

## Clinical Notes

### An Arab tradition could lead to a disaster in diabetic patients

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Floor sitting is a known practice among Arabs and some Asian countries, for example, India and Japan. Arabs use to sit on the floor to take food, drinks and for religious purposes. While Asians have different positions of sitting. The tailor position is known in India and *Zazen*, the Japanese word for “sitting meditation”, is a form of meditation rather than a particular posture, and it is practiced in Yoga. Sitting on the floor, puts pressure on the foot, which is of concern in diabetic patients, as it may lead to ulcer formation. Diabetic foot ulceration (DFU) is a common problem, which develops in one out of 6 diabetic patients.<sup>1</sup> Approximately 70% of all leg amputations happen to people with diabetes. Furthermore, in developed countries, approximately 5% diabetics have foot problems and are the most common cause of admission to hospitals. In developing countries, it is estimated that foot problems may account for approximately 40% of health-care resources available for diabetes. The direct cost of an amputation associated with diabetic foot is estimated between US\$30,000 and US\$60,000. Most amputations begin with foot ulcer. One in every 6 people with diabetes will have a foot ulcer during their lifetime. Each year, 4 million people worldwide gets foot ulcer. In most cases, diabetic foot ulcers and amputations can be prevented. It is estimated that 85% of amputations could be avoided. A well-organized diabetic foot care teams, good diabetes control, can achieve significant reductions in amputation.<sup>1</sup> Diabetic neuroarthropathy, a less recognized complication of diabetes mellitus (DM) needs greater attention in Saudi Arabia. Diabetes mellitus has emerged as a major public health problem. The problem of diabetic neuroarthropathy deserves greater attention to detect it at an earlier stage so as to prevent diabetic feet from further complications.<sup>2</sup>

A 72-year-old, male Saudi, presented at a primary health care center, with complain of ulcer at the right big toe, he recognized it 3 days ago after he wore unfit shoes. There was a swelling on the lateral side of the ankle of the same foot, that he did not mention, which sometimes reduced, in on and off path, he denied trauma, but he admitted a long time habitual sitting on the ground, depending on his lateral side of the right ankle. Medical history was significant for DM for approximately 20 years. On examination, the temperature was 36.7°C, pulse 70/min, blood pressure 120/70 mmHg, the ulcer at the right big toe was slightly extended to the dorsum



**Figure 1** - Photo showing the right foot of the patient with ulcer on the lateral side.

of the foot (Figure 1). There was a swelling at the lateral side of the ankle. The patient has erythematous margins, and chancre of volcanic appearance, there are no signs of ischemia, peripheral pulses and neuropathy detected. Laboratory result showed glycosylated hemoglobin (Hb A1c) of 0.071 (normal range 0.044 - 0.064). The patient was on insulin. Wound dressing consist of normal saline, povidone iodine 10%, clindamycin 150 mg / orally, twice a day. He was transferred to the surgery department for further evaluation. They advised to continue on caring of the foot, with regular follow up at surgery department. Post-operatively, the patient acquired good glycemia. He was instructed not to sit on the lateral part of foot, and avoid sitting on the floor as possible. After one month, the ulcer of the big toe started to heal with good vascularization, the swelling at the lateral ankle was reduced and caring of the foot was continued.

The case presented is a common problem among diabetics, but it is unique as it draws our attention to a clear cause of ulcer due to a common traditional habit, which should be stressed on to avoid complication. The patient use to sit on the ground as an Arab custom, put his weight on his feet, for a long time, that leads to volcanic ulcer on the lateral part of the ankle; when he was instructed to avoid this sitting position, the ulcer started to heal, thus, saving his feet from amputation. A benign, appearing dry gangrenous eschar, often hides undrained infectious collection. Non-healing ulcers may become infected ulcers and are a major cause of lower-extremity amputation, approximately 15 times more likely to occur in people with diabetes versus people without diabetes. Reduction of pressure, or off-loading, is another essential aspect of diabetic wound care. Foot pressures, shock, and shear can be reduced by wearing fitted shoes, insoles, and socks.<sup>3</sup> Several well-accepted classification systems are available for diabetic foot ulcers.

A new wound-based clinical scoring system for diabetic foot ulcers is suitable for daily clinical practice and anticipating chances for healing and risk of amputation. Four clinically defined parameters, such as palpable pedal pulses, probing to bone, ulcer location, and the presence of multiple ulcerations. Using this score, the probabilities for healing, amputation, need for surgery, and hospitalization are predictable with high accuracy.<sup>4</sup> The incidence of DM in Saudi Arabia is significantly high and approaching 12% of the population. The adverse effects of DM on lower limb circulation and the potential increase of risk of limb loss are well known. Neglecting a diabetic foot leads to disability of the patients as 50% of foot amputations are related to diabetes; due to several factors (such as peripheral neuropathy, maculopathy and retinopathy) diabetics may not be aware of their feet injuries. Early detection would save a patient's life in terms of quality and quantity. For this reason, diabetic foot examination has been considered as part of many protocols for diabetic care.<sup>5</sup> The focus should be on prevention, patient education, general hygiene and daily inspection. Neuropathy continues to be the most common cause of diabetic foot ulcers and its presence is a strong predication of likelihood for future ulceration.<sup>2</sup> Patient's education and care from the family are the corner stone in the treatment of diabetic foot ulcers. The patients should avoid sitting on the ground as much as possible, change his sitting position and use a pillow to rest the feet on. There should be a point

of value to mention this to an Arab diabetic patients. Control of blood glucose is the paramount treatment. There should be frequent observation of the ulcer and most importantly, daily dressing. We believe that this leading problem is preventable, and this cancer can be controlled in a simple cost-effective way.

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