

## Treatment of Headache with Botulinum Toxin a Injection : An Open Label Study of 21 Patients

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**Background :** Botulinum toxin injection has been used successfully for a number of therapeutic indications such as focal dystonia, hemifacial spasm, spasticity, myofascial pain, etc. Recently, it is introduced for tension-type headache treatment and migraine prophylaxis.

**Method :** An open label study of 21 patients with headache (8 migraine and 13 tension-type) were treated with botulinum toxin-A injection (BTX-A) during December 1996 to March 2001 at Siriraj Hospital, Mahidol University, Bangkok, Thailand. The diagnosis of headache has been made according to the criteria of the International Headache Society. Each patient was given BTX-A injection (25-50 units) over the temporalis, or frontalis, or trapezius or Fung Chou point or the combination sites. Response and complications of treatment were assessed on 2-week and 4-week visits via recording in the patient's headache diary (including intensity, duration, location, and frequency of headache).

**Findings :** Twenty out of 21 patients with migraine or tension-type headache were headache-free during the 4-week visit. Only one patient reported mild frontal headache. Most of the patients with migraine were given injections over the Fung Chou point and most of the patients with tension-type headache were given injections over the bitemporalis muscles. There were no complications of injection reported and the effectiveness of injection lasted for 4-6 months.

**Interpretation :** Botulinum toxin-A injection is the effective out-patient treatment for both migraine and tension-type headache. It is a simple, reliable and safe treatment. The only drawback of this treatment is its high cost (100 unit = 300 US dollar) but it is a cost-benefit treatment for severe or frequent headache.