



ELASTOSIS PERFORANS SERPIGINOSA

<http://www.aocd.org>

Elastosis perforans serpiginosa (EPS) is a rare dermatologic condition where connective and elastic tissues are viewed as foreign objects and subsequently expelled from the papillary dermis through the epidermis. This process is known as transepithelial elimination, an unusual method for removing foreign debris from the skin when the body perceives these substances as foreign. This often results in the formation of small red inflammatory papules.

There are three distinct etiologies of EPS:

- **Idiopathic EPS** - likely a genetic predisposition and the exact cause remains unknown. Approximately 60-70% of EPS cases fall in this category.
- **Reactive EPS** - this variant is associated with various systemic and inherited connective tissue disorders like Down syndrome, Marfan syndrome, Ehlers-Danlos syndrome and **scleroderma**.
- **Drug-induced EPS** - this variant manifests as a dermatologic reaction to the drug D-penicillamine and occurs in nearly 1% of patients on long-term therapy for Wilson's disease.

As the name elastosis perforans serpiginosa suggests, elastic or connective tissue 'perforates' through the epidermis in a serpiginous or wavy fashion. The clinical appearance of EPS frequently reveals small 2-5mm red, dome-shaped papular eruptions clustered in a confined area. As the manifestation progresses, new papules appear in linear, or a snake-like fashion causing the rash to enlarge peripherally. The core of each papule may contain cellular debris representing the foreign material. Common sites of predilection for EPS include the neck, upper extremities, face and lower extremities and are commonly asymptomatic.

The diagnosis of EPS is based on clinical history and physical exam findings including **biopsy**. Histologic examination will reveal a thick column of keratotic and elastic tissue debris being extruded through to the dermis representing transepidermal elimination. Other disease processes that should be included in the differential diagnosis of EPS include but are not limited to **prokeratosis of Mibelli**, **dermatophyte infections**, **cutaneous larva migrans** and perforating folliculitis.

Treatment of EPS is mainly supportive and no uniform therapy exists. EPS commonly resolves spontaneously and resolves without complications. When medical intervention is required, most recommendations are based on case reports and include **isotretinoin**, **tazarotene gel**, **imiquimod**, **cryotherapy** and flash lamp pulsed dye **laser**.

This information has been provided to you compliments of the American Osteopathic College of Dermatology and your physician.

The medical information provided in this article is for educational purposes only and is the property of the American Osteopathic College of Dermatology. It is not intended nor implied to be a substitute for professional medical advice and shall not create a physician - patient relationship. If you have a specific question or concern about a skin lesion or disease, please consult a dermatologist. Any use, re-creation, dissemination, forwarding or copying of this information is strictly prohibited unless expressed written permission is given by the American Osteopathic College of Dermatology. For detailed information including links to related topics on this and many other skin conditions with photos, visit: <https://www.aocd.org/page/DiseaseDatabaseHome>