THE READERS' CORNER

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(Editor's Note: The Readers' Corner is a quarterly feature of JCO in which orthodontists share their experiences and opinions about treatment and practice management. Pairs of questions are mailed periodically to JCO subscribers selected at random, and the responses are summarized in this column.)

1. Do you believe that mouthbreathing associated with a compromised nasal airway can alter facial growth, leading to a steeper mandibular plane?

The vast majority of respondents (85%) believed that a compromised nasal airway *could* alter facial growth and contribute to a steeper mandibular plane angle, and another 10% thought that the compromised airway *sometimes* altered facial growth. Only 5% believed that it did not.

When asked to explain their position, most replied that research by investigators such as Linder-Aronson and Ricketts and animal studies have amplified the form-follows-function concepts of Moss and, therefore, would be a physiologic rationale for associating a steeper mandibular plane with a compromised airway. The central theme of the responses was that mouthbreathing caused a low tongue position, due to enlarged adenoids and tonsils, which in turn contributed to a higher and narrower palatal vault. Because the mouth is usually open when the nasal airway is constricted, the buccal segments are not in normal occlusion and can erupt passively, which results in a steeper mandibular plane angle and will aggravate an open-bite tendency.

Some typical comments were:

• "I think that it can, but not always. If the bite is open due to a compromised airway, giving the patient an open airway can make the difference in being able to treat the patient non-surgically."

• "A constricted nasal airway leads to mouthbreathing, which leads to tongue thrusting, which leads to narrow palate, which leads to long-face syndrome as sure as night follows day."

• "Moss's relationship between form and function explains some of what I see, but there are many other modifying and contributing factors. These include allergic responses, oral habits such as tongue position, hand pressures when sleeping or resting, and perhaps a genetic predisposition that would make the patient more sensitive to environmental factors."

• "I'm not as concerned about a steep mandibular plane as I am about the stability of the orthodontic correction. If an inability to breathe results in altered tongue position at rest or with swallowing, and lip incompetence is obvious, then the orthodontic correction may not be as stable as I would like it to be."

In cases of apparent mouthbreathing, to whom do you normally refer?

Seventy-two percent of the respondents said they would refer their mouthbreathing patients to ENT specialists, 10% would refer to allergists, and a few would send the patients to pediatricians, myofunctional therapists, or orofacial myologists. The rest said that they would not routinely refer these patients to specialists unless

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the problem was blatantly obvious.

A significant number of clinicians mentioned that due to insurance and HMO requirements, they were obliged to send patients to their family physicians, who, in turn, acted as gatekeepers and referred the patients to appropriate specialists if they believed it necessary. There were also comments to the effect that many ENT specialists are now reluctant to remove tonsils or adenoids.

One reader remarked, "All orthodontists can do is to make recommendations. If the parents decide not to take our advice to evaluate the airway, that is their decision. We can only suggest what we would do in their place."

If you noticed extensive adenoidal tissue on a cephalometric x-ray, would you consider an ENT evaluation?

More than three-quarters of the respondents said they would consider an ENT evaluation if they noticed extensive adenoidal tissue on a cephalometric x-ray. The critical words in this question were "extensive" and "consider". Most of those who would consider ENT evaluation also noted that the x-ray observation would have to be coupled with other conditions such as sleep apnea, snoring, lethargy, or parental concern.

Some said they would rather have the ENT specialist decide what should be done to alleviate the condition, because it would be inappropriate for the orthodontist to presume that the condition would disappear in time or that it was not associated with side effects other than a complicated occlusion. In addition, clinicians noted that the cephalometric x-ray provides only a two-dimensional projection of a three-dimensional condition and, therefore, should be amplified by a specialist's diagnosis.

Interesting comments included:

• "I might refer if there is an obvious problem associated with the enlarged adenoids, but not just because I noticed them on the film."

• "Some other health professional may already be observing this condition, and the addition of my concern may be what is needed to motivate either the physician or the parents into action."

Would you start orthodontic treatment on a patient before elimination of a mouthbreathing habit?

All but one respondent indicated that they would start treatment on a mouthbreathing patient before the condition was eliminated, noting that there are no studies contraindicating orthodontic treatment. It was apparent, however, that the clinicians were concerned about relapse tendencies and the potential biomechanical difficulties of dealing with such cases. The most common remark was that since the majority of these patients have constricted maxillas, palatal expansion can increase the volume of the nasal cavity and thus the possibility of obtaining a nasal respiratory potential. Additionally, Class II correction can aid with the lip incompetence that is so often observed in these patients.

Some representative comments:

• "Not everyone will go for an evaluation, and not every medical practitioner will understand the importance of nasal breathing to orthodontics. Therefore, you have to develop treatment plans for mouthbreathers because you will be treating them. I try to educate and use those physicians who appreciate what I'm trying to do."

• "If there are serious crowding problems, I take records at the same time as I refer for ENT evaluation. Basically, if I perceive that the condition will not improve or get worse, I start the case."

• "I have found palatal expansion to be very helpful in managing airway problems. I once had a physician ask me, 'What have you done for this child? She can breathe comfortably now.'"

• "I have had ENT specialists call my office (after my referral) to have the RPE removed for an immediate tonsil/adenoidectomy. After a brief discussion, the physician realizes that the RPE is secure and stable enough to allow for surgery with the appliance in place. The results from a combined RPE and surgical procedure have produced some amazing results."

• "It is often difficult or impossible to break a mouthbreathing habit, but intervention such as a Herbst appliance in a retrognathic Class II case can improve the jaw relationship enough to facilitate lip closure."

2. What is your average number of patients per day?

The average number of patients seen each day was 65, with a range of 40 to 100, except for one clinician who saw 12 patients per day, but was just starting his practice. There were a few comments that it was difficult to answer this question because there was no average day—some were bonding/banding days when longer appointments were scheduled, and others were arch-adjustment days when many more patients could be seen.

What is your average number of broken appointments per day?

The average number of broken appointments per day was between four and five. This was bracketed by 9% of the respondents, reporting a low of one or two, and one clinician who reported 10 broken appointments per day.

What is your usual procedure for rescheduling broken appointments?

The vast majority of the respondents (94%) said they would reappoint the patients in the next available time slots. The remainder reserved rescheduling time on a daily or weekly basis or waited until the next regularly scheduled appointments.

One clinician said, "If they get another appointment right away, there is no incentive to prevent missing again."

Do you charge for broken appointments?

Two-thirds of the respondents did not charge for broken appointments, and 65% of the rest commented that they would charge only after there was a history of two or three missed appointments, and after notifying the patient or parents that the charge would be put into effect. Many of these orthodontists also stated that their policy of charging for missed appointments was clearly stated in the consultation and on the patient's contract.

Some interesting comments were:

• "Only if they miss a lot do we threaten them with that alternative. Very few actual charges, but when they miss a long bonding appointment they get one free miss. If they miss another, I threaten a $150 charge for the next miss."

• "Our contract explains that there is a charge for 'excessive' broken appointments, but we seldom need to actually make the charge. If we do, the charges are related to the amount of time lost, usually $50 to $150. The patient or parent is always verbally warned by the doctor after the previous broken appointment."

What methods have you found effective in reducing broken appointments?

Most of the replies indicated that a combination of techniques were used. Foremost was a telephone reminder, usually coupled with additional communication with frequent offenders. Following this was charging for missed appointments (with a few comments that this method did not help very much) and mail reminders. A few respondents said they used calendar stickers or refrigerator magnets.

Of the respondents who used telephone reminders, 12% noted that they used a commercial computer service, such as Televox or HouseCalls, and that these services were very effective. One orthodontist remarked, "We have experienced a significant reduction in broken appointments since we started using HouseCalls for telephone reminders the night before the appointment. In addition, we review the completion date at practically every appointment and make adjustments to this date if missed appointments become excessive. This action has a very positive effect on the attendance record."

Do you find that broken appointments result in extended treatment time?

Only one respondent did not believe broken appointments contributed to extended treatment.

Does lengthening the interval between appointments exaggerate the effects of broken appointments on treatment time?

Two-thirds of the clinicians felt that lengthening the appointment interval exaggerated the effects of broken appointments; the remainder

did not believe so or thought it depended on the stage of treatment.

Individual comments included:

• "Of course lengthening the interval between appointments exaggerates the effects, not only of broken appointments, but of patient cooperation as well. When the patient is seen every two months or more, their appointment times and the doctor's directives for cooperation are hazy memories. They probably have difficulty recalling the office address."

• "We have tried to use the 'extended appointment interval' selectively—that is to say, critical treatment appointments are still scheduled at one-to-four-week intervals, whereas leveling, rotation correction, and torque control can be scheduled as extended appointments, eight to 10 weeks."

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