Introduction:
Chronic recurrent multifocal osteomyelitis (CRMO), is an autoimmune inflammatory bone disorder occurring primarily in children and adolescents. It is not well recognized and often misdiagnosed as infection or tumor. Its diagnosis is usually one of exclusion and most commonly requires a bone biopsy. The reports in the literature are rare and no reports have been published in the foot and ankle literature to our knowledge.

Case Presentation:
In November 2008 an 8 year old Asian female presented to the hospital for an unusual appearing left foot x-ray following an inversion injury while twisting her foot playing outside. She was treated with fracture shoe and supportive care but continued to have pain, swelling and lower extremity redness months later she re-presented complaining of recurrence. An MRI was ordered which was suspicious for a lesion and a bone biopsy was performed. Cultures of bone specimen did not yield any organisms. Pathologic evaluation of the samples revealed fracture healing. A second opinion was recommended and the patient was evaluated by Orthopedic oncology. Results were inconclusive and she was diagnosed with chronic osteomyelitis. She no longer had clinical symptoms and resumed normal activity.

Discussion:
Chronic recurrent multifocal osteomyelitis (CRMO) usually presents in adolescents and children. The consistent feature of CRMO is the insidious onset of pain with swelling and tenderness localized over the affected bones. CRMO has been described in SAPHO but reports in children usually do not have the consistent skin findings that SAPHO have. Diagnosis can usually be made without a bone biopsy, but will usually be sterile when cultured. Fortunately, It is usually treated with NSAIDs, but refractory cases may require corticosteroids, bisphosphonates, MTX, sulfasalazine, or TNF-alpha inhibitors.

Conclusion:
CRMO is a rare inflammatory bone disease that is still not fully understood. Reports in the literature are scarce and to our knowledge there have been no published reports in the foot and ankle literature. Our patient presented with primary foot involvement who initially responded well to NSAIDS but subsequently was placed on Enbrel and Pamidronate with good response. With our case report we hope to provide awareness of the disease to the foot and ankle community in hopes for quicker diagnosis, as well as unnecessary IV antibiotics, surgical biopsies, and hospital admissions.

References: