History
3 year old female initially with left shoulder pain. Subsequently she developed bilateral lower extremity pain and intermittent fever.

Discussion
Chronic recurrent multifocal osteomyelitis (CRMO) is an idiopathic inflammatory disorder of bone. It is seen primarily in children and adolescents with most patients presenting between 9 and 14 years of age. Females are more commonly affected than males. Initially CRMO was thought to be infectious but no common pathogen has been isolated; recently autoimmune and or genetic etiologies have been suggested. Most patients present with insidious pain, tenderness, swelling or limited range of motion. Systemic symptoms such as fever, lethargy and weight loss are unusual. Acute phase reactants may be mildly elevated but white blood cell count is usually normal. Common sites of involvement include the long tubular bones and clavicle but lesions have been described throughout the skeleton. Upto 30% of CRMO lesions involve the clavicle and clavicular disease is more common in females. It is important to note that osteomyelitis of the clavicle is extremely unusual. Lower extremity is reported to be three times more often involved than the upper extremity. Metaphyses or metaphyseal equivalents account for 75% of sites of disease. Radiographically, lesions initially appear as vague areas of osteolysis which become progressively sclerotic with periostitis. MR imaging typically reveals marrow edema and geographic areas of osseous necrosis; periostitis, soft tissue edema, joint effusion and transphyseal disease may also be seen. Differential diagnoses include osteomyelitis, histiocytosis, hypophosphatasia, and neoplasia (leukemia, lymphoma, Ewing sarcoma).

Findings
MR-Coronal T1, IR and postgadolinium fat-suppressed T1 images of the left shoulder show marrow and periosteal edema and enhancement. Also note the small effusion involving the acromioclavicular joint.
MR-Coronal T1, fat-suppressed T2 and fat-suppressed postgadolinium T1 images of the pelvis and thighs show marrow and periosteal edema with multifocal rim enhancing intramedullary lesions.

Reference
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