Common errors in preparing for and completing the American Board of Orthodontics clinical examination

Jeryl D. English,[a] Barry S. Briss,[b] Scott A. Jamieson,[c] Marvin C. Kastrop,[d] Paul T. Castelein,[d] Eladio DeLeon, Jr,[d] Steven A. Dugoni,[d] Chun-Hsi Chung,[d] and Peter M. Greco[e]

Houston, Tex, Boston, Mass, Marquette, Mich, Billings, Mont, Princeton, Ill, Augusta, Ga, South San Francisco, Calif, and Philadelphia, Pa

Attaining Board Certification should be a goal of every orthodontic resident, orthodontic educator, and practicing orthodontist. The Board Certification process requires commitment, persistence, firmness of purpose, and sacrifice. Procrastination is the first error along the way to becoming certified. There are many reasons in support of achieving Board Certification, but undoubtedly the most salient is the inner satisfaction of knowing that one has done his or her best. From a practical perspective, certification will become increasingly important in the eyes of the public we serve.

As directors of the American Board of Orthodontics (ABO), we receive ample testimonies to the value of the certification process from newly certified and recertified orthodontists. Many of these diplomates reflect their gratitude for the assistance of the ABO staff throughout the process, the information on the ABO Web site, and the preparation courses provided by the College of Diplomates. The value of the examination as a self-evaluation and self-improvement tool is probably the most frequent comment the ABO receives each year.

The 3 components of the ABO Clinical Examination are the Case Report Examination, the Case Report Oral Examination, and the Board Case Oral Examination. The Case Report Examination and the Case Report Oral Examination are the portions of the ABO Clinical Examination that involve an examinee's case display demonstrating his or her knowledge of diagnosis and treatment. The Board Case Oral Examination involves an examinee's analysis and treatment planning of cases presented by the ABO examiners. Since most errors occur in the Case Report Examination and the Case Report Oral Examination, they will be discussed in this article.

Selecting the cases for the 6 reports is the first step in preparing for the Clinical Examination. This should be done months before the examination. The records for every patient should be of high quality so that any patient who has completed treatment can be considered as a candidate for the case display. Case selection should be based on the quality of diagnostic records, appropriateness of diagnosis, case management, and final result. Improper case selection is a common error made by examinees. The examinees must understand that the cases will be closely evaluated by testing instruments to enhance examiner objectivity. These instruments are also valuable for the examinee's self-assessment after the examination is completed.

The discrepancy index (DI) is first measured by the examiner for each case. The DI is a measure of case complexity based on pretreatment casts and radiographs.[1] If the DI is insufficient to qualify the case as an examination case, the examiners will not score it. Most difficulties seem to occur in cases with a DI score of 20 and above. The 6 case requirements must be followed carefully. Although a surgical or a 2-phase case is not a requirement, complete interim records are mandatory for these cases to be included in the display. The full-step or end-on Class II relationship must be properly recognized. Adequate periodontal documentation for all adult patients, as well as younger patients with signs or symptoms of periodontal involvement, is required if the diagnostic records were produced after March 1, 2007. Instructions for completing and assembling the Case Report are clearly provided in the Web site. A common error is omitting case analysis in all dimensions. If

From the American Board of Orthodontics.
[a]President.
[b]President-elect.
[c]Secretary-treasurer.
[d]Director.
[e]Immediate past president.
Reprint requests to: Christine Eisenmayer, American Board of Orthodontics, 401 N Lindbergh Blvd, Ste 300, St Louis, MO 63141; e-mail, chris@americanboardortho.com.
Submitted, September 2009; revised and accepted, July 2010.
Am J Orthod Dentofacial Orthop 2011;139:136-7
0889-5406/$36.00

doi:10.1016/j.ajodo.2010.11.005

different radiographic units preclude meaningful superimpositions, the examinee needs to indicate this on page 2 of the Written Case Report. This will avoid point penalization for lack of superimpositions on the Case Management Form.

The Cast-Radiograph Evaluation is a measure of the results of treatment based on analysis of the final dental casts and dental radiographs.[2,3] The most common deficiencies found in the Cast-Radiograph Evaluation are alignment, buccolingual inclination inadequacies, marginal ridge discrepancies, and root angulation problems. Lateral incisors and second molars most often lack adequate alignment.[4]

The Case Management Form is a measure of the treatment changes in the skeletal, dental, and facial soft-tissue aspects of the case.[3] This analysis also documents how well the treatment objectives were met. The skeletal, dental, and facial analyses must have relevance to the stated treatment objectives listed on the Written Case Report. If they differ, the examinee should be prepared to explain what happened or why the goals were not achieved. The shaded area in the Records Analysis portion of the form allows the examiner to evaluate the records for thoroughness and quality. The "overall analysis" portion of the form documents whether the patient received proper treatment and adequate final results.

Cephalometric tracing errors are common when the occipital area and the stable areas of the skull (planum sphenoidum, greater wing of the sphenoid, and cribiform plate) are not included or clearly depicted. The maxilla and the mandible should also be traced with the appropriate landmarks. Constructed gonion, as demonstrated on the ABO Web site, should be used to measure the mandibular plane angle. Superimposition errors are common when proper landmarks are ignored. Tracings must be printed on a transparent medium with a 1:1 ratio of tracing to radiograph. There is a detailed explanation of use and superimposition construction in the ABO Web site.

Proclination of lower incisors resulting from treatment is another situation to which the examinee needs to pay close attention. Although in certain instances based upon the diagnosis, sound treatment planning, and profile considerations, incisor proclination might be appropriate. However excessive advancement and proclination of lower incisors should be avoided because this might be detrimental to periodontal health, and could result in a protruded lower lip and an unaesthetic profile.[5-7] The examinee should make a proper diagnosis and treatment plan for the case and use appropriate mechanics and techniques to prevent the occurrence of this problem.

Special problems, such as impacted teeth, require specialty-level knowledge, and thus the examinee should be adept at discussing the benefits and shortcomings of different treatment techniques. The examinee should research the literature to know the incidence, sex preference, and other factors of an anomaly involving the displayed case, since the examiners might ask questions about such issues.

Most orthodontists prefer a particular bracket system. It is important to know the system used in case treatment and why it was chosen. Be ready to explain what appliance modifications were used to address unusual circumstances.

Orthodontists are professionally trained people, and our appearance should reflect this attitude. The Board maintains that examiners and examinees should be respectful of one another during the Clinical Examination. Do not hesitate to admit that you are unfamiliar with a question posed in the examination rather than give an answer that has little pertinence to the question. If an examiner makes a statement with which you disagree, be able to support your position with an intelligent discussion.

The ABO Clinical Examination should be an intellectually rewarding and emotionally remunerative endeavor—one the diplomate can reflect upon as a growing and enriching experience.

We acknowledge the contributions of the examiners who provided input for this article.

REFERENCES

1. Cangialosi TJ, Riolo ML, Owens SE, Dykhouse VJ, Moffitt AH, Grubb JE, et al. The ABO discrepancy index: a measure of case complexity. Am J Orthod Dentofacial Orthop 2004;125:270-8.
2. Casko JS, Vaden JL, Kokich VG, Damone J, James RD, Cangialosi TJ, et al. Objective grading system for dental casts and panoramic radiographs. American Board of Orthodontics. Am J Orthod Dentofacial Orthop 1998;114:589-99.
3. Owens SE Jr, Dykhouse VJ, Moffitt AH, Grubb JE, Greco PM, English JD, et al. The case management form of the American Board of Orthodontics. Am J Orthod Dentofacial Orthop 2006;129:325-9.
4. Greco PM, English JD, Briss BS, Jamieson SA, Kastrop MC, Castelein PT, et al. Posttreatment tooth movement: for better or for worse. Am J Orthod Dentofacial Orthop 2010;138:552-8.
5. Dorfman HS. Mucogingival changes resulting from mandibular incisor tooth movement. Am J Orthod 1978;74:286-97.
6. Yared KFG, Zenobio EG, Pacheco W. Periodontal status of mandibular central incisors after orthodontic proclination in adults. Am J Orthod Dentofacial Orthop 2006;130:6.e1-e8.
7. Toygar HU, Kircelli BH. Regeneration of multiple adjacent bone dehiscences with guided tissue regeneration after orthodontic proclination: a corrective treatment approach. Int J Periodontics Restorative Dent 2010;30:345-53.