NEXTSTEPS IN DERM | GW School of Medicine & Health Sciences

OnabotulinumtoxinA for Primary Axillary Hyperhidrosis Therapeutic Cheat Sheet

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TRADE NAME

- Botox

MECHANISM OF ACTION

- OnabotulinumtoxinA is a potent neurotoxin which inhibits the release of acetylcholine by binding to sites on motor or sympathetic nerve terminals resulting in the blockage of neuromuscular transmission.[1] This is done via cleavage of synaptosomal-associated protein 25 (SNAP-25) within nerve endings which normally docks and releases acetylcholine.[1,2] Injected intramuscularly, there is partial chemical denervation of the muscles and local reduction of muscle activity.[1] When injected intradermally, onabotulinumtoxinA results in chemical denervation of eccrine glands leading to a reduction in sweating, thereby improving axillary PHH symptoms.[1]

FDA APPROVED USES

- Overactive bladder with symptoms of urge urinary incontinence, urgency and frequency, in adults with inadequate response to anticholinergic medication
- Urinary incontinence due to detrusor overactivity associated with a neurologic condition
- Neurogenic detrusor overactivity in pediatric patients 5 years and older with inadequate response to anticholinergic medication
- Prophylaxis of headaches in adults with chronic migraine
- Spasticity in patients 2 years and older
- Cervical dystonia in adult patients to reduce severity of abnormal head position and neck pain
- Severe axillary hyperhidrosis that is inadequately managed by topical agents in adult patients
- Blepharospasm associated with dystonia in patients 12 years and older
- Strabismus in patients 12 years and older
- Moderate to severe glabellar lines associated with corrugator and/or procerus muscle activity
- Moderate to severe lateral canthal lines associated with orbicularis oculi activity
- Moderate to severe forehead lines associated with frontalis muscle activity

OFF-LABEL USES IN DERMATOLOGY

- Hyperhidrosis for the palms, soles, trunk, craniofacial region[3,5,7]
- Chronic pain disorders[2,11]
- Frey syndrome[2]
- Depression[2]
- Facial asymmetry[2]
- Platysma and masseter hypertrophy[2]
- Wound healing[12]
- Hyperhidrosis of less common areas like the groin, submammary region and gluteal cleft[13]

DOSING

- Axilary: 50 Units per axilla (diluted as 2.5-5 mL per 100 U of onabotulinumtoxinA)[1,8,12]
  - 0.1 to 0.2 mL distributed into 10 to 15 sites spaced 1-2 cm apart
- Palmar: 75-100 Units per palm[3]
  - 0.05 to 0.1 mL injected into 5-50 sites spaced 1-1.5 cm apart
- Plantar: 100-200 Units per foot[3]
- Craniofacial:
  - Forehead: 40 Units[13]
  - Forehead and frontal scalp: 50-100 Units[3]
  - Forehead and scalp boundaries: 200 Units[3]
  - Forehead and entire scalp: 300 Units[3,13]
- Groin: Ideal dose has not been established; case reports have suggested 50 Units per inguinal fold[13]

SIDE EFFECTS ASSOCIATED WITH AXILLARY PHH

- Injection site pain (≥ 3%)[1,2,8]
- Hemorrhage (≥ 3%)[1,2,8]
- Bruises[3]
- Non-axillary compensatory sweating (≥ 3%)[1,2,8]
- Pharyngitis (≥ 3%)[1,2,8]
- Infection (≥ 3%)[1,2]
- Flu-like syndrome (≥ 3%)[1,2,8]
- Urticaria[3]
- Headache (≥ 3%)[1,2]
- Fever (≥ 3%)[1,2]
- Neck or back pain (≥ 3%)[2]
- Mild local pruritus (≥ 3%)[2]

WARNINGS

- Product may spread from the area of injection and produce symptoms at unintended sites
- Swallowing and breathing difficulties can be life threatening and lead to death
- Use with caution in patients with compromised respiratory function
- Concomitant neuromuscular disorder may exacerbate clinical effects of treatment
- Rarely arrhythmias, myocardial infarction (MI) with pre-

CONTRAINDICATIONS

- Patients with known hypersensitivity to the drug or any of its components
- Infection at the proposed injection site
- Patients with peripheral motor neuropathic diseases, amyotrophic lateral sclerosis (ALS) or neuromuscular junction disorders (e.g. myasthenia gravis or Lambert-Eaton syndrome)[2]

PREGNANCY

- There are no studies or adequate data on risk associated in pregnant women. In animal studies, onabotulinumtoxinA administration in pregnancy resulted in decreased fetal weight and skeletal ossification as well as maternal toxicity including abortions, early deliveries and maternal death.
- The estimated background risk of major birth defects and miscarriages is 2-4% and 15-20%, respectively.
- No data on the presence of onabotulinumtoxinA in human milk, effects on milk production, or effects on infants who are breastfed.

MONITORING

- No recommended monitoring guidelines