Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

condition and admitted to the acute neurosciences ward at GOSH was collected over 3 consecutive years each over a 4 month period (2018-2021). Data was collected from electronic patient records on: serology, COVID-19 history, length of stay, symptoms at admission and discharge, frequency of physiotherapy and community physiotherapy referrals.

Results: 1 patient was identified over each 4 month period, prior to the COVID-19 pandemic. In the COVID-19 pandemic 9 patients were admitted during the 4 month period data was collected. 33% of patients were positive for COVID-19 antibodies and 33% were positive for MOG. 44% did not have COVID-19 serology tested at admission. 44% had COVID-19 antigens confirmed themselves or their parents had confirmed COVID-19 10 days to 2 months prior to admission. 100% of patients were treated with high dose methylprednisolone. 67% received Plasma Exchange Therapy and 11% received Intravenous Immunoglobulin Treatment.

The median length of stay was 14 days (range 5-45 days). Presenting symptoms included: reduced consciousness, behavioural changes, seizures, impaired swallow, visual impairment, speech disturbances, altered tone, ataxia, reduced strength and altered reflexes. 8 required physiotherapy input. They received a median number of 4 physiotherapy sessions (range 2-27) during their inpatient stay. 2 of these patients were referred onto community physiotherapy.

Conclusion(s): There was a 900% increase in paediatric patients admitted with a demyelinating condition since the COVID-19 pandemic.

100% of the patients made clinically significant functional recoveries. Despite the majority being significantly impaired on admission, 78% did not require ongoing physiotherapy on discharge.

The small cohort of patients is a limiting factor. Further investigation is recommended to identify if there is a correlation between COVID-19 and demyelinating conditions in the paediatric population.

Impact: The data demonstrates a wide range of presentations, length of stays and physiotherapy input required. The increase number of patients and their complexity may suggest that a pathway for their management would be beneficial. Their wide range of symptoms highlights the importance of continuing to provide patient centred care.

The recoveries made suggest that delaying referral to local physiotherapy could positively impact on triaging and reduce waiting list times in the community. These patients often require multiple follow-up appointments, which has both a financial and emotional burden on patients and caregivers. These impacts could be improved by reducing unnecessary referrals.

A literature search identified 5 single case studies that document demyelination diagnoses alongside a diagnosis of COVID-19 in paediatric patients. Further investigation would be beneficial to understand the acute and long term functional impacts of potential COVID-19 related demyelinating conditions in the paediatric population.

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O58

Brachial plexus neuropathies during the COVID-19 pandemic: A retrospective case series of 15 patients in critical care

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Keywords: COVID-19, Brachial Plexus, Proning

Purpose: The use of the prone position to treat patients with COVID-19 pneumonia who are critically ill and mechanically ventilated is well documented. This case series reports the location, severity, and prevalence of focal peripheral nerve injuries (PNI) involving the upper limb identified in an acute COVID-19 rehabilitation setting. The purpose of this study was to report observations and to explore the challenges in assessing these patients.

Methods: The study was conducted at the Queen Elizabeth Hospital, Birmingham (QEHB) which has a tertiary critical care unit and a regional upper limb unit. This retrospective study was registered and approved by the University Hospitals Birmingham National Health Service Foundation Trust Clinical Audit Registration Management System (CARMS-16211). Patients who were referred to the upper limb team with suspected PNI had the following outcomes assessed; muscle power using MRC, sensation using the 10/10 test and pain using VAS/NPSI. Specialist upper limb therapists (CM, JOS and JJ) completed the assessments whilst the patients were inpatients. Demographics (including sex, ethnicity, time on unit, proning history) was collected retrospecivley. JJ inputted data and categorised it within an Microsoft excel sheet. This was reviewed by JOS and CM for accuracy. Data was analysed using descriptive statistics.

Results: During the first wave of the COVID-19 pandemic in the United Kingdom, 256 patients were admitted to COVID-19 critical care at QEHB. From March to June 2020, a total of 114 patients required prone ventilation. In this subgroup, a total of 15 patients were identified with clinical findings of peripheral nerve injuries within the upper limb. Mean age of patients was 54.5 years, with 80% (12) being male. Hypertension (80%), Obesity (53%) and type 2 diabetes (46%) were the most prevalent co-morbidities present. Mean length of stay on critical care was 32.5 days (20-46) and mean number of times proned was 7.3 (2-15). In total, 30 anatomical nerve injuries were recorded. The most commonly affected nerve was the ulnar nerve (12/30) followed

by the cords of the brachial plexus (10/30). 80% (12/15) of the patients were deemed to have high grade nerve injuries (neuropathic pain; muscle wasting; dry skin; severe weakness etc).

Conclusion(s): Peripheral nerve injuries can be associated with prone positioning on intensive care units, although other mechanisms, such as those of a neuroinflammatory nature, cannot be excluded. The most common nerve dysfunction observed is our study affected the ulnar nerve.

Impact: Proning-related upper limb peripheral nerve injuries are not discussed widely in the literature and could be an area of further consideration when critical care units review their proning protocols. Physiotherapists treating these patients play a key part in the management of this group of patients by optimising the positioning of patients during proning, making early identification of peripheral nerve injuries, providing rehabilitation interventions, and referring to specialist services if necessary.

Following discussion with the critical care team, this study led to modifications to the standard operating procedure for proning at QEHB during subsequent waves, in addition to, extra training and awareness of potential impact of the proning position.

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O59

Characteristics of patients attending ACL post-operative rehabilitation in an NHS setting

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Keywords: ACL surgery, Patient characteristics, Tailored rehabilitation

Purpose: Anterior cruciate ligament (ACL) injury is devastating. Its consequences include functional limitation, poor quality of life, and risk of early-onset knee osteoarthritis. Annually, ~3% of amateur athletes injure their ACL; they are young (15-40 years) and often participate in pivoting sports. ACL reconstruction (ACLR) is standard if a return to sport (RTS) or a physical job is the goal. Post-operative ACLR rehabilitation is extensive (~12months) requiring significant patient/therapist commitment. While ACL injury studies are abundant, an optimal post-operative ACLR rehabilitation pathway designed for RTS is incomplete, particularly for NHS-treated non-elite athletes. One reason is that ACLR rehabilitation patients are often considered homogenous meaning specific clinical rehabilitation needs might be overlooked. Therefore, in this project we aimed to determine the homogeneity patient characteristics attending ACLR rehabilitation in our urban NHS physiotherapy department over a calendar year.

Methods: This was a retrospective service evaluation. All patients attending post-operative rehabilitation following primary ACLR locally were eligible (February 2019-2020). Patient sex/age, injury mechanism, sport and surgery characteristics were collected by a single physiotherapist from patient records. Data are presented as median (IQR) or proportions.

Results: In total, 99 patients were analysed; 58 (58%) male, 41 (41%) female. Median age at surgery was 29 (26-35) years. The majority were injured playing sport (81%) most commonly football (39%) and skiing (12%). Pre-operative physiotherapy was undertaken in 76% of cases. Median injury-surgery time was long at just under a year (334 (243-562) days).

Reconstruction surgery grafts were variable; hamstring (87%), allograft (7%), or patellar tendon (5%). A minority of surgeries were isolated ACLR (32%), while most involved concomitant meniscal surgery (55%) of which 35/55 (63%) involved the medial, 9 (16%) the lateral, and 11 (20%) bilateral meniscuses. The remaining surgeries were either multi-ligament repair (9%), triad (2%) or associated high tibial osteotomy (1%).

Conclusion(s): We observed a large sample of ACLR patients with representative sex/age characteristics attending NHS post-operative rehabilitation. Playing sport represented the biggest injury mechanism. So RTS probably represents a common patient goal which might not be maximally exploited by rehabilitation therapists particularly during the long injury-surgery time. Furthermore, patients exhibited heterogenous previous sports activities, and a wide spectrum of injury reconstruction surgery. ACLR procedures involving meniscal repair are often excluded from ACLR rehabilitation studies because acute movement restrictions are assumed to be confounding. But our data shows they represent the majority. Study designs should therefore be developed to include them. It is possible that the sensible notion of consistency in NHS ACLR rehabilitation protocols needs adjustment given the heterogeneity in our observed data. Instead, the development of tailored aspects of peri-operative and rehabilitation protocols are indicated.

Impact: Most NHS ACLR rehabilitation patients previously played sport and presumably wish to RTS. There is heterogeneity across patient's mechanism of injury and their surgery. The quest for efficient and consistent rehabilitation protocols should therefore include tailoring of rehabilitation to account for the heterogeneity.

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