Fibrous Dysplasia

PLAY PICMONIC

Pathophysiology

Bone Replaced by Collagen and Fibroblasts
Bone Replaced by Cola-gem Fiber-blast blanket
Fibrous dysplasia is a condition in which bone is replaced by collagen and fibroblasts.

Location

Face and Skull
Face and Skull
Fibrous dysplasia can impact any bone in the body. The face and skull can be seen in 10-25% of cases of fibrous dysplasia.

Ribs
Ribs
The ribs can be seen involved in 28% of cases of fibrous dysplasia. It is the most common site of the monostotic form (single bone affected).

Long Bones of Arms and Legs
Long Bones of Arms and Legs
The long bones of arms and legs can be involved in fibrous dysplasia. Legs may be seen in more than 70% of cases. It is the most common site of the polyostotic form (multiple bones affected).

Sign and Symptom

Bone Pain
Bone Pain-bolts
Fibrous dysplasia patients often present as asymptomatic due to incidental findings. However, patients can experience bone pain due to fractures or the change of fibrous tissue in the bone.

Diagnosis

"Ground Glass" Appearance on Imaging
Ground Glass
Fibrous dysplasia will show three main features on imaging, including cystic/lucent, sclerotic, or mixed. Lesion of fibrous dysplasia is well-circumscribed, lytic, or ground glass-like in density. It may be seen in the metaphyseal or diaphyseal location on plain radiographs.

Complication

Fracture

Fracture

The bone that is affected by fibrous dysplasia is weaker than normal bones, which causes a high risk of fracture in patients. This is also called a pathological fracture.

Association

McCune-Albright Syndrome

Raccoon All-bright

Fibrous dysplasia (polyostotic form) is also part of McCune-Albright syndrome, along with unilateral café-au-lait spots with ragged edges and at least one endocrinopathy manifestation (e.g., precocious puberty).

Treatment

Supportive

Supportive IV Bags

Patients can be managed with supportive treatment, which includes physical therapy to strengthen muscle and enhance range of motion, and bisphosphonates that can help to reduce bone pain and the risk of osteoporosis. Surgery can be used to help to prevent and treat fractures, scoliosis management, and repair of misshapen bone.