

Botulinum injection provides relief of tennis elbow

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An injection of botulinum toxin can provide relief for "tennis elbow" but needs to be injected properly to avoid potential paralysis, states a research article in *CMAJ (Canadian Medical Association Journal)*.

The study, a randomized controlled trial of 48 patients, was performed at Imam Khomeini Hospital Complex, affiliated with the Tehran University of Medical Sciences that serves patients from all over Iran. It was conducted to introduce an easy and effective method for injection of botulinum toxin to be used in routine practice. Instead of a fixed injection site physicians determined the injection site based on each patient's forearm length. All participants' used in the study had undergone previous therapeutic interventions that failed.

It is very important when paralyzing a muscle to know the appropriate injection site. Injection at a fixed distance from anatomic landmarks, as was performed in previous clinical trials of botulinum toxin for the management of lateral epicondylitis (tennis elbow), could result in inadequate paralysis.

"We found that pain at rest and pain during maximum pinch were significantly reduced in patients with lateral epicondylitis [tennis elbow] after botulinum toxin was injected at the site based on precise anatomic measurement of each patient's forearm length," write Dr. Mortazavi, Iman Khomeini Hospital, Tehran University of Medical Sciences, Iran, and coauthors. "However, this method caused a decline in maximum strength and resulted in extensor lag."

The authors conclude that precise measurement to guide injection of botulinum toxin can be effective in the management of chronic "tennis elbow". However, it should be used for patients whose job does not require finger extension. Further research is needed to determine whether the pain-relieving effects of the treatment remain or diminish after four months.

In a related commentary, Dr. Rachelle Buchbinder of Monash University, Australia, writes that the high costs to an individual and society related to sick leave and disability from lateral epicondylitis mean there is a clear need to identify the most cost-effective therapies. However, [botulinum toxin](#), although shown to reduce pain, may not be the right therapy for everyone because its effect on function, quality of life and pain-free grip is unknown. Also, it can cause partial loss of movement of the third and fourth fingers which may be unacceptable for some people.

More information:

Research www.cmaj.ca/cgi/doi/10.1503/cmaj.090906

Commentary www.cmaj.ca/cgi/doi/10.1503/cmaj.100358

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