How to improve our diagnostic acumen: Teach it to our residents

Part I

By Dennis J. Tartakow, DMD, MEd, EdD, PhD, Editor in Chief

Are orthodontists responsible for examining the occlusion, teeth and gingivae? Yes, for sure, training and understanding not just to straighten teeth, correct malocclusions or improve skeletal discrepancies of the jaws but to ensure that any and all pathology in the head and neck is identified, documented, treated or referred for treatment more appropriately?

After many years of clinical practice and teaching, it occurred to me that many of our residents are missing certain aspects of their orthodontic training. Nothing is a better teacher than personal experience, however, what we do and how we do it in practice often reflects upon the educators and mentors in postgraduate residency programs.

The following are examples of issues and guidelines that are seldom, if ever, mentioned in our teaching, they are subjects that go beyond the routine in the diagnostic process and examination.

1. Documentation is the most glaring problem that is often overlooked in resident training, mostly because it is assumed that the residents know how to write and what to write in all correspondence, diagnostic letters and patient charts, but do they? Most do not!

We must prepare them to speak before a group of individuals, to address a judge and jury in the courtroom and, most important, we must educate them to document correctly, writing with proper English.

Speaking clearly and writing properly are the most important aspects of documentation for communicating our thoughts, treatment plans, problems, objectives and projected outcomes. Writing clearly in a patient’s chart can make a big difference years later when asked to review a patient’s record and we cannot even remember the patient’s name, let alone treating them.

Ask any medical malpractice attorney about how well dentists or orthodontists document properly in a patient’s treat- ment chart. You will be mortified. Most clinicians do not take the time to write adequate notes, explaining or identifying problems encountered such as compliance, oral hygiene, lack of proper ap- plication care, etc., and some writing so poorly that whatever is written either cannot be deciphered or makes little or no sense.

Not only are many notations illegible, they are often written with shortcuts and abbreviations only known to that clinician. Most chart entries are too short, incomplete, unacceptable and inadequate. These situations occur much too often and are a poor reflection on the educators because this is our responsibility.

2. Cephalometric radiographs can provide much more diagnostic informa-
tion than measuring lines and angles by looking beyond the teeth. A broad scan, it can be used to find pathology other than dental disease. Not too long ago, a recently graduated orthodontic resident came to me beaming, stating that because of his diagnostic lectures, he spotted a carotid artery calcification on a routine cephalometric radiograph of a new 24-year-old patient. Presenting with no familial or personal medical history of high cholesterol or heart disease, this calcification was never diagnostically un- diagnosed and unexplained to the patient. According to the vascular surgeon who removed the calcification, this pick up saved the patient’s life.

A cephalometric radiograph can help in diagnosing cervical vertebral problems, disc disease and other spinal abnormalities. Tonsil and adenoid en- largements that contribute to airway impingement, open-mouth breathing, high palatal vaults, open-bites, etc. can also be identified on a cephalometric ra- diograph. The list goes on, but such pickups can be found only if the doctor takes the time to examine the X-ray in greater detail.

3. Submental vertex radiographs (SMV) and posterior-anterior X-rays (PA) can do and show exposure lengths of the mandible whereas the panorex and cephalometric X-rays often do not.

Such was the case of an 18-year-old fe- male patient who had an asymptomatic mandibular swelling and was eventually diagnosed as fibrous dysplasia. The diagnosis of fibrous dysplasia in a patient raises important questions for the orthodontist such as: (a) can a pa- tient with fibrous dysplasia be treated with orthodontics, or (b) what are the contraindications to moving teeth in the presence of fibrous dysplasia? A rare finding indeed, but both of these views are extremely valuable tools that can facilitate early diagnosis of other pathologies, especially vs. one caused by benign and malignant disease processes. The SMV and PA are omnipresent in diagnosing skeletal midline discrepan- cies. Midline deviations are often misdiagnosed and labeled as a dental prob- lem, when in fact there is an underlying skeletal asymmetry in the maxilla, man- dible or both. Midline issues and diag- noses can easily be confirmed by using these two radiographs that beautifully demonstrate when the left and right mandibular corpi are unequal in length. How often do we blame a cephalometric radiograph with non-superimposed pro- surion images on technique, when in fact (a) the PA view identifies the length of the mandibular rami to be unequal in length, or (b) the SMV view identifies the length of the mandibular corpi to be unequal in length?

Consequences of missing this astute diagnosis can have daunting and dire treatment results. Besides, attempting to move a maxillary or mandibular dental midline may be like shoveling sand back to the ocean when the tide is coming in — a sure miscarriage of justice. This view will result in relief. These additional views can prevent misdiagnosis, poor treatment results and explain or even lead to un- derstanding of the etiology of a patient’s malocclusion. Is it skeletal, dental or both?

NOTE. Part II of this article will publish in the next edition of Ortho Tribune.

OBIITUARY: Dr. Howard Sacks

Dr. Howard Sacks, a member of the Ortho Tribune’s Editorial Review Board, passed away on Oct. 20, 2023. Dr. Sacks was a graduate of Queens College, University of Pennsylvania, School of Dental Medicine and Al- bert Einstein Medical Center Ortho- dontic Residency program and practiced orthodontics in Miami, Fla., since 1977. He is survived by his wife, Dr. Ar- lene Sacks, daughter Mara Sacks De- well, son Merritt Sacks and three grandchildren.