ABSTRACT

The purpose of this case report is to describe attempts to prevent skin-related adverse events from occurring and protect the skin once breakdown occurred in a person with chronic stroke during locomotor training. There is scant literature in how to address skin during locomotor training with the Lokomat(®), particularly when a patient presents with sensory deficits and frail skin. The patient was a 75-year-old male survivor of stroke who participated in the Lokomat(®) group of a randomized clinical pilot study comparing locomotor training with the Lokomat(®) and conventional means. He had diminished sensation to light touch and proprioception on his left leg with skin on both lower legs presenting as thin, flaky, and virtually hairless. Although much effort was put towards prevention of skin breakdown, he developed numerous skin-related adverse events during his training. However, his skin healed completely with reduced training intensity and initiation of "pre-wrapping" his lower legs with Akton(®) viscoelastic polymer sheets and elastic bandages. Significant improvements were noted in his Functional Improvement Measure(™) locomotion score and Stroke Impact Scale domains of strength, participation/role function, and total recovery, though not in his 10-m walk test velocity or 6-min walk test. The Akton(®) sheets and team approach between study team, patient, and his wife allowed simultaneous safe continuation of locomotor training with the Lokomat(®) and healing of his skin breakdown.