reported tongue sores or lip oedema as a putative side effect following BT injection, nor have we ourselves observed similar neurological reactions in any of our cases. On the other hand, many viruses, predominantly herpes simplex types, varicella zoster and various cоквестix types produce oral manifestations resulting in vesicles or ulcers, or both. Together with wound infections, these changes may or may not be pathogenic for a number of other infectious agents. Without further information, appearance of tongue sores and lip oedema in this case cannot further be clarified. It seems possible that they had appeared unrelated to a drug reaction as a common or uncommon stomatological infection, with or without upper pharyngeal/respiratory infection. 

The authors use the sequence of clinical events and the neurophysiological findings as their main argument for a relationship between the BT injection and the subsequent brachial plexopathy. From this sequence, however, the plexopathy could be considered unrelated to the BT injections as well. The following two arguments, however, do not preclude an immune-mediated mechanism for its occurrence.

Firstly, plexopathy started with irradiating neck pain that, after a free interval of 23 days, was followed by weakness of selected shoulder and arm muscles. Despite the generally assumed clinical similarity of immune to non-immune forms of brachial plexopathy, this interval between pain and onset of weakness is frequently significantly longer in non-immune forms of brachial plexopathy than with non-immune-mediated pain at the onset of weakness, on the other hand, is seen more frequently in the serogenous forms. Secondly, the haemagglutinin-toxin complex of the Clostridium botulinum type A administered has strong antigenic and biochemical similarities to the toxoid of C. tetani. In accordance with everyday neurotoxic experience, most vaccine-induced plexopathies from the toxoid form of C. tetani are extremely rare. Given the worldwide, billion-fold application of tetanus toxoid for many decades, it seems impossible that vaccine-induced complications following BT injections at the peripheral nervous system will occur at a conspicuously higher rate than with tetanus toxin.

BT is a new therapeutic agent with a high level of medical surveillance. Medical observation, therefore, will link any evidence of a possible adverse event to the administration of such an agent; this is even more likely, if the event represents a condition with a generally ill-defined etiology, such as the non-serogenous or non-vaccine-induced forms of "idiopathic" brachial plexopathy. Analysis of such cases must take into account selection bias before further conclusions are drawn.

In our opinion, the above documentation does not sufficiently rule out the mere coincidence between BT injections and the bilateral brachial plexopathy. As BT is one of the most important novelties of neurological treatment in recent years, possible adverse effects in its use merit close attention but should be documented as completely as possible.
Delirium and quantitative EEG.

A Primavera, P Novello and A Fonti

*J Neurol Neurosurg Psychiatry* 1993 56: 1339
doi: 10.1136/jnnp.56.12.1339-a

Updated information and services can be found at:
http://jnnp.bmj.com/content/56/12/1339.2.citation

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/