Extensive striae present on the abdomen after 4 weeks of once-daily application of 0.05% clobetasol ointment.

effects of systemic corticosteroids. A recently published study[2] demonstrated that high-potency topical corticosteroids were safer and more effective than systemic therapy in patients with bullous pemphigoid.

We attempted to treat a patient with linear IgA bullous dermatosis, a variant of bullous pemphigoid, in a similar manner. A side-side comparison was initiated with 0.05% clobetasol ointment and 0.1% tacrolimus ointment applied to opposite sides of the body (entire body surface area, sparing face) 1 to 2 times each day. Control of disease activity was achieved by day 21 using clobetasol, but the patient continued to develop new bullae on the side treated with tacrolimus. However, she developed extensive striae (**Figure**) on areas treated with clobetasol, and this was apparent within 1 month of starting treatment. Joly et al[2] reported that their patients treated topically had shorter hospitalizations, more rapid control of disease activity, fewer severe complications, and lower mortality rates than patients treated with systemic corticosteroids. No mention was made to cutaneous side effects. Striae, purpura, telangiectasias, and atrophy are well known adverse effects of corticosteroid use.

We confirm the success of topical clobetasol ointment in a patient with refractory linear IgA bullous dermatosis, but alert the physician to the cutaneous side effects, including striae, that may develop. In addition, our case suggests that tacrolimus ointment may provide inferior disease control compared with clobetasol ointment.

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1. Williams L, Nesbitt L. Update on systemic glucocorticosteroids in dermatology. *Dermatol Clin.* 2001;19:63-77.
2. Joly P, Roujeau JC, Picard C, et al. A comparison of oral and topical corticosteroids in patients with bullous pemphigoid. *N Engl J Med.* 2002;346:321-327.

VIGNETTES

Systemic Adverse Effects After Botulinum Toxin Type B (Myobloc) Injections for the Treatment of Palmar Hyperhidrosis

We describe a patient who experienced systemic adverse effects after the injection of botulinum toxin type B (Myobloc) to treat palmar hyperhidrosis. The adverse effects included blurry vision, indigestion, and a severe dry throat associated with dysphagia. Although systemic adverse effects have been described in the medical literature after the use of botulinum toxin type B for the treatment of cervical dystonia, to our knowledge, it has never been described as being associated with the treatment of palmar hyperhidrosis.

Hyperhidrosis is a troublesome problem that results in awkward social situations for those affected. Unfortunately, topical and oral medications, iontophoresis, and surgery have not proven to be efficacious in most patients. Because the eccrine glands are innervated by sympathetic nerves that use acetylcholine as the neurotransmitter, botulinum toxin is effective in temporarily reducing or abolishing sweat production. There have been no studies published to date on the effects or adverse effects of botulinum toxin type B on hyperhidrosis[1] but preliminary trials are under way.

Report of a Case. A 27-year-old accountant was referred to the University of Miami Cosmetic Center for the evaluation and treatment of palmar hyperhidrosis. He was unemployed, was going on job interviews, and was concerned about his palmar hyperhidrosis. He had never been treated with any type of botulinum toxin.

On initial presentation, the patient received 100 U of botulinum toxin type A (Botox; Allergan, Irvine, Calif) injected into each hand, for a total of 200 U. Upon evaluation 7 days later, he stated that he had experienced no improvement of the sweating. He denied side effects other than a mild, tolerable, muscle weakness in the hands. Three months later, when no improvement of the sweating had occurred, he received another 100 U of botulinum toxin type A into each hand (total of 200 U). Again, he experienced some mild grip weakness and continued to sweat at an unacceptable level.

After 2 months of continued sweating, the patient had several important job interviews and was desperate to treat his hyperhidrosis. The risks of injection with a different serotype of botulinum toxin was reviewed and the patient was then injected with 2500 U of botulinum toxin type B (Myobloc; Elan Pharmaceuticals, South San Francisco, Calif) diluted 50:50 with isotonic sodium chloride solution into each hand, for a total of 5000 U.

The patient noted that the hyperhidrosis stopped within 24 hours of the botulinum toxin type B injections. Two days after injections, he experienced blurry vision bilaterally, indigestion, and a dry sore throat that led to difficulty swallowing (dysphagia). No respiratory distress was experienced. The indigestion and dyspha-

gia lasted 7 to 10 days. The blurry vision improved after 3 weeks, but when present severely impaired his ability to use a computer or to drive. On follow-up, 1 month after his injection with botulinum toxin type B, his hyperhidrosis was still improved and all of the systemic symptoms had resolved. The patient felt that despite the adverse effects, the treatment was successful. In addition, he was newly employed by a large accounting firm.

Comment. Botulinum toxin type A injections have been shown to be effective in temporarily reducing or abolishing sweat production by blocking the release of acetylcholine in the postganglionic sympathetic fibers in the eccrine glands.[2] Botox has been the most widely used and studied type of botulinum toxin used to treat this condition. In the case presented herein, we tried Botox twice, and both times the patient was refractory to treatment. It is doubtful that this patient had antibodies to Botox, because he had not previously been treated with it and he did develop mild muscle weakness in the hands. It is unknown why his hyperhidrosis did not respond to treatment.

Myobloc (botulinum toxin type B) has been approved for the treatment of cervical dystonia in the United States by the Food and Drug Administration since December 2000,[3] but is often used as an off-label treatment for facial wrinkles and hyperhidrosis. Most of what is currently known about Myobloc comes from 3 randomized, double-blind, placebo-controlled clinical trials conducted to evaluate the safety and efficacy of botulinum toxin type B for the treatment of cervical dystonia. The package insert of Myobloc states that the use of 5000 U of botulinum toxin type B is associated with a 12% incidence of dry mouth and a 10% incidence of dysphagia, and the use of 10000 U of is associated with 34% incidence of dry mouth and a 25% incidence of dysphagia. None of the trials reported blurry vision as an adverse effect. Published studies in the literature have described that the incidence of these adverse events increases with increasing dosage.[4-6]

There have been no studies published to date on the effects of botulinum toxin type B for the treatment of palmar hyperhidrosis.[1] In our experience, treatment of the palms for hyperhidrosis can induce temporary muscle weakness, indigestion, dry mouth and dry eyes, but has not been associated with blurry vision or dysphagia before this event.

In the presenting case, the patient was treated for his palmar hyperhidrosis with 2500 U of botulinum toxin type B in each hand. In addition to some mild muscle weakness, he sustained systemic adverse effects 2 days after injection. We believe these effects were due to the botulinum toxin type B and were indeed similar to the adverse effects reported in the literature for the treatment of cervical dystonia. Of course, one cannot rule out the additive effect of the botulinum toxin type A and type B, even though they were injected 2 months apart, and an additive effect has not, to our knowledge, been described. To date, there have been no reports of these types of adverse effects associated with using botulinum toxin type B for palmar hyperhidrosis. Further data and experience are needed regarding the safety and efficacy of botulinum toxin type B in the treatment of hyperhidrosis.

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Dr Baumann has received money for clinical trials and honoraria for lectures from Elan Pharmaceuticals and Allergan.

1. Stolman LP. Treatment of hyperhidrosis. *Dermatol Clin.* 1998;16:863-867.
2. Heckmann M, Ceballos-Baumann AO, Plewig G. Botulinum toxin A for axillary hyperhidrosis (excessive sweating). *N Engl J Med.* 2001;344:488-493.
3. Schwetz BA. First drug for cervical dystonia. *JAMA.* 2001;285:724.
4. Brin MF, Lew MF, Adler CH, et al. Safety and efficacy of NeuroBloc (botulinum toxin type B) in type A–resistant cervical dystonia. *Neurology.* 1999;53:1431-1438.
5. Brashear A, Lew MF, Dykstra DD, et al. Safety and efficacy of NeuroBloc (botulinum toxin type B) in type A–responsive cervical dystonia. *Neurology.* 1999;53:1439-1446.
6. Lew MF, Adornato BT, Duane DD, et al. Botulinum toxin type B: a double-blind, placebo-controlled, safety and efficacy study in cervical dystonia. *Neurology.* 1997;49:701-707.

Pseudoporphyria Induced by Oral Contraceptive Pills

We report a case of pseudoporphyria associated only with the use of oral contraceptive pills (OCP) and natural sun exposure. Pseudoporphyria has not been reported to be secondary to OCP use although OCP are a known inducer of porphyria cutanea tarda.[1]

Report of a Case. Four months after starting the low-dose estrogen OCP Alesse (levonorgestrel, 100 µg, and ethinyl estradiol, 20 µg; Wyeth-Ayerst Laboratories, Philadelphia, Pa), a 40-year-old white woman with skin type II presented with skin fragility on her sun-exposed forearms. She denied taking any other medication or using a sunbed.[2] On examination, there were clear blisters, crusted erosions, and stellate scars, limited to her sun-exposed forearms.

A biopsy specimen obtained at the edge of a blister revealed a pauci-inflammatory subepidermal vesicle (**Figure**). Direct immunofluorescence showed perivascular deposition of IgG. All urine, fecal, and plasma porphyrin levels were within normal limits. Testing for hepatitis C antibody was negative.

The diagnosis of pseudoporphyria was made. The patient was advised to protect herself from the sun and discontinue the OCP. She subsequently reported that she did not change her level of sun exposure or her use and brand of sunscreen, but after stopping the OCP, she had no new blisters. She healed slowly, with stellate scarring but no milia. Two years after stopping the OCP, the pa-