tutor

Use of Fine Art to Enhance Visual Diagnostic Skills

Dolev, Jacqueline C. MD[1]; Linda Friedlaender[1], Linda Krohner MS[2]; Braverman Irwin MD[1]

[1] Department of Dermatology; Yale University School of Medicine; New Haven, Conn
[2] Yale Center for British Art; Yale University; New Haven

author by correspondence: linda.friedlaender@yale.edu

BACKGROUND

Observational skills that define the astute clinician are usually only acquired after years of clinical experience. Recognizing both the subtle and obvious visual details is a critical aspect of visual diagnosis or 'seeing'. Nonetheless, the formal teaching of observational skills is rarely included in the medical curriculum. We studied whether the experiential process of seeing such visual details can be enhanced in medical students through systemic visual training using representational paintings.

MATERIALS AND METHODS

A total of 176 medical students (over 2 years) were randomized to a control group (n=65), an intervention group (YCBA group, n=81), or a lecture group (n=30).

The control group attended clinical tutorial sessions in which a physician taught history taking and physical examination skills. The lecture group attended an anatomy lecture that featured abdominal radiographic images. The intervention group attended the YCBA program in which each student studied a preselected painting for 10 minutes before describing it in detail. Descriptions were based solely on visual evidence. The discussions, moderated by the curator of education, used open-ended questions to encourage students to describe systematically the entire painting.

Photographs of persons with medical disorders were p[resented as a pretest and posttest. Students were given 3 minutes to write descriptions of what they observed in each photograph and were specifically asked not to provide a diagnosis. Students' descriptions were graded blindly using a key that assigned 1 point for each of the 9 or 10 visual diagnostics features present in each photograph. Statistical analysis was performed.

RESULTS

The groups did not have significantly differing pretest scores in 2 years of study, 1998-1999 (P=.21) or in 1999-2000 (P=.56). Posttest scores differed significantly between groups in both years. The 1998-1999 YCBA group had significantly higher mean (SD) posttest percentage improvement scores (56% [14%] than both the control (44% [14%]; P =.001) and the lecture group (46% [12%]; P=.009) as did the 1999-2000 YCBA group (57% [11%] compared with the control group (47% [9%]) in 1999-2000 (P=.001). Students in the YCBA group achieved higher posttest scores in each of the photographs used in the posttest examination.

DISCUSSION

The use of representational (narrative) paintings capitalizes on students' lack of familiarity with the artworks. The viewers search for and select all of he details in the paintings because they do not have a bias as to which visual attribute is more important than another. This lowered threshold of observation has direct application to the examination of the patient.

CONCLUSION

Although our program has concentrated on teaching and improving the observational skills of first-year medical students, it could serve as the basis for a continuing curriculum and may be applicable to all physicians. Our study demonstrated that the use of fine art to enhance observational skills was statistically significantly impactful.