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Is Kinesio Taping useful for advanced cancer lymphoedema treatment? A case report

Abstract

Lymphoedema is a common and distressing symptom in palliative care. The classic physiotherapy treatment for lymphoedema includes a combination of manual lymph drainage (MLD), compression therapy (multi-layer bandaging, compression garments), decongestive exercises and skin care. Lymphoedema therapy in advanced cancer patients should be adapted to their general condition and the intensity of other symptoms. In this article we present a case of an advanced cancer patient whose painful skin tension, caused by lymphoedema, was successfully reduced with the use of Kinesio Taping.

Key words: lymphoedema, Kinesio Taping, palliative care

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Introduction

Lymphoedema can be defined as the tissue fluid accumulation that arises as a consequence of impaired lymphatic drainage [1]. In cancer, lymphoedema is caused by damage to the lymphatic system as a result of surgery, radiotherapy, or progression of neoplastic disease. However, in advanced cancer patients, several concurrent factors usually contribute to the formation of oedema. These factors often include chronic renal failure, hypoproteinaemia, deep vein thrombosis (DVT), and reduced mobility and activity [2]. The presence of lymphoedema in people with advanced cancer can lead to significant distress for both the patients and their families [3]. The studies show that lymphoedema significantly affects their quality of life [4–6]. It causes discomfort, decreases physical activity and increases dependence on others [7, 8]. The goals of the treatment

for advanced cancer patients are different from those of traditional lymphoedema therapy, which are based on complex decongestive therapy (CDT). CDT includes a combination of manual lymph drainage (MLD), compression therapy (multi-layer bandaging, compression garments), decongestive exercises and skin care [9]. Lymphoedema therapy in advanced cancer patients should be adapted to meet patients' needs and regularly reviewed to assess its efficacy. The main goal of the treatment is to achieve symptom management without decreasing patients' quality of life. Therefore, CDT often needs modifying in advanced cancer patients. One of the options is using Kinesio Taping instead of multi-layer bandaging. It can be particularly helpful in patients who cannot undergo compression treatment due to pain. Kinesio Taping was developed by the Japanese chiropractor Dr Kenzo Kase in the 1970s. In this method we use special elastic tapes composed of 100% cotton

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Figure 1. Advanced cancer patient with haematoma before Kinesio Taping application



Figure 3. Lighter marks on the skin where the tape was applied



Figure 2. Kinesio Taping application on the arm

fibres and acrylic heat-sensitive glue. The tapes are modelled on the skin's characteristics [10, 11]. The unique properties of Kinesio tape allow it to lift the skin and open up the superficial lymphatic pathways in the affected area. In addition, the tape can provide a directional pull that guides the lymphatic fluid in the desired direction of drainage [12]. The positive results of Kinesio Taping are also explained by the improvement in microcirculation (Figures 1–3).

In this article we present the case of an advanced pancreatic cancer patient whose lymphoedema was successfully reduced by Kinesio Taping.

Case report

A 56-year-old woman was admitted for palliative home care in September 2010. In February 2008, the patient was diagnosed with a malignant tumour of the head of the pancreas and qualified

for surgical treatment. She underwent pancreaticoduodenectomy (the Whipple procedure) and chemotherapy. In September 2010 the patient was hospitalized in the surgical department due to symptoms of bowel obstruction. The patient was rediagnosed with local recurrence with gastroenterostomy infiltration. In hospital, the patient was consulted by palliative care support team. After being discharged from hospital, the patient was transferred for palliative home care in a good functional condition. At the time of admittance, she suffered from visceral pain, which was successfully treated with long-acting morphine (120 mg a day) and transdermal buprenorphine (52.5 µg/hr). Four weeks later the patient started suffering from lower limb lymphoedema, located mostly in the shins. She also complained of limb skin and subcutaneous tissue pressure pain. The skin was stretched and painful and it was not possible to mobilize it. Lymphoedema treatment required the implementation of physiotherapy. Since classic decongestive therapy consists of multi-layer compression bandaging and manual lymphatic drainage, its use was inconvenient for the patient, suffering as she was from severe pain. Therefore, the physiotherapist decided to use the Kinesio Taping method. A lateral anterior lower leg taping application was used [13]. The fan tape anchor started at the lateral aspect of the knee with no tension. The tails of the tape were applied to the anterior, medial and posterior aspects of the lower leg with 15–25% tension (Figure 4). The tapes were left on the patient's skin for the next three days. After that time, the physiotherapist removed the tapes. The patient claimed that the oedema, pain and feeling of heaviness had decreased. The physiotherapist observed skin ten-



Figure 4. Kinesio Taping lymphatic application



Figure 5. Stripy marks indicating skin lift

sion reduction and stripy marks, which may have indicated the lifting of the skin in the places where the tapes had been applied (Figure 5). The patient was satisfied with the effects of the physiotherapy intervention. Kinesio Taping has been carried out with positive effects up to now. The tapes remain on the skin for three to five days. Between each application, the skin has 24 hours' rest.

Discussion

Lymphoedema management in advanced cancer patients remains a challenge for health care professionals. This reflects the principles of palliative care, in focusing on the palliation of physical symptoms and the maintenance of independence for as long as possible [3].

The main goal of lymphoedema therapy in advanced cancer patients is to make them feel more comfortable [2]. Therefore, classic CDT often needs to be modified. Kinesio Taping can be one of these additional forms of lymphoedema therapy. It is a safe method and the possibility of leaving the tapes on the skin for a few days also makes it comfortable. Another advantage is that a patient can take a shower without taking the tape off, since it is waterproof

[13]. The authors of current publication show one of the possibilities of classic CDT modification. The effectiveness of basic lymphoedema physiotherapy methods, such as multi-layer bandaging, manual lymphatic drainage or decongestive exercises, has been confirmed by numerous studies carried out among cancer patients [14]. The development of Kinesio Taping administration is still ongoing. There are very few studies assessing the effectiveness of Kinesio Taping in lymphoedema therapy. One of them was performed by Tsai et al. [15]. The purpose of this study was to compare the treatment and retention effects between standard CDT combined with pneumatic compression (PC) and modified CDT, in which the use of a short-stretch bandage was replaced by the use of Kinesio Taping combined with PC. The study results suggest that Kinesio Taping could replace the bandage in CDT, and could be an alternative choice for breast cancer-related lymphoedema patients with poor short-stretch bandage compliance. The authors emphasized the need for more clinical trials evaluating the effectiveness of Kinesio Taping in lymphoedema treatment.

In our case, standard CDT had to be modified to achieve symptom management without compromising the patient's quality of life. The effective-

ness evaluation was based on the assessment of pain and the patient's satisfaction. Lymphoedema physiotherapy in palliative care should focus on identifying the individualized and realistic goals of the treatment for each patient.

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