

The Use of Kinesio Tape in the Management of Acute Musculoskeletal Bleeds in Haemophilia

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OBJECTIVES

Patients with haemophilia can suffer from recurrent bleeds in joints and muscles which cause a cycle of musculoskeletal and joint damage leading to arthritis. Joint preservation is a crucial component in the care of haemophilia patients: preventing bleeds and maintaining normal activities of daily living. Over an individual's lifetime this can help reduce the amount and frequency of treatment with consequent financial savings.

Kinesio tape was invented in Japan 1973 by Dr Kenzo Kase. It is designed to influence muscle and soft tissues, but still allow full range of movement (Kase, 1996). The use of Kinesio tape has been researched in mastectomy patients with lymphoedema, results indicated reduced swelling and increased shoulder range of movement in the treatment group compared to the control group (Lipinska et al, 2007).

The tape is thought to facilitate myofascial release and increase the re-absorption of lymphoedema in underlying tissues (Kase, 1996).

METHODS

Patient A was newly diagnosed with acquired haemophilia A, following a spontaneous left elbow bleed which was restricting range of movement and strength in the left elbow. Severe swelling and bruising was present over the lateral and posterior aspects of the elbow joint, which was warm on palpation. No neurological signs were present.

According to Kase (2011) swelling causes increased pressure and a lack of skin movement and this increased pressure may inhibit the lymphatic system. The manufacturers of Kinesio tape report that the micro convolutions in the tape gently lift the skin away from the underlying tissue, which in turn, releases pressure and allows lymphatic fluid movement (Morris et al, 2012). The stretch on the tape also provides a micro massage which can help redirect fluid to a less congested lymphatic pathway, in this case the shoulder.

Patient A commenced FEIBA (Factor Eight Inhibitor Bypassing Activity) immediately, for four days at a dose of 6000 units BD. Kinesio tape was applied to the area 24 hours later by a physiotherapist trained and qualified in the application of Kinesio tape (KT 1-3). The patient had no skin conditions or sensitivities after a test tape was performed.

Two 'fan' strips were applied to clean, dry skin, from the axilla down to and across the elbow joint with tape off tension (15% tension) giving a slight recoil effect; a technique used for lymphatic drainage. The tape covered the area of swelling and bruising crisscrossing the entire area. The arm was also placed in collar and cuff to allow for some gentle movement following a rest period of 24 hours.

The tape was removed 72 hours later for assessment and was then reapplied for a further 72 hours, using the technique outlined above. No reactions were observed.

RESULTS

The application of the tape appeared to assist in the drainage of the fluid within the joint by redirecting it away from the congested area around the elbow and up towards the shoulder joint (pictures 1 & 2).

The bruising around the elbow joint also significantly reduced in size over the initial treatment period (pictures 3 & 4). The bruising had almost disappeared seven days following the initial application of tape.

The images show the tape cut and location used in this case study. The images are initial tape application and post tape at 72 hours.

The range of movement at the elbow joint returned to normal functional range at four days following initial application (picture 4, demonstrating full flexion). Resisted movements at the left elbow and wrist also returned to normal four days following initial application of the tape.

The case study indicates that swelling and bruising around the joint had all but disappeared seven days following initial application.

CONCLUSIONS

The application of Kinesio tape in this case study, in conjunction with FEIBA, appeared to assist in the recovery of the joint by reducing swelling, pain and restoring full range of movement within 7 days of bleed onset.

Improving lymphatic fluid flow with the application of tape by redirecting fluid to a less congested lymphatic pathway around the joint or soft tissue bleed, could accelerate the recovery process and enhance muscular, joint and circulatory function thus reducing the duration of treatment required for the bleed.

However with this one off case study it has been impossible to quantify whether or not return of normal function, reduced swelling and pain free movement was in any way facilitated by the application of Kinesio tape. The recovery of this joint bleed could have followed the same pathway and timescale of recovery without the use of Kinesio tape.

Kinesio tape could play an important role in the management of bleeds in haemophilia and associated bleeding disorders, resulting in reduced length of treatment due to shorter periods of recovery; facilitating early discharge and significant cost savings. There is a need for further investigation into this field of practice.

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