International Wound Journal ISSN 1742-4801

LETTER TO THE EDITOR

To suck or not to suck: medicinal leech therapy for lower extremity wounds in patients with peripheral arterial disease

Dear Editors,

An 84-year-old man presented for non-healing lower extremity wounds, which were present for 3 months, at the diabetic foot team of our hospital. He had diabetes (10 years), chronic renal failure (3 years) and coronary arterial disease. He had an ulcer on the second toe of his right foot (Figure 1) and a dry necrotic wound on the heel of the same foot. His pedal pulses were non-palpable. On Doppler ultrasonography, arteria tibialis anterior and arteria dorsalis pedis were not observed, and arteria tibialis posterior had monophasic waveform indicating severe peripheral arterial disease. He also had resting pain on his right foot. He was diagnosed as having Fontaine IV peripheral arterial disease. Surgical revascularisation was not possible and medical therapy was prescribed. He received intravenous iloprost for 10 days. The patient was taken into wound care follow-up programme and weekly visits were scheduled. The patient did not come to following scheduled visits and showed up 3 months later. The second toe of his right foot has developed dry necrosis and the wound on his heel was at the same size (Figure 2). But, there were several additional ulcerations on his right foot (Figures 2 and 3). On detailed questioning, it was found that almost 3 weeks ago, he was brought to a centre, where a physician applied several alternative and complementary treatments including medicinal leech therapy. The patient has received several sessions of medicinal leech therapy (hirudotherapy) in 20 days in this centre. During this time, his wound on the second toe became worse and developed gangrene and additional wounds due to leeche bite (Figures 2 and 3).

Figure 1 An ulcer on the second toe of the patient at first visit.

Figure 2 Gangrene of the second toe.

The medicinal leech therapy is a-century-old method, which constitutes the use of *Hirudo medicinalis*, an intervertebrated parasite, in the treatment of human disease (1). Medicinal leech therapy is widely used by plastic surgeons, when venous congestion threatens the viability of free-tissue transfers and replanted digits (2). Leeches attach to the skin, suck up to 15 ml of blood per feeding and detach when fully engorged (3). In 2004, FDA approved their use as medical devices in plastic surgery (3). Recently, its use has dramatically increased for

Figure 3 New necrotic wounds after leech therapy.

unsupported indications. A number of complications related to leech therapy have been reported. These include pain, allergic reaction, uncontrolled bleeding and infection (3,4). Neither its effectiveness nor its safety has been investigated in patients with peripheral arterial disease. As seen in this case, leech bites may cause new ulceration in patients with peripheral arterial disease.

In conclusion, medicinal leech therapy should not be used in patients with severe peripheral arterial disease. Serious complications of medicinal leech therapy should always be kept in mind. The awareness of the health care workers regarding these complications should be increased.

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doi: 10.1111/iwj.12304

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