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upper, and lower end vertebra of spinal curves, (iv) open access to individual data, and (v) accurate reporting of electrode placement and data processing. To facilitate quality meta-analysis, it is critical that participant age, sex, skeletal maturity (i.e. Risser score), curve characteristics: side, single or double curve, Cobbs angle, apex level, and curve progression status, are reported. To enable comparison between AIS participants and the equivalent side of their matched control group, data from "convex-equivalent" and "concave-equivalent" sides are required for matched participants with symmetrical spines who contribute to a control group.

O1.7 A Textile-based Electrode System for Self-administered Phantom Limb Pain Treatment in the Home Environment

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BACKGROUND AND AIM: People with limb loss might be affected by Phantom Limb Pain (PLP) in the amputated limb. One treatment to reduce PLP is phantom motor execution (PME). PME can be facilitated by decoding motor volition using myoelectric pattern recognition to then control virtual limbs and games to re-engage central and peripheral circuits involved in motor control (Ortiz-Catalan 2016). PME can be used as a home-based treatment where patients benefit from staying in the comfort of their own home and thus increasing training opportunities (Lendaro 2018). One challenge with home-based PME is the placement of single-use electrodes, which is both time-consuming and difficult to do without the assistance of a physiotherapist. In this study, we investigate the effectiveness of a textile-based electrode matrix system, named textrode-band, as an alternative to the several single-use electrodes needed to record myoelectric signals to perform PME and ultimately to treat PLP at home. METHODS: In an ongoing trial, six participants will be provided with and trained to use the textrode band to perform PME at home. The study consists of three intervention phases: 1) pre-intervention phase, where participants are trained to use the system at home (Fig.1), 2) Phase I, where participants train at home following a schedule with on-call support as needed and 3) Phase II, train at home at their own discretion without support. PLP is evaluated using the Q-PLP questionnaire after each session, addressing the intensity, character, duration, and frequency of the pain, how the pain affects sleep, and how the participant perceives the pain. At the end of intervention phases I and II, semi-structured interviews are performed to evaluate the users' experiences from the treatment enabled by the textrode-band. RESULTS: To date, we have gathered preliminary results from the first participant who has lower limb loss. The control of the virtual leg is good (> 90% online accuracy) demonstrating that textrode-band is a feasible alternative to traditional single-use electrodes for performing PME. The preparation time per session to wet and wear the textrode-band is 15 minutes (compared to 45 minutes with a single-use electrodes setup). The participant expressed that he likes the textrode band, but that the need to wet the band is an inconvenience/drawback. Future studies will focus on making the wetting process easier or using other materials with enough conductance in dry conditions. CONCLUSIONS: In this study, we introduced the concept of using a textile-based electrode system performing PME for the purpose of alleviating PLP. The preliminary results are favorable, indicating a potential for the PLP treatment to be fully self-administered. A home-based protocol will reduce visits to clinical sites. This means not only improved quality of life for these patients also a substantial reduction of healthcare and service costs.