Granny's Hip: Problem Handouts

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Granny's Hip

Part 1

Patient History:

You stop over to visit your grandmother for your weekly visit to set out her medications for the coming week. As you enter her apartment, you find her lying on her back in severe pain. She is confused and does not recognize you when you enter the room. In addition, she is unable to tell you how she came to be lying on the floor.

You try to help her up off of the floor, but she immediately complains of significant pain in the groin area. You dial 911 and an ambulance arrives. As the paramedics make their initial assessment and transfer her to the gurney, they note that right lower limb is laterally rotated and noticeably shorter than her left lower limb. A first-year medical student does the initial assessment upon admission to the ER.

Physical Examination and Preliminary Laboratory Results:

The patient is given a physical by the attending resident, and the following is noted:

- The right lower limb is noticeably shorter than the left.
- The right limb is externally rotated, and the patient is unable to change the limb's position without considerable pain.
- On palpation, the groin region is tender, but no swelling is obvious.
- Passive movement of the hip causes extreme pain, especially upon external and internal rotation.
- WBC is 20
- Hemoglobin (Hgb) is 9.8

The resident is concerned by the fact that the patient's injury occurred two days earlier, and he is not sure as to how treatment should proceed due to this time lag. He administers a painkiller to make the patient more comfortable and then pages the orthopedic surgeon on call for the evening for a consult.

Questions:

1. What is your preliminary diagnosis of this patient?
2. How do you account for Granny's lab results?

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Part 2

The attending orthopedic surgeon arrives and immediately suggests IV fluid replacement. As fluids and electrolytes come back into balance Granny informs the physician that she tripped on the throw rug in her apartment two days before being found by her grandson, and that she had been unable to crawl to the telephone for help.

The orthopedic surgeon also confirms the resident's physical examination facts. She immediately orders anteroposterior and lateral radiographs of the hip region.

Patient History:

Upon examination the orthopedic surgeon notes the following:

- The patient is a frail, elderly woman 75 years of age.
- She appears to be in rather poor nutritional state.
- Mentally she seems to be confused, which may be due to the effects of the narcotic and/or electrolyte imbalance.

Physical Examination:

A physical exam by the surgeon yields the following information:

- The right lower limb is externally rotated and the patient is unable to lift her right heel from the stretcher.
- The right leg is shorter, which is confirmed by measuring the distance between the anterior, superior iliac spine and the distal tip of the medial malleolus of the tibia, and comparing the results with those of the left lower limb (after passive rotation by the surgeon).
- The greater trochanter on the right side also appears to be higher and more prominent than that of the left thigh.
- Palpation yields tenderness in the femoral triangle in front of the hip joint.

Utilizing sound anatomical logic, consider the following questions:

1. What is your diagnosis of the patient?
2. Yes or No: Based upon the position of the lower limb, as well as the patient's nutritional history, if the hip is fractured what is the most probable location of the fracture? If you answered "no" to the above question, give a rationale for the positioning of the lower limb. Provide adequate anatomical evidence to justify your answer to this question.
3. Based upon the patient's nutritional history, what other structures of the joint structure might be involved and in need of repair?
4. Keeping this patient's history in mind, which would be the best course of action: repair the fracture or prosthetic replacement of the femoral head? Defend your answer.
5. If open prosthetic replacement is required, what surgical procedure would be best for this patient?

6. Discuss the blood supply of the shaft, neck and head of the femur. Why should the orthopedic surgeon be aware of these anatomical details?
7. Utilizing sound musculoskeletal logic, why was Granny's hip in the position it was in when her grandchild found her? Because no active muscular action was involved in placing her hip in this position, what passive forces would be involved in causing her limb to be laterally rotated?

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Team and Self Assessment Form

Your name: _____

Please use the rating scale below to describe how you and your team members performed on each of the tasks listed associated with your PBL group's activities. The purpose of the grading is not to divide groups but to reward those making above average effort and to encourage those not giving their fair share to the group overall effort.

5 if Always 4 if Very Often 3 if Sometimes 2 if Rarely 1 if Never

PBL Group Number:

Please fill in PBL Group Members' *Last* Names (including your own)

Names	_____	_____	_____	_____	_____
Completed assigned tasks	_____	_____	_____	_____	_____
Contributed valuable information to the group	_____	_____	_____	_____	_____
Attended group meetings	_____	_____	_____	_____	_____
Was honest in reporting progress about his/her assigned tasks	_____	_____	_____	_____	_____
Participated in writing final report	_____	_____	_____	_____	_____

Now, ***please circle*** the rating below that you feel you would best describe your group's overall performance:

Very good Good Barely Acceptable Poor Very Poor

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PBL Self Evaluation Form

This evaluation form will not be utilized in assigning any grades. However, it is beneficial to reflect on any progress that you might have made in various areas as a result of participating in a PBL course. Therefore, please evaluate yourself utilizing the following scale.

Scale:

5 = Strongly agree

4 = Agree

3 = Neutral

2 = Disagree

1 = Strongly disagree

Your name: _____

As a result of my participation in PBL in Human Anatomy I feel that I have improved in the areas of:

1. Effective group participation _____

2. Effective group communication _____

3. Evaluation of myself (self evaluation) _____

4. Evaluation of others (peer evaluation) _____

5. Acquiring information to solve complex problems _____

6. Evaluation of the quality of information needed
   to solve complex problems _____

7. Working effectively with others _____

8. Higher-order, critical thinking skills _____

Overall improvement rating of yourself: _____

5 = excellent; 4 = good; 3 = average; 2 = needs work; 1 = poor