

What Did You Say, Doc? : Instructor Guide

Title:

What Did You Say, Doc?

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Discipline:

Biological Sciences

Target Audience

Intermediate, majors and nonmajors

Keywords

Anatomy, brain stem function, conduction deafness, cranial nerve function, neuroanatomy, neurological deafness

Abstract

John Angleman, a 41-year-old machinist, complains of difficulty hearing in the right ear. In addition, his gait has been unsteady, with occasional missteps with his right leg. As the students progress through this two-part problem, they will be confronted with issues dealing with cranial nerve function, brain stem function, and the determination of the location of the possible lesion.



Date Submitted

9/24/2002

Date Published

11/30/2002

Student Learning Objectives

This problem was written with the following summative objectives in mind:

1. Development of a 3-dimensional understanding of the anatomy of the brainstem and cranial nerve VIII.
2. Development of an understanding of conduction deafness and neurological deafness, and how these two may be differentiated with a simple test.
3. Development of a 3-dimensional understanding of the anatomy of the brain stem.
4. Development of how the lateral enlargement of a tumor, in close proximity to the cranial nerve VIII, can disrupt normal signal transmission cranially and caudally.

This problem was written with the following formative objectives in mind:

1. Increase overall problem solving skills, including the ability to define problems, gather and evaluate information, and develop solutions.
2. Develop effective knowledge acquisition skills.
3. Develop better team skills.
4. Increase communication skills.
5. Increase self-assessment skills.
6. Increase ability to assess the work of others.
7. Increase ability to identify, find, and use appropriate resources.

Assessment Strategies

This problem has been utilized in Human Anatomy classes with an enrollment ranging from forty to eighty students. Assessment has been both summative and formative.

Summative Assessment:

Summative assessment has been broken down into two formats. One format involves evaluation of both the group and individuals within the group. The following procedure is followed in evaluating individual and group progress on the PBL:

On the day the PBL is assigned the class will break up into PBL groups and do some preliminary work on the problem. By the next class session *each PBL group member* must turn in an *individual* hard-copy preliminary report. The preliminary report must contain the following:

- Possible hypothesis of what is wrong with the patient.
- What you will need to find out in order to prove or disprove your preliminary hypothesis, and where you will look to find this information.
- Any terminology that is not understood must be listed and defined, and the source of the definition cited.

It is expected that each member of the group will review *all* of the group's preliminary hypotheses *prior to coming to class the day the preliminary reports are due*.

On the day the preliminary report is due the second part of the problem will be handed out. The class will again break into PBL groups and do further preliminary work on the problem. In this session the group will now:

- Determine how the additional information has changed any or all of the preliminary hypotheses, *and why*.
- Determine the course of action the group will take in order to solve the problem.
- Divide up the work that needs to be completed in order to solve the problem. The group leader will then post, in the group's Public Folder, a listing of what task is to be accomplished by what group member.

At the next class session (after distribution of part 2 of the PBL) *each group member* will turn in an *individual* hard-copy secondary preliminary report. (A copy will also be posted in the Public Folder). This secondary report must contain the following:

- Statement as to how your preliminary hypothesis of what is wrong with the patient has changed, *and why*.
- What you will need to find out in order to prove or disprove your newly formed hypothesis, and where you will look to find this information.
- Any new terminology that is not understood must be listed and defined, and the source of the definition cited.

As published in the course schedule, *each group* is required to submit a final report at the state of the appropriate class period. (It would be advisable for the group to keep *at least* one backup copy on computer disc.) The group report is to contain at least the following:

- Hypothesis for the solution to the problem.
- Sound anatomical reasoning to substantiate your hypothesis.
- Citations for any and all sources utilized, including your textbook.
- PBL reports will be graded on the anatomical accuracy of the final solution to the problem, as well as the anatomical logic utilized to arrive at the final solution.

A second form of summative evaluation is inclusion of material covered in the PBL on a "standard" lecture examination. The anatomical objectives may be assessed in the form of objective or essay questions.

Formative Assessment:

Formative assessment is accomplished two times during the course: at midterm and at the end of the course. Students are asked to fill out a form that assesses team and individual performance twice during the term. Individual growth throughout the term is assessed only at the end of the term.

Diagnosis and Solution Notes

Solution removed.