

Hot spring footbath is effective for low back pain

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ABSTRACT

This is a case report of an old Japanese woman with Parkinson's disease complicated with severe low back pains. Because of her low back pain, she could not receive physical therapy to improve her motor performance. Daily hot-spring foot bathing relieved her low back pain very effectively. Foot hot spring water bathing can be recommended as a safe and a cost effective therapeutic procedure localized chronic pains.

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A 60-year-old woman with Parkinson's disease and lumbal spondylosis accompanying discogenic pain was admitted to Kyushu University Beppu Hospital for her suffering from daily on-off phenomenon to be controlled. After admission, her dose of anti-Parkinson agent was increased and she was subjected to a physical therapy program for stable standing and gait. Several days after start of the physical therapy program, she became suffered from insomnia due to low back pain. She also suffered from coldness at peripheral lower extremities probably caused as a side adverse effect of the increased anti-Parkinson agent. To her lumbago, the administration of diclofenac rectal suppository started as a pain relieving medication and its daily dose increased gradually Figure 1. Our hospital locates in Beppu city, which bears the largest numbers of hot spring sources in the world. The hospital ward is supplied with hot spring water containing low salt solute (1.5g/kg). To lessen her foot coldness, she was subjected to hot spring footbath of 40°C for 20 min every afternoon. Two buckets were half-filled with hot spring water and she sat on a chair and put her right and left leg into each. After spa foot bathing, we did

no rinsing the patient's feet with warmed tap water, and just wiped the excess of hot-spring water on skin to keep the contents of the hot-spring on skin and it disturbed the evaporation of sweat from skin surface, and it would delay the cooling of the warmed foot temperature. After starting the daily footbath, the foot coldness disappeared. In addition, unexpectedly the daily dose of diclofenac rectal suppository decreased and finally she needed no pain reliever Figure 1. She recovered sound night sleep (1,2) with no low back pain and no foot coldness. This good condition continued with daily foot bathing for following several months until her discharge from hospital. The 20-minute-long footbath was considered to dilate local blood vessels and warmed feet. Naturally, the foot warmth erased the foot coldness. Locally warmed blood at feet got into systemic blood circulation, leading to improving blood circulation at low back might contributed to lessen low back pain with increased microcirculation at the site. Moreover, spa bathing has been reported to reduce autonomic sympathetic stress, chronic pain, blood pressure and cardiac load by increasing pain-relieving hormones in plasma such as b-endorphin and

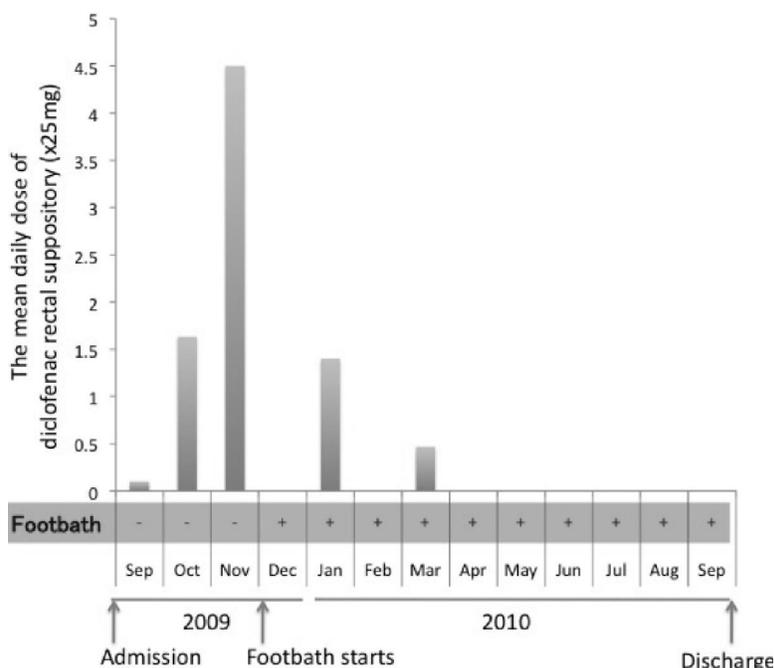


Figure 1 : The change of daily dose of pain reliever for lumbago before (-) and after (+) daily foot bathing treatment

corticotrophin and lowering the circulating mediators of inflammation and pain, (3,4). Thus, foot bathing has been reported to be effective for pain and mental stress relief (5-7). These reports support the pain-relieving effect observed in the present case, although foot-bathing may yield partial effects in comparison with systemic spa bathing. In fact, we could reduce the administration of pain reliever. The foot bathing seems to be a safe, and cost and clinically effective treatment for systemic or local chronic pain. Foot bathing can be applied safely to patients who are difficult to be immersed systemically in a warm bath, for example, patients with hemiplegia or bone fracture of an arm. To our knowledge, this is the first report of a long clinical course over several months of pain relieving effect of hot spa foot bathing for lumbago. We propose that the warm footbath should be taken into a consideration as an assist therapy for chronic physical pains.

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