

22. Bone density

HISTORY

Enquire at Long Term Follow Up clinic re:

- 1) Back pain
- 2) Fractures

INVESTIGATION

Consider evaluation of bone mineral density by DEXA scan (or less commonly Quantitative CT [QCT] scan) in:

- 1) BMT recipients
- 2) Acute lymphoblastic leukemia (ALL) survivors
- 3) Medulloblastoma survivors
- 4) History of fracture
- 5) History of back pain

NB Interpretation of DEXA scanning in children requires correction for size

RISK FACTORS

- Steroids
- Radiotherapy, including
 - TBI
 - Craniospinal
 - Cranial
 - Spinal
- Endocrinopathy especially
 - Growth hormone deficiency
 - Gonadal failure
- Chemotherapy
 - Standard ALL treatment
 - ?Methotrexate
 - ?Ifosfamide

MANAGEMENT

- 1) Treatment of osteoporosis should only be undertaken after discussion with a Specialist in Bone Disease.

REFERENCES

- Reviews**
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- Specific**
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 - 2) Warner JT, Evans WD, Webb DKH, *et al.* Relative osteopenia after treatment for acute lymphoblastic leukemia. *Pediatr Res* 1999; **45**: 544-551.
 - 3) Kaste SC, Jones-Wallace D, Rose SR, *et al.* Bone mineral decrements in survivors of childhood acute lymphoblastic leukemia: frequency of occurrence and risk factors for their development. *Leukemia* 2001; **15**: 728-734.
 - 4) Mithal NP, Almond NK, Evans K, Hoskin PJ. Reduced bone mineral density in long-term survivors of medulloblastoma. *Br J Radiol* 1993; **66**: 814-816.
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