Paget's disease medical treatment

Although there is no cure for Paget's disease, medications (bisphosphonates and calcitonin) can help control the disorder and lessen pain and other symptoms.

Medications are often successful in controlling the disorder, especially when started before complications begin.

Medical treatment is indicated for cases that are not rapidly progressive where the diagnosis is certain, for patients who are poor surgical candidates, and pre-op if

Medical therapy reverses some neurologic deficit in 50% of cases, [1)] but generally requires prolonged treatment (≈ 6–8 months) before improvement occurs, and may need to be continued indefinitely due to propensity for relapses. Medications used include the following.

Calcitonin derivatives

Parenteral salmon calcitonin (Calcimar®): reduces osteoclastic activity directly, osteoblastic hyperactivity subsides secondarily. Relapse may occur even while on calcitonin. Side effects include nausea, facial flushing, and the development of antibodies to salmon calcitonin (these patients may benefit from a more expensive synthetic human preparation (Cibacalcin®) starting at 0.5 mg SQ q d).

50–100 IU (medical research council units) SQ q d × 1 month, then 3 injections per week for several months.

If used pre-op to help decrease bony vascularity, ≈ 6 months of treatment is ideal. Doses as low as ≈ 50 IU units 3 ×per week may be used indefinitely post-op or as a sole treatment (alkaline phosphatase and urinary hydroxyproline decline by 30–50% in > half of patients in 3–6 months, but they rarely normalize).

Bisphosphonates

Bisphosphonates are pyrophosphate analogues that bind to hydroxyapatite crystals and inhibit bone resorption. They also alter osteoclastic metabolism, inhibit their activity, and reduce their numbers. They are retained in bone until it is resorbed. Oral absorption of all is poor (especially in the presence of food). Bone formed during treatment is lamellar rather than woven.

Etidronate (Didronel®) (AKAEHDP): reduces normal bone mineralization (especially at doses ≥ 20 mg/kg/d) producing mineralization defects (osteomalacia) which may increase the risk of fracture but which tend to heal between courses [2)].

Contraindicated in patients with kidney failure, osteomalacia, or severe lytic lesions of a LE. 5–10 mg/kg PO daily (average dose: 400 mg/d, or 200–300 mg/d in frail elderly patients) for 6 months, may be repeated after a 3–6 month hiatus if biochemical markers indicate relapse.

Tiludronate (Skelid®): unlike etidronate, does not appear to interfere with bone mineralization at recommended doses. Side e ects: abdominal pain, diarrhea, N/V. 400 mg PO qd with 6–8 ounces

Pamidronate (Aredia®): much more potent than etidronate. May cause a transient acute flu-like syndrome. Oral dosing is hindered by GI intolerance, and IV forms may be required. Mineralization defects do not occur in doses <180 mg/course. 90 mg/d IV×3 days, or as weekly or monthly infusions.

Alendronate (Fosamax®): does not produce mineralization defects.

Clodronate (Ostac®, Bonefos®): 400–1600 mg/d PO×3–6 months. 300 mg/d IV×5 days (may be available outside the U.S.).

Risedronate (Actonel®): does not interfere with bone mineralization in recommended doses [3]. 30 mg PO q d with 6–8 oz. of water at least 30 minutes before the first meal of the day.

1)
Chen J-R, Rhee RSC, Wallach S, et al. Neurologic Dis- turbances in Paget Disease of Bone: Response to Calcitonin. Neurology. 1979; 29:448–457
2)
Tiludronate for Paget's Disease of Bone. Med Letter. 1997; 39:65–66
3)
Risedronate for Paget's Disease of Bone. Med Letter. 1998; 40:87–88