

Urticaria Caused by Spinal Cord Stimulator

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Learning Objective

- Emphasize recognition and management of atypical device-related allergic reactions
- Highlight the need for comprehensive pre-implant allergy evaluation in atopic patients

Abstract

- 56-year-old woman with chronic low back pain, s/p lumbar fusion, underwent SCS implantation for pain control
- Developed diffuse urticaria and pruritus, later shortness of breath → suspected allergic reaction
- SCS explanted; symptoms persisted despite corticosteroids, antihistamines, and topical agents
- Allergy testing confirmed hypersensitivity to several SCS components
- Normal tryptase, no systemic anaphylaxis → suggests non-IgE-mediated hypersensitivity
- Case highlights persistent allergic symptoms post-explant and need for multidisciplinary management
- Underscores gap in pre-implant screening for device-related hypersensitivity

Case Description

- 56-year-old woman with lumbar fusion, dermatographia, extensive allergies
- Developed diffuse urticaria and pruritus 3 weeks post-SCS implantation
- Symptoms refractory to corticosteroids and antihistamines
- Flares triggered by heat and summer weather; episodes of throat tightening

Figures



Figure 1: Urticarial Rash



Figure 2: Urticarial Rash



Figure 3: Urticarial Rash

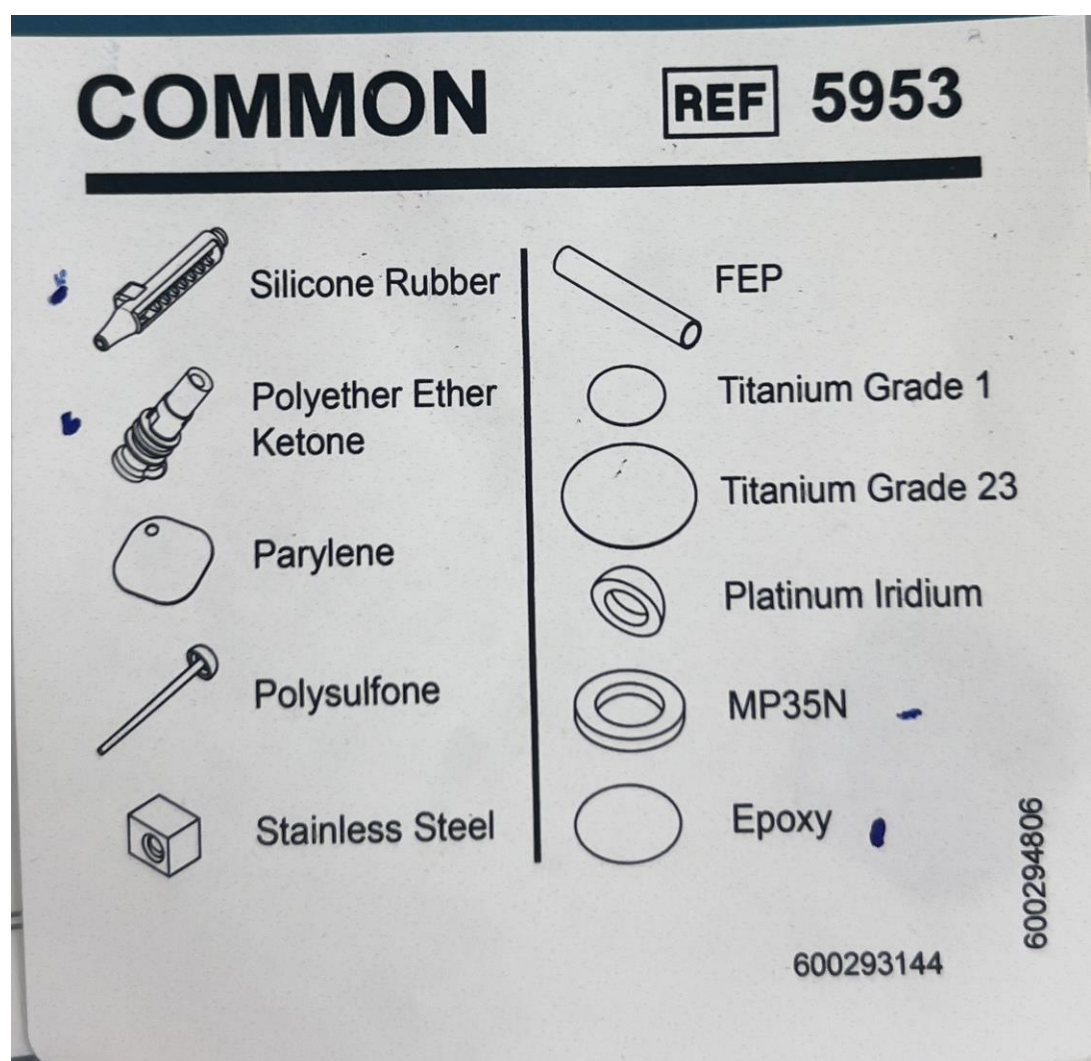


Figure 4: Common Allergic Reaction Inducing Agents in SCS

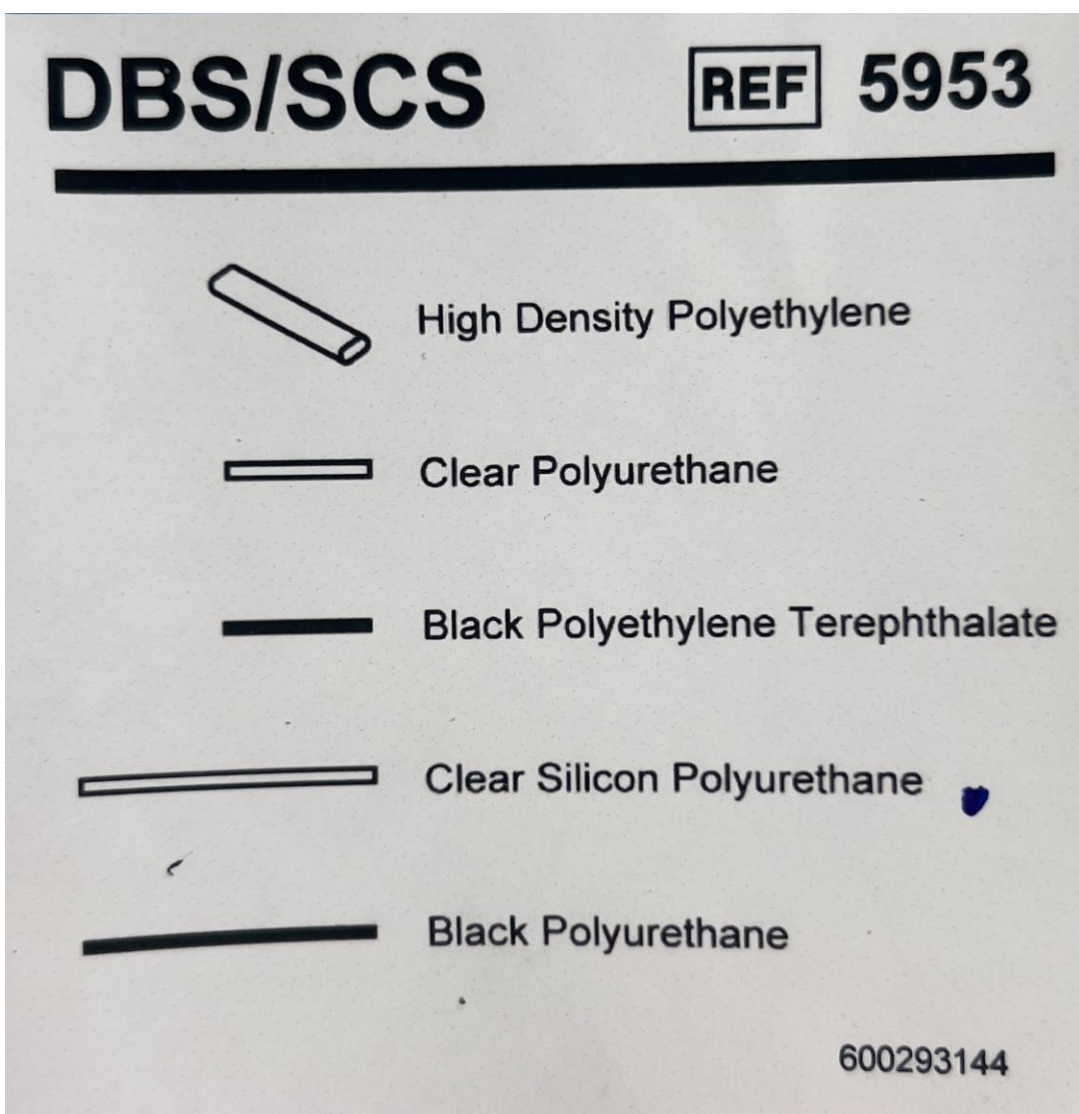


Figure 5: Materials Used in SCS Device

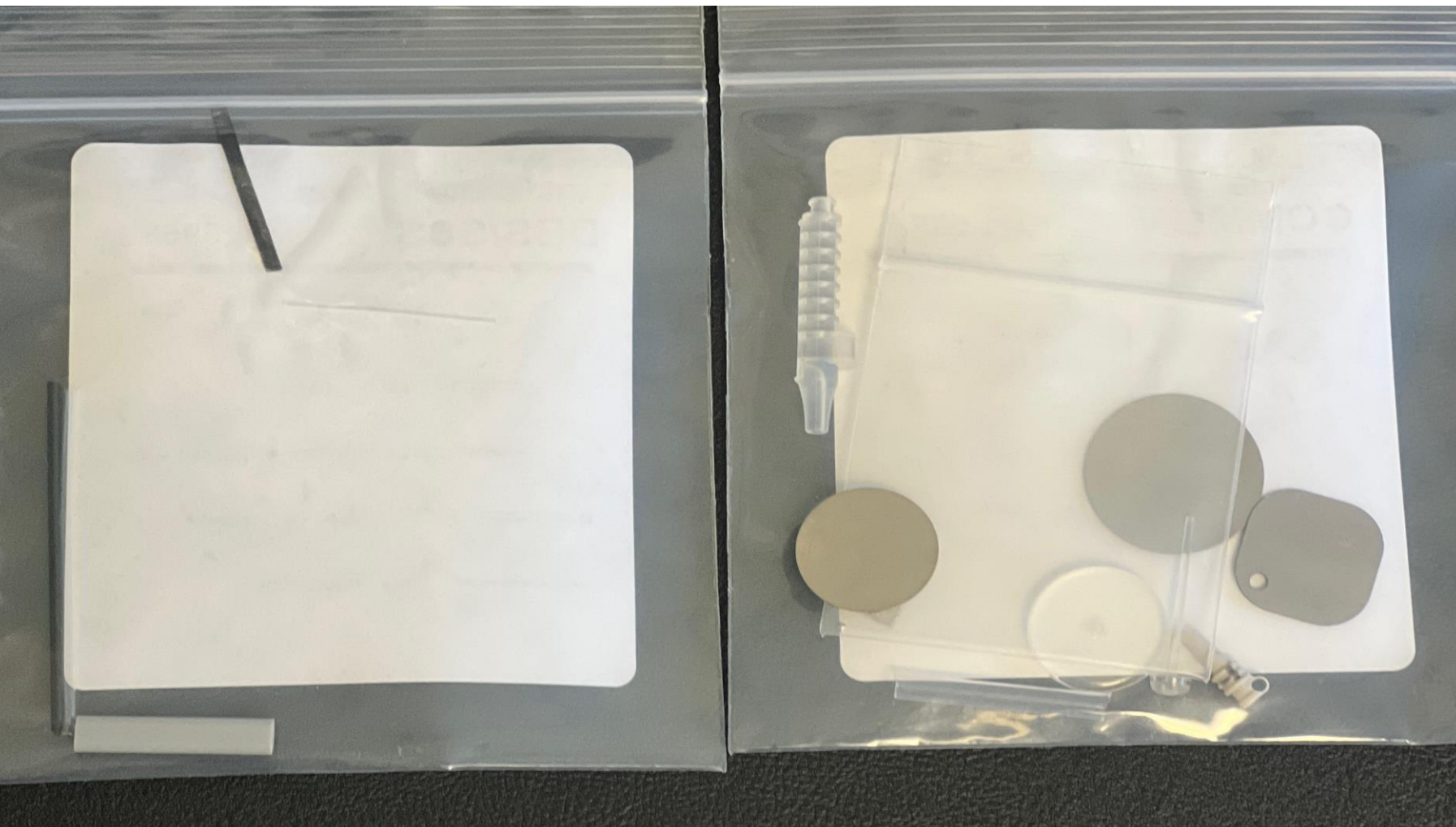


Figure 6: Removed SCS Device Post-Urticarial Reaction

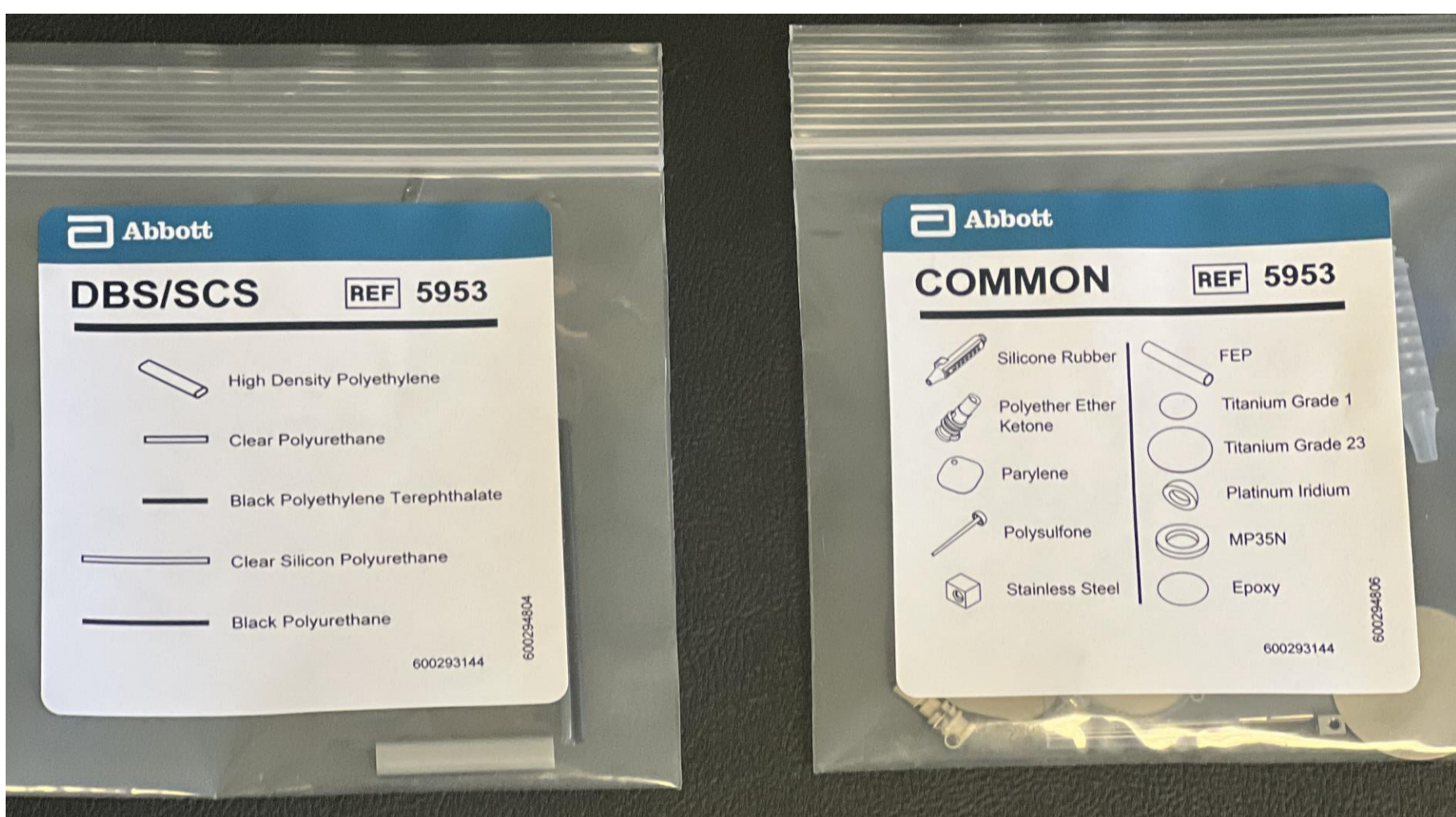


Figure 7: Abbott Medical SCS Device Materials Listings

Case Description Continued

- Device removed; symptoms persisted post-explant
- Treated with hydroxyzine, cetirizine, diphenhydramine, topical steroids, menthol creams
- Allergy testing: hypersensitivity to multiple SCS components
- Tryptase normal → non-IgE-mediated mechanism
- Symptoms ongoing, refractory to conventional therapy

Discussion

- Delayed hypersensitivity to SCS components is rare but significant
- Increasing SCS use → clinicians must recognize non-IgE allergic reactions
- Persistent urticaria despite explantation supports immune-mediated pathology
- Highlights need for multidisciplinary evaluation: anesthesia, pain, dermatology, allergy
- Pre-implant screening critical for patients with complex atopic histories
- Consider patch testing or material sensitivity testing prior to device placement
- Early recognition prevents prolonged morbidity and guides safer pain interventions

References

Chaudhry ZA, Najib U, Bajwa ZH, Jacobs WC, Sheikh J, Simopoulos TT. *J Pain Res.* 2013;6:617–623. doi:10.2147/JPR.S44676