Caring for the Foot Mobile
Holistic Foot and Nail Management

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Proper foot and nail management is essential to maintaining a good quality of life and remaining independent as we age. Basic and ongoing care of the feet and proper shoe selection are critical not only for preventing diabetic foot problems, but also for helping to lead productive, balanced lives. When our feet hurt, the rest of our body most likely hurts too. Because proper foot and nail care and education are critical for preventing ulceration and amputation, especially in persons with diabetes, this outcome case study presents a holistic approach to the management of foot and nail problems.

KEYWORDS: diabetes, foot care, foot education, foot pain, foot problems, healing, holistic approach, nail care, prevention, shoe selection

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As society continues to demand alternative healing approaches from healthcare providers, holistic care is quickly gaining wide recognition because it considers the whole person.1-4 The holistic approach to healthcare management views healing as a lifelong journey, where prevention and understanding of social, economical, cultural, psychological, and spiritual aspects of health and illness, in addition to the physical aspects, are key in maintaining a balanced lifestyle. According to Dossey5 and Watson and Foster,6 healing is not only about curing symptoms or temporarily fixing problems, but also about caring, creativity, prevention, and understanding "the whole." Most importantly, healing is about creating a balance in and for our lives.5,6

Holistic foot and nail management is a nursing approach to managing feet and nail problems in which the holistic philosophy provides care and teaches clients that proper foot management requires lifelong endeavor, dedication, and commitment. Holistic foot management involves self-care, understanding, and education. In addition, basic and ongoing foot care and shoe selection are critical for preventing diabetic foot problems and continuing to lead productive, balanced lives.7-9

This article, which is part of an outcome case study report of the Good Foot Care Initiative implemented by the Coastal Georgia Regional Development Center, presents a holistic approach to the management of foot and nail problems. Fictitious names are used in the case studies to protect participant privacy.

CASE STUDY 1

Mr Sam, a retired schoolteacher, is a 79-year-old man with nail abnormalities. Mr Sam has reduced sensation in his toes caused by diabetes, of which he was unaware until his recent visit with the first author. His peripheral sensation was clinically measured using a monofilament 5.07 (10 g), the usual tool to detect neuropathy. The main concern and focus, however, were nail changes that Mr Sam described as "horrible," "painful," and "expensive." For the past 10 years, he had simply applied over-the-counter fungal medications. Although fungal nail infection could result in abnormal looking nails, Mr Sam did not have fungal nail infection.

Mr Sam was diagnosed 22 years ago with borderline type 2 non-insulin-dependent diabetes, which he developed after taking steroids for several years for arthritis. He has never taken any insulin or oral hypoglycemic agent. According to Mr Sam, I watch what I eat constantly. I don't eat french fries and sweets, but eat lots of vegetables and fruits and eat fish 2 to 3 times a week. I try to take care of myself by exercising regularly. And, I don't go to doctors.

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anymore [unless I'm really sick], and I'm no longer on steroid medicine. I swim regularly to help my joint pain. But, I've been dealing with these bad nails for too long. And the pain is not getting better.

Although Mr Sam has a healthy lifestyle and frequently used alternative therapeutic modalities, such as aquatic therapy and humor, he was under the false impression that his diabetes was not severe, especially after prednisone was discontinued. Unfortunately, he is just as likely to develop diabetes complications. Mr Sam needs to understand the importance of regular checkups for accurate diagnosis, prevention, and treatment of preventable foot problems, such as nail abnormalities that result from neuropathy.

**CASE STUDY 2**

Mr John is a 68-year-old black man who has been followed for about 2 years as part of the Good Foot Health Initiative Program for seniors in rural southeast Georgia. When first seen, Mr John had a sad expression on his face, with a facial grimace. His toenail extension was 1.8 cm long and about 0.6 cm thick. His nails were thicker than Mr Sam's and heavily coated with dirt. Most well-kept toenails (not fingernails) are usually less than 0.1 to 0.3 cm long and 0.1 to 0.2 cm thick. In addition, Mr John's nails were yellow, brittle, and badly curved in all directions.

Mr John had no evidence of ingrown toenail or previous history of medical or surgical treatment for ingrown toenail. He is not diabetic and has no toe or foot amputation. He ambulates slowly and steadily, but "do not go to places because [his] feet hurt." His long toenail was also complicated by 2 painful calluses; 1 top of the left second toe and 1 at the bottom of the right foot. One callus was the size of a dime and 2 measured 2.5" x 1.8" and thick, but no bruised area. His feet were dirty, with dirty socks and shoes that had not been changed or washed for weeks. His legs and feet were also dry, white, and scaly.

Financially, he indicated that he is "lucky to get by" with his Social Security check. During one of our conversations, Mr John indicated that he never thought about having his nail "trimmed" because his "friend who once had his nail cut, later lost his leg." His friend was diabetic. Mr John did not associate his foot pain and limitation in mobility of more than 5 years to the condition of his nails and shoe. Although not diabetic, his vision had been "bad for years." Unfortunately, because he did not consider his foot pain "bad, like having a heart attack," he did not think it was necessary to see a healthcare provider.

**DISCUSSION**

The issue of foot and nail problems is not unique to persons with diabetes. Everyone, including children, can have foot and nail problems. Although there are different types of foot and nail problems, holistic assessment was necessary to identify all of Mr John's problems. Other than managing fungal toe nails (onychomycosis), some of his foot care included caring for calluses and cleaning, massage, and moisturizing his legs and feet. Onychomycosis and ingrown toenails (onychocryptosis) are common nail problems that can affect anyone. Table 1 presents the differential diagnosis of these 2 nail problems.

**Onychogryposis**

Onychogryposis, which was present in Mr Sam's and Mr John's nails, is commonly referred to as claw nail or ram's horn nail. It is simply thickening, curving, and distorting of the toenails, typically the great toe. Onychogryposis is a gross abnormality and not a fungal nail infection. The most common cause of onychogryposis is tight or ill-fitted shoes or repeated nail trauma. Other possible causes include infection, poor blood supply, diabetes, and poor nutrient intake.

Not always painful, onychogryposis may be temporarily relieved by wearing shoes that accommodate the changes or pressure on the nail. Because of the length, it becomes impossible to cut the nails and is often misdiagnosed and mistreated as onychomycosis, as in the case of Mr Sam.

Using antifungal agents is often a waste of money and is an unnecessary treatment for onychogryposis. Treatment is simply grinding or trimming the nail down gradually, regularly, or completely via surgical intervention. Surgical removal may involve partial or total obliteration of the nail bed. However, prevention is the key to lifelong management through routine, ongoing, proper nail care.

**Holistic foot and nail care**

Before holistic foot and nail care, Mr John's routine for 3 years was to walk into the multipurpose senior center and sit down in the TV room before lunch. After lunch, he was usually out the door without talking, socializing, or participating in any center activity. When invited to participate in Bingo games or asked to join group outings, he always declined. After foot care on his first visit with the first author, the center manager reported that Mr John was a "totally different person."
TABLE 1. Differential diagnosis: Onychomycosis versus onychocryptosis

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Onychomycosis (Tinea unguium)</th>
<th>Onychocryptosis (ingrown toenail)</th>
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<tr>
<td></td>
<td>The most common nail disorder defined as fungal infection of the nail. Thickening nail bed,</td>
<td>Paintful acute paronychia (acute or chronic inflammation of tissue folds surrounding the nail</td>
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<td>crumbling nails, discoloration (white, black, green, and often yellow), and separation of the</td>
<td>plate). Red, painful, and often with small abscess or pus pocket.</td>
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<td>nail plate from the nail (onycholysis)</td>
<td>Involved nail made worse by poor nail cutting that becomes infected and swells, leading to pain</td>
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<td>Usually starts in the nail margins or under the free edge of the plate, which is often warm and</td>
<td>and difficulty wearing shoes.</td>
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<td>moist as a result of footwear.</td>
<td>Mechanical force of walking or sporting activities press the soft tissue against the nail margin,</td>
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<tr>
<td>Possible cause</td>
<td>Frequently caused by organizing opportunistic fungi (eg, tinea, candidias, or yeast infections)</td>
<td>adding to the problem and pain.</td>
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<td>Susceptible patients: patient with diabetes and arteriosclerosis and repeated wound injuries;</td>
<td>Caused by fungal or bacteria infection (usually organizing is Staphylococcus aureus) that is</td>
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<td></td>
<td>has a hereditary component</td>
<td>often the result of the germinal matrix bed being folded or involved deeply into the soft tissue at</td>
</tr>
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<td></td>
<td>Medical management</td>
<td>the side of the nail.</td>
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<td></td>
<td>Months of taking antifungal medication, which is often toxic to liver and kidneys</td>
<td>Anyone can be susceptible; it also has a hereditary component</td>
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<td>Permanent nail removal is aggressive medical/surgical treatment</td>
<td>Poorly fitted shoes can worsen the condition</td>
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<td>The key to treatment is prevention, early identification, and intervention, with simple and</td>
<td>Management is usually trimming the offending nail margin and draining the abscess. It is a</td>
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<td>ongoing nail care.</td>
<td>misconception/myth that ingrown toenail is caused by trimming the nail straight across.</td>
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<td>Permanent treatment involves surgical removal of part of, or the entire, nail.</td>
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<td>The goal of treatment, however, is to prevent the nail from piercing the skin by ongoing proper nail</td>
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<td>care via holistic self-care approach discussed below.</td>
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Holistic healing is a way of life and not so much about the medication or the treatment we give to our patients. Holistic approaches to healing and caring for anyone with healthcare needs, such as Mr John and Mr Sam, are about the ability to understand and connect the physical, emotional, social, and spiritual environment needs of the client. Nightingale provided nurses with a framework of how to care for the whole person, body, mind, and spirit by teaching us to appreciate and holistically assess and reshape the environment in healing. She noted the importance of an accurate diagnosis prior to any intervention. Specifically, Nightingale stated,

In watching disease, both in private houses and in public hospitals, the thing which strikes the experienced observer most forcibly is this, that the symptoms or the suffering generally considered to be inevitable and incidental to the disease are often not symptoms of the disease at all, but of something quite different. This helps explain that in the holistic approach to healing, simple covert or hidden etiology (eg, poor foot hygiene, callus, and pain, as in the case of Mr John; and poor shoes, as in the case of Mr Sam) can often deprive us of social, financial, and spiritual balance in our life. For 10 years, Mr Sam was spending money on the wrong treatment, but wearing the same shoes. On his first visit, it was recommended that he change his shoes, which he did. Many seniors at the various senior centers, such as Mr Sam and Mr John, have indicated they were unable to go to church or move around because of problems with their feet and legs.

Nightingale’s statement, therefore, enables us to think beyond the presenting problem in providing holistic care to our client. Nightingale also noted that, ultimately, it is nature that heals; often, our role as healthcare providers is to remove the obstacle to healing. That obstacle simply could be replacing a shoe, caring for someone’s nails (ingrown, claw, or
fungal nails), or teaching self-care preventive and management strategies.

After Mr John's nails were trimmed, calluses removed, and his feet thoroughly washed, massaged, moisturized, he was given simple, preventive education. "Whole" again, Mr John was able to socialize and participate in activities that improved his emotional and spiritual life. Since the author's first visit in 2003, Mr John is always waiting at the door with a smile, offering to carry equipment or reload the equipment after the service before sitting down to eat lunch.

Foot care for persons with diabetes is more complex because of the high risk for retinopathy and neuropathy. In addition to neuropathy, a diabetic foot problem is also a collection or combination of chronic foot problems, such as onychomycosis, onychocryptosis, onychogryposis, callus, corn, deformities, blisters, infections, cellulites, abscess, Charcot foot, ulcers, and gangrene. Most problems originate from something minor, such as improper nail or foot care, improper follow-up of minor cuts, or from wearing the wrong type of shoe, leading to gangrene and amputation. To prevent the incident of serious diabetic foot problems, such as infections, gangrene, and amputations, nurses might consider adopting the holistic approach in providing proper foot and nail care for the elderly, especially for those with diabetes. Holistic perspectives not only provide clients with a way of living with their foot and nail problems, but also provide them with common sense and a self-care approach to managing preventable foot problems and balancing life.

THE BASIC FOOT CARE PROGRAM

By using a holistic healing approach to managing feet and nails of the seniors in the Coastal region, the Good Foot Care Initiative was not simply about cutting toenails. Care often began with a holistic assessment and always included prevention education: referrer, when appropriate: and follow-up visits or calls. Clients are taught to understand that feet are like cars, which need to be serviced regularly (Fig 1).

The Foot Mobile

The first step in prevention and management of foot problems and foot and nail complications is teaching the public to understand that feet are like cars, trucks, wheelchairs, or any other vehicles of mobility. Just as we regularly service our cars every 3 months or 3000 miles, we must set aside time to service our Foot Mobile (Fig 1). When this concept is instilled in the client, it becomes easy for them to appreciate the need for regular foot care, even if they do not have foot or nail problems.

Holistic assessment

Seniors and those with diabetes experience many holistic reasons for the inability to cut their nails or take care of their feet, including transportation; lack of funds; age; poor vision; arthritis; poor coordination; osteoporosis; poststroke; lack of flexibility; fear of bone fracture; cardiac disease; pacemaker; difficulty breathing; oxygen use; and fear that cuts can lead to ulcer, infection, and possible amputation. In the holistic approach, locating or identifying the primary
concern or problem of every client via physical, emotional, social, economic, and spiritual assessment was the first step in taking care of their feet and nails. It is important to assess these issues to be able to provide a holistic plan of care\(^{21}\) that involves ongoing and lifelong self-care or to provide prevention education for preventable problems, such as calluses, corns, onychomycosis, onychocryptosis, and onychogryposis.

It is inappropriate for a professional to cut a client’s nails without first assessing for poor vision and checking for foot neuropathy. It is impossible for someone with retinopathy to look for changes. These clients must be taught to use their hands, rather than their eyes, to feel for changes and check the inside of footwear, just as clients with neuropathy check for lumps, bumps, or wear and tear in the inside, outside, and sole of the shoes.\(^{22}\) A patient needs to understand that neuropathy can lead to covert or hidden complications, such as foot pain; fungal toenails; paresthesia; numbness; tingling; changes in the arch of the foot; Charcot joint/foot; and, most commonly, calluses, corns, clawed toes, and unnoticed ulceration.\(^{22,23}\) As recommended by the American Diabetes Association, it is imperative for patients with neuropathy to see a medical professional yearly, or sooner as needed, for foot assessment.

**Holistic self-care**

Although most of us need our nails managed weekly or monthly, it is amazing how many of us do not pay attention to our feet. We pay daily attention to our face, yet ignore our feet until it becomes unbearable to walk. If we can apply the same concept of regularly servicing our car to servicing our foot mobile, then we may be able to prevent some of the holistic problems associated with foot problems (Fig 1). In addition, healthcare systems do not pay healthcare providers to cut a client’s nails on a weekly or monthly basis, which makes it imperative to teach the public, especially those with diabetes, about holistic self-care. This holistic self-care approach to managing our feet and nails is imperative and critical to prevent debilitating complications of neglect and improper care or shoes.

Elioupoulos\(^{1}\) noted that holistic self-care is playing an active role in balancing our life, body, mind, and spirit by proper “tune-ups” and nutrition. It is, therefore, important that clients be given the tools to manage their nail and foot problems. In doing so, it may be important to solicit the assistance of family members, neighbors, or community to provide care if the patient cannot personally or financially perform the care. Using a strong, long emery board several times a week or applying inexpensive lamb’s wool in between toes may be all that is needed to maintain proper nails. Waiting to see a provider every 3 to 6 months or until surgical intervention is necessary can be detrimental or result in severe complications.\(^{24-26}\)

**CONCLUSION**

Nurses interested in providing foot care to clients as an independent nursing function can become trained as certified foot and nail care nurses (CFNC).\(^{27,28}\) The certification program expectations can be found at www.wocn.org. As nurses begin to be certified in caring for nail problems, it will be critical to recognize the different types of foot and nail problems that are common to everyone.

With a holistic approach to good foot and nail care management, our feet can continue on a lifelong journey of good health and a balanced lifestyle.

**REFERENCES**


