

# *Can a Toxin Treat Patients Suffering from Internal Derangement of Temporomandibular Joint?*

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## *Abstract*

**I**nternal derangements, specifically anterior disc displacement with reduction, are one of the major findings in temporomandibular disorders. The therapeutic use of botulinum toxin type A has been introduced as a new modality for the treatment of anterior disc displacement with reduction. This study was done to investigate the effect of Botulinum Toxin Type A injection in the lateral pterygoid muscle as a promising treatment modality with and without anterior repositioning appliance in the management of patients with anterior disc displacement with reduction. Eighteen patients suffering from anterior disc displacement with reduction as confirmed by MRI were enrolled in the present study. Patients were randomly assigned into three groups each comprising 6 patients. Group I received ARA (Control group), group II received BTX-A while group III received both treatment modalities. After 3 months, evaluation was done clinically and by MRI as well as through electromyography (EMG). In groups I and II, only 33.3% of the patients showed complete relief of TMD symptoms and were graded as Ai0. While in group III, 50% of the patients were graded as Ai0 at the evaluation period. Furthermore, disc position was significantly improved in groups II and III as