

Hypercalcaemia

Causes

Hyperparathyroidism

malignancy breast lung myeloma leukaemia

sarcoidosis

vitamin d intoxication

thiazide diuretic

Bones moans and abdominal groans

weight loss

thirst

bone pain

Neuromuscular

muscle weakness

confusion coma

psychiatric

GI

nausea vomiting constipation

abdominal pain

pancreatitis

Renal

calculi

impairment

polyuria

CV

brady-arrhythmias

short QT

Normally required $\text{Ca} > 3.5 \text{ mmol/l}$

Rehydration

Iv hydration normal saline not hartmanns/colloid have calcium 200-300ml/hr

Elimination

Loop diuretics not thiazide

furosemide 20-40 mg 1-4 hourly

Biphosphonates

first line

very effective

inhibit osteoclastic bone resorption

SE

hypocalcaemia

pyrexia

pain injection site

Doses

not as bolus

infusion minimum 2hrs upto 24hrs

disodium pamidronate 60mg 500ml 0.9% saline over 4 hours

Steroids (vit d toxicity, haem malignancies)

200-300mg hydrocortisone

Calcitonin

Treat underlying condition