To "B" or to "A" - That is the question

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Although we have used Botulinum Type A Toxin (BOTOX) since 1986 in hundreds of patients with BEB and hemifacial spasm, our experience with Botulinum Type B Toxin (MYOBLOC) is limited to the management of less than 40 patients over the past year. Furthermore, we have not used Type B Toxin for hemifacial spasm.

Type B Toxin may be slightly more convenient to use, as it comes already in solution and has a very long "shelf life." Nevertheless, Type A Toxin remains our first injection choice for patients with BEB, since Type B Toxin seems to last only about 2/3 as long and is reported by patients to sting more than Type A during administration. However, in some patients in whom the Type A Toxin becomes less effective or was never effective, we have tried Type B Toxin in a number of strategies:

Strategy # 1 Use Type B Toxin exclusively

For patients in whom Type A seems to have NO effect

Strategy # 2 Alternating Use of Types A and B Toxins

For patients in whom Type A isn't lasting nearly as long or much higher doses are required, we increase the injection frequency (say, from every two months to every six weeks) and alternate the toxin types used. A variation on this theme is to keep the injection frequency constant, but inject one side of the face with Type A and the other with Type B, then switch sides at the next injection time.

Strategy # 3 Use Type A With "Trigger Point" Injections of Type B

For patients who are doing reasonably well with Type A Toxin, but have areas that "break through" (despite higher doses in these areas) and have "always" been worse. We inject these "break-through trigger point" areas with Type B Toxin and the remainder of the face with Type A.

These strategies are as arbitrary as they appear. All of us, physicians and patients alike, understand that individuals with BEB respond differently to various combinations of oral medications, relaxation techniques, behavioral influences (e.g., whistling, singing), pressure on unique trigger points, surgeries, and toxin injections. Similarly, different individuals appear to respond differently to various injection strategies.

Just as the dose of Type A Toxin required for an effect varies among individuals, so does the amount of Type B Toxin require. More interesting, perhaps, is the fact that the

conversion factor to switch from Type A to Type B among patients is also not standard. In general, we find that for identical injection sites in a patient, we need 10 – 50 times (average probably around 25 times) the dose of Type B Toxin as Type A to achieve the same effect.

Importantly, not everyone responds well to Type B Toxin. Some patients who are failing (or have failed) Type A Toxin do not respond at all to Type B, and others find their response to Type A is still better than their response to Type B (admittedly this may simply be a matter of not having found the correct Type B dose for that individual).

Although we have had successes using all of the strategies above, we have also had disappointments. About a quarter of patients managed with strategy 1 don't respond, and the response seems to be worse among patients with a predominant apraxic component. Success among those treated with strategy 2 can be very difficult to assess, since many have fluctuations in their symptoms, but the majority of patients tried on this scheme report overall improvement. The strategy that has proven most successful is number 3, perhaps due to some synergy from combining the two toxins.

In short, the management of BEB remains elusive. Type B Toxin is not a panacea, but it does add one more treatment option. Creative and tailored uses of all options are likely to yield success across a wider range of patients.