Iowa PDL New Drug Review

Proprietary Name: Sofdra®
Common Name: sofpironium bromide gel
PDL Category: Topical Astringents / Protectants

Pharmacology/Usage: Sofpironium, the active ingredient of Sofdra®, is an anticholinergic drug. It is a competitive inhibitor of acetylcholine receptors that are located on certain peripheral tissues, including sweat glands. Sofpironium bromide indirectly reduces the rate of sweating by preventing the stimulation of these receptors.

Indication: For the treatment of primary axillary hyperhidrosis in adults and pediatric patients 9 years of age and older.

There is no pregnancy category for this medication; however, the risk summary indicates that there are no available data with use in pregnant women to assess for drug-associated risks of major birth defects, miscarriage, or adverse maternal or fetal outcomes. The safety and efficacy of use in the pediatric population younger than 9 years of age have not been established.

Dosage Form: Topical gel: 12.45% (w/w), in a 50ml bottle with a metered dose pump and applicator. One full pump delivers 72mg sofpironium in 0.67ml of gel.

Recommended Dosage: For topical use only. Apply to clean, dry skin once a day at bedtime. Apply a single pump actuation to the top of the supplied applicator. Spread the entire amount to cover 1 underarm. Apply a separate, single pump activation to the top of the supplied applicator. Apply the entire amount to the second underarm. Allow to dry completely (5 minutes) before putting on clothing.

Important dosage and administration:

- Do not shave armpits at least 8 hours before applying Sofdra®.
- Do not shower at least 30 minutes before applying Sofdra®.
- Wash hands immediately with soap after use.
- Avoid fire, flame, and smoking during and immediately following application.
- Do not shower or wash underarms for at least 8 hours after application.
- Do not touch underarms after applying Sofdra®.
- Do not use more than once daily.
- Avoid transfer of Sofdra® to the periocular area and do not apply to broken sink.
- Avoid using Sofdra® with occlusive dressings.

The safety and efficacy of use in populations with renal impairment and in populations with hepatic impairment have not been established.

Drug Interactions: The coadministration of Sofdra® with anticholinergic medications may result in additive interaction leading to an increase in anticholinergic adverse effects. Avoid the co-administration of Sofdra® with other anticholinergic-containing drugs.

Avoid the co-administration of Sofdra® with drugs that are strong inhibitors of CYP2D6.

Box Warning: There is no box warning listed with this product.

Common Adverse Drug Reactions: *Listed % incidence for adverse drug reactions= reported % incidence for drug (Sofdra®) minus reported % incidence for vehicle. Please note that an incidence of 0% means the incidence was the same as or less than vehicle.* The most frequently reported adverse events included dry mouth (13.4%), vision blurred (8.7%), mydriasis (7%), and urinary retention (2%).

Listed % incidence for adverse drug reactions= reported % incidence for drug (Sofdra®) minus reported % incidence for vehicle regarding local skin reactions. Please note that an incidence of 0% means the incidence was the same as or less than vehicle. The most frequently reported adverse events included pain (6%), erythema (6.7%), dermatitis (5.7%), pruritus (4.4%), irritation (1.7%), and exfoliation (1.7%).

Use Sofdra® with caution in patients with a history or presence of documented urinary retention. Be alert for signs and symptoms of urinary retention, especially in patients with prostatic hypertrophy or bladder-neck obstruction. Discontinue use immediately and consult a healthcare provider should any signs or symptoms develop.

In the presence of high ambient temperature, heat illness (hyperpyrexia and heat stroke due to decreased sweating) can occur with the use of anticholinergic drugs, including Sofdra®. Watch for generalized lack of sweating when in hot or very warm environmental temperatures and avoid using Sofdra® if not sweating under these conditions.

Transient blurred vision may occur with the use of Sofdra®. If blurred vision occurs, discontinue use and avoid engaging in activities that require clear vision, such as operating a motor vehicle or other machinery or performing hazardous work, until the symptoms have resolved.

Contraindications: In patients with medical conditions that can be exacerbated by the anticholinergic effect of sofpironium bromide (e.g., glaucoma, paralytic ileus, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis, Sjogren's syndrome).

Manufacturer: Botanix SB Inc.

Analysis: Two randomized, vehicle-controlled multicenter trials (CARDIGAN 1 and CARDIGAN 2) enrolled subjects 10 years of age or older (N=701) with primary axillary hyperhidrosis. All subjects were to have symptoms of axillary hyperhidrosis for at least 6 months' duration, produce at least 50mg of sweat in each axilla (underarm) with a combined total of at least 150mg over a 5-minute period, and have a Hyperhidrosis Disease Severity Measure-Axillary, 7-item scale score (HDSM-Ax-7) ≥3.

In the trials, 56% of subjects were female, 78% were white, fewer than 1% were less than 12 years of age, 7% were 12 to 17 years of age, 91% were 18 to 64 years of age, and 1% were 65 years of age or older. Subjects 12 years of age and older were asked to rate their underarm sweating severity and frequency since waking on the previous day ("since you woke up yesterday") on the 11-item HDSM-Ax Adult version instrument. The HDSM-Ax-7 scale score was calculated by taking an average of 7 items, where the scale score ranges from 0 to 4 with a higher score representing greater underarm sweating severity. The mean HDSM-Ax-7 scale score at baseline was 3.5 in CARDIGAN 1, and 3.6 in CARDIGAN 2. The median gravimetric sweat production (GSP) over 5 minutes at baseline was 214.1mg in the Sofdra® arm and 228.6mg in the vehicle arm in CARDIGAN 1, and 207.7mg in the SOFDRA® arm and 231.1mg in the vehicle arm in CARDIGAN 2.

Subjects were randomized to receive either Sofdra® or vehicle applied once daily at bedtime to each axilla. The co-primary endpoints were the proportion of subjects having at least a 2-point improvement in the HDSM-Ax-7 scale score from baseline to day 43, and the change in GSP from baseline to day 43. Results are presented in the table below, which was adapted from the prescribing information.

	CARDIGAN 1		CARDIGAN 2	
	Sofdra®	Vehicle	Sofdra®	Vehicle
≥2-point improvement in HDSM-Ax-7 scale score from baseline to day 43 in subjects ≥12 years	N=172 49%	N=177 29%	N=178 64%	N=169 48%
Treatment Difference	18%		17%	
NNT *calculated by Optum Rx*	6		6	
Baseline Median GSP in subjects ≥10 years of age (mg/5 minutes)	N=173 214	N=177 229	N=180 208	N=171 231
Change from baseline to day 43, median (mg/5 minutes) 25th percentile, 75% percentile	-128 -201, -52	-100 -228, -29	-143 -260, -75	-134 -230, -60

Place in Therapy: Sofdra® is an anticholinergic indicated for the treatment of primary axillary hyperhidrosis in adults and pediatric patients 9 years of age and older. It is to be applied once daily at bedtime and is for topical use only. The safety and efficacy of Sofdra® were assessed in two randomized, vehicle-controlled multicenter trials that included subjects 10 years of age and older with primary axillary hyperhidrosis. The co-primary endpoints were the proportion of subjects having at least a 2-point improvement in the Hyperhidrosis Disease Severity Measure-Axillary, 7-item (HDSM-Ax-7) scale score from baseline to day 43 and the change in gravimetric sweat production (GSP) from baseline to day 43. Sofdra® was more effective than vehicle for both endpoints in both studies. Per a pooled analysis of CARDIGAN 1 and CARDIGAN 2 by Pariser et al[2], significantly better results were observed in the treatment group as compared with the vehicle for both co-primary endpoints ($p<0.0001$, $p=0.0002$). One noted reference prefers the use of topical antiperspirants as initial treatment for axillary hyperhidrosis, with topical glycopyrronium as an alternative first-line treatment,[3] while another reference sources suggest to consider topical treatments as first line (with sofpironium listed).[4]

Summary

There is no evidence to suggest that Sofdra® is safer or more effective than other currently preferred, more cost-effective medications. It is therefore recommended that Sofdra® remain non-preferred and require prior authorization and be available to those who are unable to tolerate or who have failed on preferred medications.

PDL Placement: ☐ **Preferred**
☒ **Non-Preferred**

References

[1] Sofdra [package insert]. Wayne, PA: Botanix SB, Inc; 2024.
[2] Pariser D, Glaser DA, Del Rosso J, et al. Sofpironium topical gel, 12.45%, for the treatment of axillary hyperhidrosis: Pooled efficacy and safety results from 2 phase 3 randomized, controlled, double-blind studies. *J Am Acad Dermatol.* 2025. [Online ahead of print].
[3] UpToDate online. Primary focal hyperhidrosis. Accessed June 2025.
[4] Dynamed online. Hyperhidrosis. Accessed Jun 2025.