

Effectiveness of Case-Based Learning in Medical Parasitology

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Introduction

Case-based learning (CBL) is an established approach used across disciplines where students apply their knowledge to real-world scenarios, promoting higher levels of cognition. In CBL classrooms, students typically work in groups on case studies, stories involving one or more characters and/or scenarios. The cases present a disciplinary problem or problems for which students devise solutions under the guidance of the instructor.

Objectives

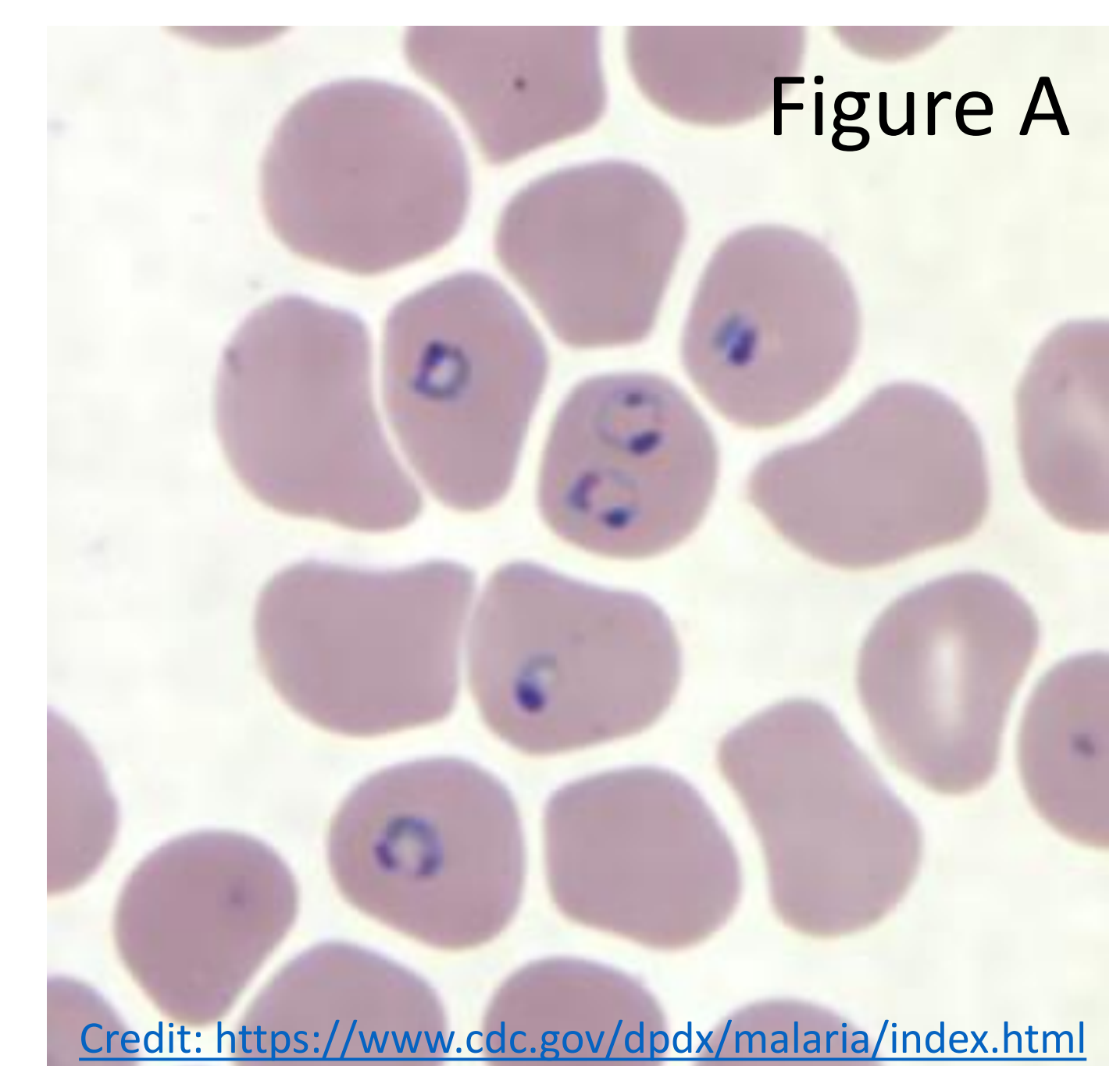
The aim of this study was to assess the effectiveness of CBL on the topic of malaria by comparing formative test scores of the previous year students being taught by a conventional lecture and the current year students being taught by CBL.

Methods

Teaching in the topic of "Malaria" was taught by two different methods in two consecutive years. In the class of 2018, 48 third-year medical students was taught by a conventional lecture and in the class of 2019, 48 third-year medical students was taught by CBL. CBL comprised of 5 case scenarios in malaria. The same formative assessment tests were performed after class. The formative assessment scores were compared by using Mann-Whitney U Test.

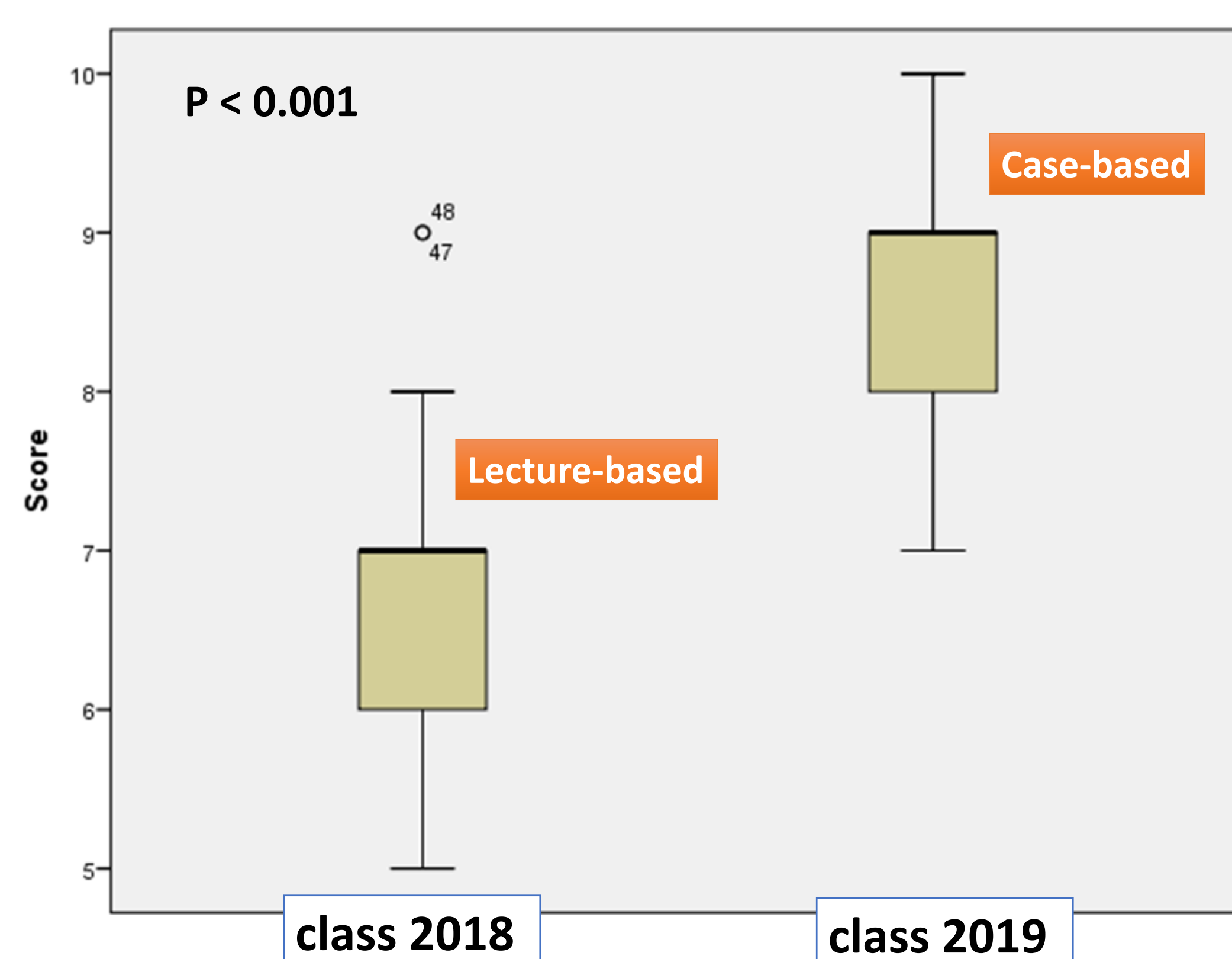
Example of case scenario:

A 25-year old Thai man from Ranong province presented with 2-day fever and chills, but had no symptoms of cough, running nose or other respiratory tract symptoms. On examination, body temperature 39 °C and his liver was mildly enlarged with firm and sharp margins without tenderness. His spleen was normal. A blood smear was obtained, then stained with Wright-Giemsa and examined (Figure A).



Results and conclusions

Median scores of the class of 2018 and 2019 were 7 (range 5-9) and 9 (7-10), respectively. Median scores of the class 2019 using CBL was significantly higher than those of the class of 2018 using lecture-based learning. CBL session in Medical Parasitology is a guided enquiry method in which students face case scenarios. The students learn how to think, ask questions and solve problems. This process enhances students' ability to synthesize, evaluate and apply information and concepts, thus leads to a better performance on the test. Other advantages of CBL are that it promotes self-directed learning, improves decision making and problem solving attitudes.



References:

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