A Novel Approach to Polymicrobial Nail Infection

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INTRO

The care and treatment of patients with dystrophic nails continues to be a challenging, expensive, and at times a potentially patient-harming endeavor for today's physician. Many therapies are unsuccessful at best and provide an unacceptable percentage of a microbiological cure and/or clinical cure of nail improvement. This in turn leads to patient dissatisfaction and frustration on the clinician's part.

The advent of oral anti-fungal medications has provided a higher mycological cure and clinical improvement in the patient's nail plate, but at the risk of potentially serious systemic complications (liver damage, aplastic anemia, and a multitude of possible systemic adverse reactions). The use of oral anti-fungals are often accompanied by the need for frequent blood tests to monitor patient liver and cell functions-especially in patients taking statin drugs.

The recent development of advanced anti-fungal topicals have provided a safer method of treating onychomycosis, but at an exorbitant cost with oftentimes unsatisfactory results. These medications focus again on fungi or yeast as the causative agent(s).

Recent evidence, however, suggests that bacteria, yes bacteria alone, is likely the primary causative agent in the majority of nail pathologies. These findings also suggest that a bacterial-fungal co-infection is the second most common etiology of nail pathologies with a pure fungal infection being responsible for a very small percentage of nail dystrophies (less than 10%). This is corroborated by the findings of several nail topicals which profess a small (8%) antifungal cure rate and smaller percentage of a clinical improvement. This proposes a new paradigm in the approach to treatment of dystrophic nails.

The unique antimicrobial wound gel Hexagen™ combines anti-bacterial, anti-fungal, and anti-yeast agents in a petrolatum-based carrier ideal for the topical treatment of dystrophic nails. This gel has been utilized to treat a series of patients with nail pathologies of several etiologies. The purpose of these case studies was to evaluate the hypothesis that the application of this unique anti-microbial gel would initiate the process of creating an infection-free environment that would secondarily allow for the growth of a clinically non-dystrophic nail plate.

METHOD

The focus of this study is topical nail care. These case studies are presented to provide evidence of clinical improvement of nail infections by bacteria, fungus, yeast, and a combination of the above. The nails were treated with a minimum daily or BID application of Hexagen™ with no additional dressings. 100+ patients were treated.

RESULTS

The use of Hexagen™ successfully initiated clinical improvement of the nail plate. There is visible evidence of the development of a Beau's line with progression of a clear nail plate to the distal end of the nail. In this study, we found the clinical efficacy varied from close to 70% with once a day application to over 85% efficacy with BID application. This has resulted in both patient and physician satisfaction from utilizing a unique anti-microbial gel that addresses nearly every cause of nail infective processes. There were no reported adverse effects and compliance was optimal with a BID application.

Selected Examples from Study Population