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AB1476-HPR EFFECTS OF WEARABLE TECHNOLOGY AS VIRTUAL REHABILITATION ON FUNCTIONAL OUTCOMES IN PATIENTS WITH ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION

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Background: Virtual rehabilitation systems play an increasing role in rehabilitation. They provide an interactive environment and increased motivation for patients during the session.¹ In recent years, intervention methods based on virtual reality have been studied. However, existing studies are limited because most of them focused on the balance ability of the elderly or studied in stroke patients with same systems.² Thus, it is necessary to investigate the effects of virtual rehabilitation in patients with Anterior Cruciate Ligament (ACL) Reconstruction.

Objectives: The purpose of this study was to investigate the effects of a wearable technology as virtual rehabilitation which provides visual and auditory stimulus aimed for educating and controlling the joint on proprioception, postural stability and fear of re-injury in patients with ACL reconstruction.

Abstract AB1476-HPR – Figure 1

Methods: Nineteen patients (age=28.47±6.18 years, height=176.31±6.06 cm, weight=79.47±14.38 kg) with ACL reconstruction were participated in this study. In addition to conventional physiotherapy, a virtual rehabilitation treatment applied with visual and auditory stimulus three times in a week for 8 weeks. Knee proprioception, postural stability and fear of re-injury were measured with Biodex System Pro 4 Isokinetic Dynamometer, Pedalo Sensamove System, Tampa Kinesiophobia Score, respectively.

Results: There were statistically significant improvements in measures of proprioception (p=0.003), postural stability (p=0.001), and fear of re-injury (p=0.001) between pre- and post – treatment.

Conclusions: According to the results, wearable technology as virtual rehabilitation may be beneficial on proprioception, postural stability, and fear of re-injury to treat patients with anterior cruciate ligament reconstruction. We conclude that devices used as wearable technologies should be used as treatment modalities in clinical services because of providing feedback, easy to carry and interactive treatment.

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AB1477-HPR ADHERENCE TO RCOPHTH GUIDELINES IN MONITORING OF HYDROXYCHLOROQUINE BY RHEUMATOLOGISTS AT LNWH CMH

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Background: The Royal College of Ophthalmologists (RCOPHTH) published in 2017 revised recommendations regarding screening for hydroxychloroquine (HCQ) toxicity. Recent data reported the prevalence of retinopathy to be around 7.5% and depending on dose and duration can rise to 20%–50% after 20 years of therapy. Much higher than the 0.5% reported previously in the 2009 guidelines. Risk is increased in patients taking more than 5 mg/kg/day, and those with renal dysfunction, pre-existing retinopathy or also taking tamoxifen. Retinopathy appears as damage to the photoreceptors, followed by degeneration of the retinal pigment epithelium (RPE). This can produce visual loss and a "Bull's eye maculopathy".

Current guidelines state patients looking to take HCQ long term should have a baseline screening (10–2 Humphrey visual test) in a hospital eye department, and then be referred for annual screening after 5 years of therapy. Dosage should ideally be kept ≤5 mg/kg/day.

Previous guidelines recommend a maximum dose of ≤6.5 mg/kg/day, and baseline optometrist review. Referral to ophthalmologist only if a visual impairment or eye disease is detected at the baseline assessment or the patient notices reduced vision whilst on treatment. Long term HCQ patients, were advised to agree and individual screening arrangement with the local ophthalmologist.

Objectives: This single point of care audit was to assess real world practice at Central Middlesex Hospital against the new 2017 guidance as a gold standard.

Methods: HCQ questionnaires were collected from patients attending regular appointments over one month October–November and recorded:

1) date commenced HCQ, 2) est. total dose, 3) weight and 4) last retinal screen;

Hospital EPR database was used to confirm or assist documentation of therapy data.

Results: In one calendar month 152 of 414 patients were prescribed HCQ.

94/152 of the patients had been on HCQ for >5 years.

63/152 patients were high risk with doses of >5 mg/kg/day.

55/152 patients had either failed to attend a baseline screening, or had no record of having had a baseline screen.

Of the 21 patients that had started HCQ after the introduction of the new guidelines (2017); only 5 had failed to have a baseline hospital screen (3/5 instead had optometrist/high street screen instead). No cases of HCQ related retinopathy had been reported.

Conclusions: Real world OHC retinal screening was poor compared to new Guidance. These figures imply a huge medico-legal responsibility for the previously considered rare risk of retinal damage from OHQ. The logistics of the workload in Eye Clinics will necessitate local solutions including nurse screening clinics and closer monitoring and documentation of outcomes. This rare but serious complication of a very well tolerated and effective agent will not come at a cheap price today. A repeat audit following 12 months of an agreed screening policy is recommended.

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HPR Professional education, training and competencies

AB1478-HPR PROMOTING EXERCISE IN RHEUMATIC DISEASES: PHYSICAL THERAPISTS' UNDERSTANDING

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Background: Physical therapists have unique expertise in planning, prescribing and supporting exercise programs for patients with chronic diseases. Promoting exercise can be a challenge and include a range of strategies, but descriptions of physical therapists' experiences within the field of rheumatology are limited.

Objectives: The purpose of this study was to explore and describe ways of understanding exercise promotion among physical therapists working with patients having rheumatic diseases.

Abstract AB1478-HPR – Figure 1

Methods: A phenomenographic approach was used to analyse semi-structured interviews with 25 physical therapists, working primarily within the

field of rheumatology, from eight different physical therapy departments at hospitals in various cities of Sweden.

Results: Four categories related to the promotion of exercise were identified: *to tell and monitor*; *to identify and pilot*; *to discuss and enable*; and *to listen and inspire*. Key aspects were responsibility, setting and supervision, tools to support change and the role as an educator. The findings are interpreted as a hierarchically organised structure, where the understandings of the PTs differ in respect to comprehensiveness regarding some aspects of interaction and collaboration with the patients.

Conclusions: Physical therapists working with patients having rheumatic diseases understand exercise promotion in different ways and these understandings differ in respect to comprehensiveness, which might lead to unequal promotion. A more comprehensive repertoire would probably make physical therapists more prepared to meet patients' needs for different strategies in the adoption and maintenance of exercise behaviours.

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AB1479-HPR MULTIFACETED INTERVENTION TO IMPROVE MEDICATION UNDERSTANDING AND COMPLIANCE AMONG PATIENTS WITH AUTOIMMUNE INFLAMMATORY RHEUMATIC DISEASES

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Background: Non-compliance with treatment in patients with autoimmune inflammatory rheumatic diseases are directly associated with relapse, deformities and higher treatment cost. Many of times it can be related to poor understanding of complex drug regimen. Consistent reports of sub-optimal treatment adherence among patients with autoimmune inflammatory rheumatic disease underscore the importance of understanding how adherence can be promoted and supported.

Objectives: To evaluate the efficacy of various methods of drug explanation to AIRD patients in rheumatology OPD.

Methods: It is a retrospective study of 100 DMARD naive first visit patients in rheumatology OPD. Demographic and clinical information were noted in pre-designed performa. After prescription of DMARDs regimen by rheumatologists, various methods are used to explain the advised prescription such as using permanent markers on medication strips, making envelopes, using different medication performa in their local language, as well as counselling regarding importance of medication; done by rheumatology nurse. Adherence rate and reasons of non adherence was measured by different methods like interview, pill counts, review of prescription on their routine follow up visits.

Results: 1. 79.8% of patients fully understood and had adherence with their prescribed medication.

2. 20.2% were non-adherent with the prescribed treatment, varying from occasional to complete failure. The factors for non-adherence were identified.

- a) 25% patients stopped when no symptoms.
- b) 22.5% got influenced by alternative therapy.
- c) 20% family pressure and financial constraints.
- d) 12% of myths about side effects of medication.
- e) 15% lost follow up.

f) 5% had doubts could not understood properly.

On statistical analysis of all methods of drug explanation, use of permanent marker on medicine strips were found to be most effective.

Conclusions: As per results non-adherence to treatment due to poor understanding of drug regimen is very low. But another factors were identified which have influence over adherence rate. In a busy OPD a single sitting counselling is not adequate. To summarise patients need more intensified and focused counselling to improve adherence.

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