Conclusion This study demonstrates good concordance between WBMRIs findings and the active lesion on clinical presentation in CRMO. This highlights the utility of WBMRIs in detecting clinically silent lesions and assessing disease activity. Patients with tibial involvement or claviculo-tibial crossover demonstrate a significantly greater number of lesions on WBMRIs than patients with the claviculo-spinal pauci-focal pattern.

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497 INFANTILE BLount’S DISEASE: A CASE REPORT OF 3 YEARS OLD FEMALE BABY OF ZHOB, PAKISTAN
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Aims Blount’s disease is a rare developmental disorder of children which causes progressive bowing of lower limbs. The term ‘Blount’ was named after American orthopedic surgeon ‘Walter Putnam Blount’ who first described this condition. The etiology of Blount’s disease is unknown but believed to be multifactorial. Various predisposing factors have been attributed including obesity, early walking, race, pre-existing varus, increased pressure on growth plate and nutrition. Blount’s disease has been suggested to be more frequent in African, Afro-American populations. Blount’s disease has to be differentiated from physiological bowing (physiologic genu varum) and rickets. Early diagnosis and treatment of Blount’s disease is essential as the disease process is reversible in early stage.

Methods A three years old female child was brought by her mother with complaint of progressive bowing of both lower limbs for last one year. She achieved her milestones at appropriate age and started walking at 13 months of age without support. On examination, her height was 90 cms (at 10th centile) and weight was 17 kgs (at 90th centile). BMI (body mass index) was 20.9 (obese). There were no clinical signs or symptoms of rickets i.e frontal bossing, wide wrist, rachitic rosary, carpopedal spasm, fits or muscle weakness etc. Roentgenogram showed tibia in varus with a peculiar beak at metaphysis and raised metaphyseal-diaphyseal angle (16 degrees). Serum calcium and serum vitamin D (25-hydroxy vitamin D) were normal. Serum alkaline phosphatase level was raised. Keeping in view typical history, examination findings and radiological epiphyseal beaking along with raised metaphyseal-diaphyseal angle, diagnosis of Infantile Blount’s disease was made.

Results Many cases of this disease have been reported worldwide since it was first invented by Walter Putnam Blount3. Prevalence of Blount’s disease remains unknown. Jensen N, et al. studied 139 cases of Blount’s disease in Ghana from 2010 to 2018. 90% of cases belonged to a particular tribe known as ‘Akan Tribe’. Familial predisposition (positive family history) was seen in 62% of cases. Jensen et al have reported the highest number of cases of Blount’s disease so far.

Conclusion The clinicians should have a high suspicion of infantile blount’s disease when a child, more than 3 year’s age presents with severe varus deformity at proximal tibia with typical radiological findings. Characteristic radiologic findings along with history and examination help to distinguish it from physiologic bowing (physiologic genu varum) and rickets.

British Paediatric Neurology Association

37 DEVELOPMENT OF A REMOTE-USE SCALE FOR MONITORING MITOCHONDRIAL DISEASE IN PATIENTS
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Aims This project aims to conceptualise, develop and validate an electronic patient-reported outcome measure for children with mitochondrial disease – Mitochondrial disease in Children, a patient Reported Outcome measure (MICRO). Children and families living with mitochondrial disease currently attend highly specialised centres where clinicians assess their disease using rating scales. Attending the clinic often involves long journey times, loss of school days, and associated safety risks for some of the severely affected children. Therefore, MICRO aims to empower families and carer to monitor their children’s condition independently and remotely at home as an alternative to face-to-face appointments. The project intends to correctly classify patients into Mild, Moderate, and Severe disease categories using scores generated from their MICRO scores.

Methods MICRO development took place over three stages: Item Generation, Scale Development, and Scale Evaluation (figure 1).

1) Item Generation stage - Literature searches enabled the domain identification. A panel of laypersons (n=5) assessed the medical jargon used in a validated rating scale, the Newcastle Paediatric Mitochondrial Disease Scale (NPMDS). NPMDS data analyses (n=109) identified areas for development. Target Population input (focus groups, telephone interviews, questionnaires) were accompanied by longitudinal input from experts in the field of paediatric mitochondrial disease.

2) Scale Development stage – A small pilot (n=6) was conducted with a target population at the Newcastle NHS Highly Specialised Rare Mitochondrial Diseases Service Paediatric outpatient clinic.

3) Scale Evaluation stage – A validation study in clinic (n=20), where participants completed MICRO before undergoing assessment by current methods.

A comparative analysis between the new MICRO and the existing NPMDS was undertaken.

Results Item Generation 21 key NPMDS terms were identified as requiring development for layperson use in MICRO. Target populations also highlighted clinician/layperson linguistic differences, user interface concerns, and sensitivity of the language used to describe their children as important factors. Statistical analysis of NPMDS data excluded item ‘Blood’ from inclusion in MICRO on the grounds of infrequent scoring, and highlighted item ‘Growth’ as requiring revision to ensure participant completion, whilst items ‘Visual Acuity’ and ‘Ataxia’ were excluded due to lack of target population understanding.

Scale Development Mean pilot item concordance with the NPMDS was 78.1±18.3%. No change in severity classification was reported in any participant. Participants reported no