The use of Botulinum toxin-A in the treatment of refractory cluster headache: case reports
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INTRODUCTION: Cluster headache or 'histamine headache' is an uncommon form of unilateral head pain, so named for it's clustering in time. Attacks usually start as a pain in the temple or orbital region and include ipsilateral stimulation of the lacrimal gland and nasal mucosa. Pallor and sweating may also accompany an attack. Symptomatic treatment includes ergotamine, lidocaine nasal spray as well as oxygen. Some prophylactic success has been reported with methysergide and nifedipine.
OBJECTIVE: To report the treatment with Botulinum toxin-A (BTX-A) of two healthy males, aged 38 and 46 years, with histories of cluster headache of over 10 years duration. Each suffered from clusters averaging four headaches per week over a period of 3–4 weeks. The average time between clusters was 3 months. Both subjects found ergotamine worked with moderate effectiveness although prophylactic therapy proved ineffective.
METHODS: Both subjects received fifty units of BTX-A as Allergan *Botox*®, diluted in 1 ml of normal saline, during the first week of a cluster. This was injected in 5×0.2 ml aliquots into the temporalis muscle on the affected side using a ¾ inch 30-gauge tuberculin needle.
RESULTS: Six days and 9 days, respectively, post injection, both subjects reported an abrupt cessation of headache. This corresponded with a subjective sense of weakening of the chewing muscles. No other adverse effects were reported. The headache-free period lasted for 10 and 12 weeks, respectively. Both subjects were re-injected in a similar fashion and had a second headache-free period of 18 and 21 weeks.
DISCUSSION: BTX-A is a pre-synaptic neurotoxin which blocks the release of acetylcholine from motor nerve endings. It's mechanism of action in these cases of cluster headache can only be speculated but is similar to that reported with migraine, another vascular phenomenon.