AUTO INFLAMMATORY CONDITIONS

R12 EAST OF ENGLAND EXPERIENCE: CAN THE BRISTOL DIAGNOSTIC CRITERIA BE APPLIED TO AN UNRELATED COHORT OF CHILDHOOD CHRONIC RECURRENT MULTIFOCAL OSTEOMYELITIS (CRMO)?

Chenqu Suo1, Peter Bale1,2 and Kate Armon1,2
1Department of Paediatrics, Cambridge University Hospitals, Cambridge, UNITED KINGDOM; and 2Department of Paediatrics, Norfolk and Norwich University Hospital, Norwich, UNITED KINGDOM

Background: CRMO is an autoinflammatory condition affecting the bones. Its clinical presentation is characterised by bone pain and swelling. There is often a delay to diagnosis with under-recognition. Historically a biopsy was recommended for diagnosis, but the Bristol group (Roderick et al., 2016) has proposed diagnostic criteria whereby bone biopsies may no longer be necessary for patients with typical clinical and radiological findings. This needs validation with other cohorts.

Methods: We performed a retrospective study on all CRMO patients reviewed in the child and adolescent East of England rheumatology service (referral centres: Cambridge University Hospitals (CUH), Norfolk and Norwich University Hospital (NNUH)) between 2002 and 2017. Medical notes were reviewed and information extracted on demographics, presentation, investigations, diagnosis, treatment and outcome.

Results: Thirteen patients were identified with CRMO, six from CUH and seven from NNUH. Median age of symptom onset was 10 years and median time to diagnosis was three months (range 0-24 months). Referrals to rheumatology were from orthopaedics (nine patients), paediatrics (three) and GP (one). All patients presented with bone pain, and 69% had bone swelling. Legs were the commonest site of bone pain, followed by clavicle, feet, arms, neck, back, hands, and pelvis. The median number of painful sites was two (range: 1-9), and only three out of 13 had symmetrical symptoms. Whole body MRI was carried out in nine patients. On imaging, the commonest sites of lesions were pelvis and tibia (each found in six patients), followed by clavicle (five patients). When the Bristol criteria were applied, ten patients satisfied diagnostic criteria, and the other three were undetermined due to missing information. Bone biopsy was performed on five patients, one of which was potentially avoidable after applying the Bristol criteria, as the patient had a clavicular lesion with a normal CRP. Five patients only required NSAIDs for symptom control. The other eight patients were treated with disodium pamidronate infusion at a dose of 1mg/Kg/day for three days, three monthly; of which six went into remission within a year, one changed to methotrexate after one year with ongoing active lesions, and one had some improvement and transitioned onto adult service.

Conclusion: Our median time from symptom onset to diagnosis of three months is relatively short compared with other cohorts (Girschick et al., 2018; Roderick et al., 2016). This study provides further evidence to support the proposed Bristol diagnostic criteria. Using their diagnostic criteria, we identified one patient who underwent bone biopsy which could have been avoided. Pamidronate is a valuable treatment; most patients show symptom improvement and tolerate it well with few side effects.