OSTEOPOROTIC FRACTURE

Osteoporosis and fracture risk with each S.D

Overall fracture risk 1.5

Hip Fracture 2.3

Spine Fracture 2.6

Clinical

Acute pain and in 2/3 rd settles in couple of months.

1/3: Persistent pain

Loss of body height and Kyphosis

Vertebral pseudarthrosis: Lateral view with flexion and extension

(serous fluid and fibrous and fibrocartilaginous at pseudarthrosis)

Alligator mouth phenomenon (MRI= cleft is visualised)

Rarely neurology

X ray	Wedging	Anterior vertebral margin is <75% of the Post margin
	Concave	Post is <80% of the Anterior
	Flat [Crush]	Anterior and posterior is <80% of the normal

Wedge in thoracolumbar spine and concave in the midlumbar and flat can be anywhere

Osteoporosis Vs collapse due to secondaries of the spine

Osteoporosis	Malignant
T1 is low	low (diffuse & homogenous)
T2 high	T2 high
Gadolineum Iso	High
Diffusion weighted MRI	
Hypo or Iso	Hyperitense
None	Soft tissue mass
No pedicle involvement	Pedicle involvement

Treatment

1. Bisphophonates
2. Raloxifene
3. Calcitonin

Role hyperextension brace and compliance

Surgery: Incapacitating pain with increasing Kyphosis with neurology

Types: I Posterior decompression with posterior intersegmental stabilization

II Anterior decompression and anterior intersegmental stabilization

III Vertebroplasty combined with bone graft or biomaterial implantation

Vertebroplasty and kyphoplasty

PMMA or Calcium phosphate cement

Transpedicular injection (percutaneous) under local

90% good results

Recommended for refractory severe pain with pseudarthrosis

Possible complication

1. leakage of material into the spinal canal: 30-40%
2. Occasional neurology or interactable pain 3%
3. Adverse reaction of cement

4. Transient local pain

5. Increase stress on the adjacent vertebra and prone for fracture.