Can’t Miss Orthopaedic Surgery Cases

LLOYD HAYES SYMPOSIUM

Scott E. Porter, MD, MBA, FACS
Greenville Health System
Greenville, SC

August 23, 2014
Disclosures

• None
Goals

• Touch upon the work up of a lump or bump based upon very little science but some wickedly cool pictures
Orthopaedic Oncology

What the heck is it and how’d I get here?
Essentially...orthopaedic oncologists are surgical oncologists for the pelvis, shoulder, and limbs

- Orthopaedic surgery residency (limbs, limbs, and more limbs)
- Orthopaedic/surgical oncology fellowship
The mile-long, eighty-acre Midway Plaisance, looking east toward Lake Michigan.
Dr. Dallas B. Phemister
Dr. William F. Enneking

Dr. Michael A. Simon
So Let’s Begin!!
So...Who Gets Tumors?

- Essentially...anyone!
- Rarely is there a known “cause” for the tumor
  - Not environmentally related, no risk factors, not patient induced
  - Notable exceptions (i.e. retinoblastoma) generally already followed specialists
Who Gets Tumors?

- Tumors come in all sizes, shapes and pathologies
  - Not all are malignant
  - Not all malignant tumors are uniformly lethal
Babies

• Infants – hemangiomas, infantile fibrosarcoma, rare to have 1° malignancies
• Toddlers – leukemia
Kids

- Adolescents – leukemia, Ewing’s sarcoma, all sorts of benign bone lesions, rhabdomyosarcoma,
- Teenagers and young adults – osteosarcoma, Ewing’s sarcoma, benign bone lesions
Adults

- Young and middle age – chondrosarcoma, benign bone lesions, soft tissue sarcomas
- Elderly – chondrosarcoma, mets, myeloma, secondary osteosarcoma, soft tissue sarcomas
- Tumor patients present the same way any patient presents for any ailment
  - Tumors are often completely asymptomatic
  - Presentation, therefore, rarely a clue
  - Presence of tumors/cancer suggested by exam and imaging studies
• 71 yo female with hip and knee pain
  – Moderately poor historian
  – Seen on many occasions by primary care physician
  – Recent acute pain worked up by serial DVT studies and ultrasound
  – Progressive unilateral leg edema thought to be secondary to age/lymphedema
Exams vs. Imaging
Contrast Images
So... the guide...
...ain’t but 4 things ya gotta know
Nothing In An Adult Should Grow

• Obvious exceptions:
  – Hair
  – Immune system
  – Gut (inside and out in America)
• Masses, lumps, bumps, knots, moles, etc should not grow...ever
  – Ever
  – Ever

• Things that have not grown in 10 years should not grow in 10 years
• Do not be lulled into the trap...
  – “Hey Doc, this knot just showed up on my leg...What? What’s that you say? Does it hurt? Nah, it doesn’t hurt. So you think we should just get it out? Well then sure, let’s just take it out...”
• If you feel yourself being lulled by your desire to “help the patient”...
Lie down until that feeling passes...
Time Is On Your Side

• No tumor’s outcome will be decided by three months of observation...none
  – Observation is cost-effective
  – Observation is prudent
• When in doubt, calmly have pt come back in 3 months and *dictate plan accordingly*
• Unfortunately, observation is much harder to sell to most patients than intervention
• Goes hand in hand with first point
  – Nothing in an adult should grow
  – If there is no objective proof of absence or presence of growth...
  – Remember time is on your side...just schedule follow-up for exam, study, or whatever you can use to check objective evidence of growth
Holes in Bones Ain’t All Bad

• Holes in or spots on bones in an adult are often suggestive of cancer
  – Quite possible for it to be a benign lesion
• Essentially one of three things in an adult
  – Myeloma
  – Metastatic cancer
  – Benign (fibrous dysplasia, old UBC from youth, enchondroma)
• 61 yo male with left hip pain on weight-bearing and with activity
• A good number of cases, however, will be cancer related
  – Just something to keep in the back of our minds
• Most Kinds of Tumors Leaping Primarily to Bone
  – Myeloma
  – Kidney
  – Thyroid
  – Lung
  – Prostate
  – Breast
Ordering a Test Is More Than Checking a Box

• Best test for the money is still an x-ray
• Bone scans are largely worthless tests
  – Generate more questions than they answer
  – They are rarely diagnostic...for anything...ever
  – Exceptions?...sure
    • Charcot joints, infected prosthesis, staging for known cancer, identification of additional sites of skeletal disease
• MRI’s of an entire extremity should not even be made available
  – MRI quality limited by size of field of view
  – 15 – 20 cm?
  – Clarity in images above that linear distance quite poor
• MRI ordering can be quite specific
  – Helps everyone...radiologist, patient, surgeon, etc.
• 48 yo female presented with feeling of fullness just above the back of her knee when sitting
  - Had MRI of knee and pelvis with a CT scan of her knee...all were read as being negative
• Continued to have symptoms of fullness and discomfort with sitting in hard chairs
• Continued to go to physicians
  – One thoroughly examined patient which eventually led to the “MRI of the distal thigh”
• MRI’s should be ordered of the specific region in question as directed by the x-rays or by the exam
  – “MRI of right distal thigh” or “MRI of left proximal femur” or “MRI of right proximal humerus”
  – Not MRI of knee, MRI of hip, or MRI of shoulder unless the pathology in question is actually intra-articular
• Some people believe that they have gone years without seeing a patient with a tumor

• The better question is:
  – “...have they gone years without a tumor seeing them...”
Summary

• Don’t just take out things that grow in an adult
• Time is on your side
• Holes in bones in an adult are usually one of three things…and two of ‘em ain’t good
• Be a study sniper
  – Order specifically what you want
  – Remember X-rays awesome and cheap
  – Order tests that are going to give information and not just generate more questions
Thank You