cats. In botulism, dry mouth is a common symptom, occurring in about 93% of patients. Dry mouth has also been reported in some 30% of patients after cervical injections for spasmodic torticollis.1 Paradoxically, excessive salivation has long been known to occur in botulism.2 A similar paradoxical effect on lacrimal glands producing watering of the eyes has been reported in patients receiving periorbital injections for blepharospasm or hemifacial spasm.3 This paradoxical effect of the toxin on the "neuroglandular junction" remains unexplained. Increased saliva production may partly be responsible for parotid swelling after botulinum toxin injections in the patient reported.

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1 Mann AC. Localised autonomic failure due to botulinum toxin injection. J Neurol Neurosurg Psychiatry 1994;57:1320.

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Matters arising

Localised autonomic failure due to botulinum toxin injection

I read with great interest Mann's report of a patient receiving botulinum toxin injections for spasmodic torticollis who developed sialoecstasis and swelling of the parotid glands after each set of injections.1 Local diffusion of the toxin and paralysis of the smooth muscle of the parotid saliva ducts was proposed as a possible underlying mechanism.1

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1 Mann AC. Localised autonomic failure due to botulinum toxin injection. J Neurol Neurosurg Psychiatry 1994;57:1320.
5 Klara HK, Magoon EH. Side effects of use of botulinum toxin A for treatment of benign essential blepharospasm and hemifacial spasm. Ophthalmon Surv 1990;21:335-8

Mann replies:

I am grateful to Dr Bussara for his interest and comments. I too had considered other potential mechanisms for the salivary gland swelling but favoured duct paralysis for a number of reasons.

The patient: clearly still secreted saliva as shown by 90% emptiness of the glands "manu-
ally" with massage. Chronic infection was rejected on the basis of negative growth partial epilepsy, relapsed but is still better than before the IVlg.

The mechanisms of action are unknown. We found some relation between a lower serum IgA level and a better clinical response in the first study, but could not confirm this correlation in the double blind study although we noted a trend in favour of a lower serum IgA. Infusions of IVlg in refractory epilepsy are well tolerated but the major problems related to this treatment concern its cost and the hazards of transmission of infectious diseases linked to blood derivatives. Immunoglobulins may be considered safe however, as their manufacturing procedures are known to inactivate human pathogenic viruses such as hepatitis A, B and C, and HIV.

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7 Van Engelen et al reply: We thank van Rijckevorsel and Delire for their interest in our paper on immunoglobulin treatment in human and experimental epilepsy. Their point was that we did not mention their experience in that field. Our paper was an overview on some aspects of immunoglobulin effects in human and experimental epilepsies; it was not a review of the medical literature on immunoglobulin treatment in human epilepsies. We wrote a 1993 review on current immunoglobulin treatments in experimental epilepsy. We fully acknowledge that we recognised their contribution in the field by citing three papers published by van Rijckevorsel and colleagues.

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