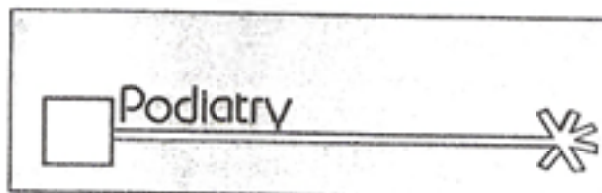


# Laser Practice

# Report

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## Podiatric carbon dioxide laser surgery reduces hypertrophied unguis labia

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The fingernail and toenail, along with their surrounding soft tissue structures, are complex structures. The nail plate is composed of three layers:

- the superficial, smooth surface layer of moderately hard keratin;
- the deep layer of harder keratin;
- and the hyponychial layer of soft keratin like that of the skin.

At the proximal nail fold, the nail matrix gives rise to the nail plate. The matrix originates as an invagination of the epidermis. Proximally, the epidermal fold -- the eponychium or cuticle -- forms the junction of skin to nail plate.

In attaching the nail plate to the nail bed, the podiatrist arranges the keratin of the hyponychial layer in longitudinal, parallel ridges matching the undersurface of the nail and similar depressions on the nail bed.

The nail grooves -- proximal, distal, and lateral -- mark the limits of the nail and hold it in the manner of a

watch glass and casing. The proximal and lateral nail grooves are more obvious than the distal hyponychial groove, which is covered by the nail plate. At the medial and lateral borders, the unguis labia, the skin lips of the nail, form the external margins. Those margins usually form a modest groove rising above the edges of the nail plate that support and direct it.

## *Unguis labia hypertrophy causes explored*

Hypertrophy of the unguis labia occurs only pathologically. It can cause cosmetic and physical distress. Such factors as shearing or direct chronic lateral pressure and chronic onychia with or without onychocryptosis can produce the condition, or it may occur without known cause.

Hypertrophied unguis labia primarily occurs in the hallux but may be present on any digit. Medial hypertrophy can arise from a hallux valgus deformity stemming from chronic pinching of the medial unguis labia against the medial nail plate. Lateral hypertrophy usually develops from chronic rubbing or shearing pressure between the hallux and second digit. Chronic or recurrent onychia resulting in an excessive inflammatory reaction and granulation tissue can also cause unguis labia hypertrophy.

Obviously the nail plate plays an important role in the formation of hypertrophic unguis labia. Any associated onychocryptosis may be primary or secondary to the hypertrophied unguis labia. Whatever the etiology, the pivotal factor is friction between the unguis labia and the nail plate. Therefore, the nail plate must be considered in clinical evaluation.