

Do Student Presentations Enhance Student Learning in Pathology Labs?

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Abstract

For the last four years, second-year medical students in my pathology lab section have used an interactive website designed to promote student knowledge construction and the expression of students' thoughts. Attendance at the lab section is voluntary, and approximately 30 students typically attend each lab. This study examined:

• Does the website help develop students' confidence in organizing and publicly presenting their thoughts?

• Do case presentations enhance student learning? If so, how?

Instructional Methods

(1) Website

The website contained a series of case presentations drawn from the teaching materials used in the laboratory sessions. The students answered questions about expected physical findings, symptoms, laboratory test results, and pathologic findings. Student answers were automatically forwarded to the instructor for review, and the instructor's comments were returned to the students.

UM SiteMaker - Personal Website

Pathology and the Patient

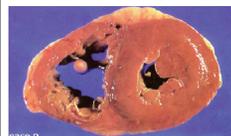
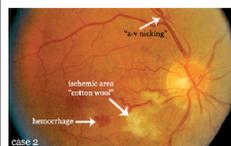
Home | All Available Cases | All My Responses

Cardio Lab 5 - Unknown Case 2

A 65-year-old man presented to the Emergency Department complaining of episodes and blurring of his vision. Physical examination manifested a variety of abnormal findings (please study the fundoscopic image). His subsequent laboratory evaluation revealed biochemical evidence of myocardial infarction and an elevated serum LDL cholesterol level. Following his evaluation and diagnosis, the patient was followed in an outpatient clinic. Approximately one month after his initial evaluation, the patient died from a stroke.

Questions

1. Please describe the pathologic findings and form a diagnosis.
2. What abnormal physical findings might have found during the patient's examination?



(2) Presentations

During each laboratory, one student volunteer served as instructor, presenting their cases to the other students.

Research Methods & Findings

(1) Surveys

All students who presented (N=16) were given a pre- and post-presentation survey. Half of these students completed both.

Student Pre-Presentation Survey

Strongly Disagree Disagree Neutral Agree Strongly Agree

1. I feel well-prepared for lab.
2. I understand what is expected of me in preparing for, and participating in, lab.
3. I feel comfortable when asked to present cases before my peers and the instructor.
4. I am given opportunities to direct and stimulate class discussions.

Student Post-Presentation Survey

1. I feel well-prepared for lab.
2. I understand what is expected of me in preparing for, and participating in, lab.
3. The case study assignments made sense to me; I understood their purpose.
4. I felt encouraged to participate in class and respond to others.
5. I felt comfortable when I presented before the class and instructor.
6. I was given opportunities to direct and stimulate class discussion.
7. My peers were encouraged to ask questions and give answers.
8. My approach to solving case problems has changed since presenting in the class presentation.

Key Survey Findings

- All of the respondents valued having students present in class.
- Half of the respondents felt that they were better able to present clinical information to other medical professionals as a result of the presentation; the other respondents were neutral regarding this question.
- All of the respondents enjoyed presenting cases and thought that instructor assistance improved the quality of their presentations.
- Case presentations were regarded by all as an effective learning tool.
- All of the respondents recommended that students in other lab sections be offered the option of presenting cases.

(2) Exams

Exam scores for presenting and non-presenting students also were examined. No significant differences were found. The lack of differences with regard to the examination grades is not surprising as the class averages for the three sequences studied were 94.1, 96.0, and 94.1. In light of such averages, the exams did not help to distinguish among different groups of students.

(3) Observations

My observations of student participation indicated that case presentations stimulated class discussions and the exchange of ideas.

Conclusions & Next Steps

- Case presentations, supported by an interactive website, were regarded by students as an effective learning tool.
- Case presentations stimulated class discussions and the exchange of ideas.
- Laboratory examinations should be revised to include more questions that ask students to analyze information and apply information in new ways.

Acknowledgments

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