How to Perform A Metabolic Bone Consult Within a Fracture Liaison Service – Helpful Tips for Success

Timing and Components in performing a metabolic bone consultation. Ideally:
All laboratory bone markers laboratory testing should be obtained preoperatively The consultation performed:
  - Post-operative Day 2/3
  - Mid-morning before PT session of the day
    - Consideration of sundowning in geriatric population

Determine competency and level of comprehension
  - Conduct a Six Item Mini Mental Exam (See Attached)
  - Six questions 0-6 score (1 point each)
  - <4/6 score indicative of cognitive impairment
    - Recommended to have the conversation at another time or speak with family member in addition

Consultation Introduction
Preface the conversation with the "consultation is a referral from the surgeon regarding the patients bone health" related to:
  - Low energy "Fragility Fracture"
  - History of osteoporosis
  - Poor bone quality "Intraoperative findings"
  - Highlight relationship between osteoporosis and current fracture/surgery

Conduct patient focused history and physical
Identify potential and actual risk factors (See attached chart)

Review of labs
Discuss the relationship of calcium and vitamin D to fracture healing
Interpret and discuss current laboratory results

Review and interpretation of DXA scan if available (see attached Metabolic Bone Consult Assessment)
Calculate FRAX score (20% major osteoporotic, 3% hip fracture)

Formulate a Plan

- Initiation of calcium and vitamin D recommendations
- Recommendations for further testing
- Recommendation a/o initiation of drug therapy
- Recommendation for metabolic bone follow-up appointment with MDINP/PA of choice 4-6 weeks
- Repeat metabolic bone labs 4-5 weeks (If necessary)
- Understand reason *need to re-check calcium and vitamin D levels after taking supplements for 1 month
- Provide Prescription for: Bone Density scan (If no recent test in past 2 years)

Provide support through contact information and communication Have consult packet available to provide to patient including:

- Office #
- FLS #
- Email
- Blank space for calcium, vitamin D recommendation
- Written plan of care
- Letter to referral physician or PCP
- Osteoporosis education materials (Nutrition, Exercise)

Registry for data
Ideal to have a patient registry with enrollment or each of these patients into a data base at the time of consult

- May require an IRB and consent for use of data for research/evaluation of program and setting new goals

Interdisciplinary Communication

- Documentation in EMR including diagnosis and outpatient plan of care to include follow up for metabolic bone health
Metabolic Bone Consult Note Assessment includes:

HPI:

PMH/PSH:

Metabolic bone specific history:

Individual fracture history/family history of fracture:

Assessment:
- Current medications which interfere with bone quality
  - corticosteroids, anticonvulsants, SSRI's, PPI's, chemotherapy agents
  - Medications known to be detrimental to bone should be discontinued or decreased, when possible.
- Current diet daily intake of calcium and vitamin D enriched food sources
- Level of activity, exercise regime
- GAIT pattern and stability

Physical examination including muscular and skeletal strength (as permitted)
- Obtain recent Bone Mineral Density testing (DXA) within past 2 years
  - BMD (DXA) of the hip, spine and radius may be used in conjunction with vertebral fracture assessment (VFA), trabecular bone score (TBS), or quantitative CT (QCT)
- Laboratory ordering and evaluation of standard (hematological and urological) biochemical bone markers
  - 25 OH-Vitamin D, Calcium, serum albumin, intact PTH, urine NTX (CTX) and bone alkaline phosphatase (BSAP)
  - Other testing ordered as indicated
- Utilize the Fracture Risk Assessment Tool (FRAX) to calculate the 10 year probability of sustaining an additional OP major fracture or hip fracture in patients with low bone density

Example:

_____ year-old _____ POD 2 sip ORIF __________, Based on age, risk factors __________, FRAX score __________ %, treatment with osteoporosis likely indicated to prevent further fracture. Supplements for therapeutic calcium /vitamin D, BMD evaluation required as outpatient in order to discuss drug therapy options.
- Calcium and vitamin D recommendations
- Script provided for outpatient labs
- Script provided for outpatient DEXA
- Follow-up with _____ 4-6 weeks
- Comment about Registry enrollment if applicable
- GOAL: Initiation of drug therapy within 3 months

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