

Yunnan Baiyao is effective in the treatment of stage 3 Onychocryptosis

Background

An ingrown nail is the most common type of nail aberration, which can escalate to the point where it may hamper the person's lifestyle and capability to perform activities of daily living. The big toe is frequently the digit most often affected, but other toes can also suffer this condition as well. The goal of treatment is to alleviate the patient's pain, reduce inflammation and neutralize local septicity to restore harmony in the affected region.

Case study: A woman in her mid-fifties suffering from an ingrown toenail on the lateral portion of the right hallux seeks treatment with the hope of avoiding surgical removal of the entire toenail. The patient is completely averse to needles, poking, pricking or prodding in any capacity whatsoever. This condition has persisted off and on for the past 13 years. The patient was advised Yunnan Baiyao as topical and oral treatment until cure of her condition.

Results: After 8 weeks of treatment using only Yunnan Baiyao, in three different modalities, the patient experienced complete relief from the affliction.

Conclusions: Yunnan Baiyao by virtue of ability to invigorate blood tissue can be effective for an ingrown toenail when the root of the condition involves Blood Stasis.

Abbreviations: YNBY, yunnanbaiyao; RA, rheumatoid arthritis; AA, arachidonic acid; RCTs, randomized control trials

Introduction

An ingrown toenail or onychocryptosis is of common occurrence in approximately 20% of patients that see a Family Physician for foot problems. The condition of an ingrown nail occurs when the corner or side of the nail grows inwards into the soft flesh of the toe. This usually affects the hallux.¹ It can be significantly disabling and painful for many patients and interferes with their ability to ambulate, exercise, even causing absence from school and work. It can be ascribed to several factors either singularly or in combination such as: heredity, obesity, poorly trimmed nails, neglect of proper foot hygiene, ill-fitting footwear, hyperhidrosis, nail abnormalities, trauma or injury.²

Diagnosis

Signs and symptoms of an ingrown toenail are redness, swelling/inflammation, prominent skin tissue (proud flesh), pain, pus or other discharge and foul odor. Additionally, if the patient has diabetes or any other condition that may cause poor blood flow to the extremities they are at a greater risk of complications of ingrown toenails.³

A staging scale has been established to discern the severity of the patient's condition. Stage 1 is characterized by erythema, mild swelling, pain and tenderness. Stage 2 is similar to Stage 1 but with exacerbation of all symptoms. The wound may also become locally infected and begin to drain. Stage 3 all signs and symptoms are of even greater severity with infection and the formation of new granulation tissue as well as increased lateral nail folding into soft flesh of the toe.⁴

Volume 12 Issue 5 - 2019

Paul M Storm

Oregon College of Oriental Medicine, USA

Correspondence: Paul M Storm, Oregon College of Oriental Medicine, 259 Hakaiau Pl. Honolulu, HI, 96825, USA, Tel (808) 979-6989, Email pstorm@icloud.com

Received: August 12, 2019 | **Published:** September 26, 2019

Cautious approaches to the treatment of an ingrown toenails in Stage 1, (without infection), involves placing a barrier underneath the affected nail such as a cotton wisp, dental floss or a gutter splint. If there is the possibility of infection, or often as a prophylactic measure antibiotics may be indicated, this may take place before or after phenolization and is widely believed that this will not reduce the rate of healing.

Surgical treatments are very common and although more extreme, generally viewed as a more effective intervention especially in refractory cases. Sectional nail avulsion followed by phenolization or direct surgical excision of nail matrix are considered to be equally efficacious. However, with respect to the prevention of recurrence, sectional nail avulsion with phenolization is the superior method and decreases the possibility of post-operative infection.⁵

Acupuncture and oriental medicine treatment

There is scant information on this condition and the treatment of it in Oriental Medicine. Searches were conducted on several well-known data-bases utilizing pertinent keywords and combinations of those keywords. Databases searched were: EBSCOHOST, Medscape, PubMed, Cochrane, ScienceDirect and Google Scholar. The keywords used in searches were: onychocryptosis, ingrown toenail, Chinese Medicine, Oriental Medicine, Yunnan Baiyao, TCM treatments for ingrown toenail, treatment of onychocryptosis. Apparently, it is extremely rare for a patient to seek treatment from a practitioner of alternative medicine when experiencing an ingrown toenail and even more so to conduct a study on the treatment of this condition utilizing Oriental Medicine. Notwithstanding, this case evinces the flexibility of Chinese herbal treatments to effectively treat an ailment that is common for Western podiatrists to see but rarely presented to a practitioner of acupuncture and Chinese medicine.

Yunnan Baiyao (YNBY), is a formula that is famous in the Far East for its effectiveness in stopping severe bleeding. It has been credited with saving thousands of lives of soldiers that were administered it after being severely wounded in battle. A systematic review and meta-analysis of randomized control trials (RCTs) from the International Journal of Clinical and Experimental Medicine attested to the efficacy of YNBY for mitigating rexis hemorrhage for a variety of ulcers and

hemorrhagic conditions such as: peptic, oral and skin ulcers, as well as uterine hemorrhage, ulcerative colitis, traumatic injury and post-operative treatment for surgical procedures.⁶ This meta-analysis shows that because YNBY can inhibit bleeding while promoting normal blood circulation, reduce inflammation and regulate the immune system it is appropriate for a multitude of maladies.

In another study from the Journal of Pharmaceutical and Biomedical Analysis, YNBY proved to ameliorate Rheumatoid Arthritis (RA) and possibly “cure” its potential mechanism through significantly modulating Arachidonic Acid (AA) metabolism in osteoblasts.⁷

How YNBY accomplishes this broad range of actions is not completely understood. The entire list of herbs and ingredients in YNBY has long been a secret. The formula was composed in 1902 by Qu Huangzhang who was loath to divulge the formula ingredients. According to investigations, YNBY is comprised of 40.7% Panaxnotoginseng (San Qi), 17.3% Saussureae Radix (Mu Xiang), 13.2% Discorea opposita Thumb (Shan Yao), 10.2% Discoreanipponica Makino, 7.3% Erodium stephanianum Willd. Geranium wilfordii Maxim, 6.2% Alpinia officinarum Hance, and 5.1% Bostaurus domesticus, Gmelin Bubalus bubalis L.⁶

The chief herb, *San Qi* (notoginseng radix) is well known in the realm of Chinese Medicine. It stops any type of bleeding, internal or external, without causing blood stasis, transforms blood stasis without engendering more bleeding, reduces swelling and stops pain. There are a couple of noteworthy contraindications: Not to be used in cases of blood deficiency or heat chaotically moving the blood.⁸

In the West, skepticism seems to be the prevailing perspective claiming that further study is required, or, that no legitimate clinical studies have been done.

History

A woman in her mid-fifties had been experiencing this problem of ingrown toenail intermittently for the past 13 years. It began at a time in her life when she was an avid rock climber. The footwear for this genre of adventure sport are shoes with specialized grippy rubber and an extremely narrow and pointed toe-box that are meant to fit the wearer's foot as tightly as possible. The patient often during the demands of a climb would be required to stand on a belay for extended periods of time, or to repeatedly jam her toes into cracks only a few inches wide as she would assiduously make her way up the route to the summit. These are the subjective precipitating factors that are believed to have induced injury to the patient's right big toenail. The patient had no history of foot or nail problems prior to rock climbing.

Most patients that come to me expect or desire to have needles inserted into their body. This patient was different in that she made it explicit from the beginning that any type of poking or pricking was simply not an option for her. In fact, her reason for seeking help with Oriental Medicine was to avoid being poked with a needle. After her ingrown nail became infected and painful enough that she was faced with the prospect of having to take time off from work she consulted a podiatrist. Her doctor prescribed the usual round of antibiotics for this condition. Unfortunately, these did not produce positive results. The physician then informed her that from his perspective surgery was the only viable option that remained. This would entail multiple pokes from the injections of a local anesthetic. The patient found this intervention unacceptably repulsive and decided to seek alternative options for her affliction. Additionally, she would take herbs but only if they are in pill form; no granules or bulk herbal decoctions.

The patient had first treatment was on Friday, July 10th. For the

first two weeks she came in twice per week. Then as improvements were made, became proportionately less frequent.

Upon observation of the patient's suffering toe and nail the color appeared to be purplish-red. In Chinese medicine this would indicate Blood Stagnation and thus a Blood invigorator to transform Blood Stasis seemed appropriate. Because Yunnan Baiyao plasters had produced positive results for the treatment of several patients in the past for invigorating blood, an YNBY plaster was gently applied. The patient was instructed on how to cut the plasters to a useful size and shape and to call if there were any problems. Because the pain was always worse in the morning a new plaster was to be applied before going to bed each night. During the day the patient was free to use her discretion when to apply a new plaster and for how long it would be worn. The agreement was that as long as the plaster seemed to be beneficial she would continue use.

There are several manufacturers of YNBY. The YNBY plaster and capsules that were used were Yunnan Baiyao Jiaoang manufactured by Yunnan Baiyao Group Company Ltd.

The patient's next visit was three days later. She happily reported that the symptoms, especially the pain, were now beginning to abate rather than worsen. She would apply new plasters twice per day; in the morning and before retiring to bed. She continued this protocol for the next two weeks. At the start of the 3rd week improvements had reached a plateau. Yunnan Baiyao capsules were then prescribed at a dosage of 6 capsules per day. I did not see the patient for the next 10 days due to a family vacation she had planned several months earlier. She promised to continue the application of plasters while taking YB internally on her holiday.

On the next patient visit she was looking very relaxed. She had worn comfortable open-toed sandals the entire time. She also reported that as the swelling and tenderness began to subside she became aware of a misshapen splinter of nail that was digging into her infected wound. With great care she was able to remove it, but in the process, enlarged and aggravated the injured site. As a precaution, (unbeknownst to me), she took another course of antibiotics because she worried that her probing may have introduced unwanted infectious organisms into her wound. When she returned for her next visit we began to apply YB powder directly. This was done by opening a capsule of YB, pouring roughly one half of the contents directly onto the exposed raw flesh and it was then sealed with a strip of YB plaster. The patient continued this new protocol for the next 4 days. When she next came in she reported that all signs and symptoms were in remission. One week later, the infection was gone and the open wound was almost completely healed. One notable effect that surprised me was the toe nail had flattened out considerably. This helped to assuage my concerns that the condition may reoccur once the YB protocols were discontinued. When I saw the patient two weeks later she was ecstatic; pain-free, normal coloration and no detectable inflammation in the toe or nail. The recovered toe now looked better than her unaffected one.

Conclusion

This was a case that initially seemed to be very limiting because the patient was unequivocally clear and adamant about what she was willing to do and, more to the point, not do for treatment. Normally, a patient that presents as one who is going to dictate terms of treatment is undesirable because we as practitioners want to be free to offer therapies that we deem to be best. What was enjoyable about this patient was that as long as the “do nots” were observed she was willing to fully comply with anything else. This is the precipitating attitude that produced a successful, albeit unusual, treatment method.

Moreover, this case serves to demonstrate not only the efficacy of Chinese herbal patents, but evidence into the mechanism of healing and how a treatment might morph by creative process into a protocol that was unforeseen at the beginning. This case lends validation to the adaptability and resourcefulness that Oriental Medicine can provide to the progression of healing.

Upon contacting the patient 10 months after treatments had ended her once afflicted toe is doing fine. There has been no relapse of previous symptoms.

Acknowledgment

None.

Conflicts of interest

Author declares their are no conflicts of interest.

References

1. What Is An Ingrown Toenail? American Podiatry Medical Association. 2018.
2. Khunger, Niti, Rajat Kandhari. Ingrown toenails. *Indian J Dermatol Venereol Leprol.* 2018;78(3):279–289.
3. Ingrown toenail. American Academy of Orthopaedic Surgeons.
4. Karaca N, Dereli T. Treatment of ingrown toenail with proximo-lateral matrix partial excision and matrix phenolization. *Ann Fam Med.* 2012;10(6):556–559.
5. Heidelbaugh JJ, Lee H. Management of the Ingrown Toenail. *Am Fam Physician.* 2009;79(4):303–308.
6. Yang B, Xu ZQ, Zhang H, et al. The Efficacy of Yunan Baiyao on Haemostasis and Antiulcer: a systematic review and meta-analysis of randomized control trials. *Int J Clin Exp Med.* 2014;7(3):461–482.
7. Hongbing H, Xiaobin R, Xiyue W, et al. Therapeutic effect of Yunnan Baiyao on Rheumatoid Arthritis Partially Due to Regulating Arachidonic Acid Metabolism in Osteoblasts. *J Pharm Biomed Anal.* 2012;59:130–137.
8. Bensky D, Schneider V, Barolet R. et al. Chinese Herbal Medicine Formulas and Strategies. App development by Phil Mitchell. USA: Eastland Press; 2018.