Extraction or Non-Extraction: Please share your opinions


I’d like a little help in deciding which way to treat this case. 14-year-old male, Class II dental relationship. Would this be treated with extractions or not? Should surgery be considered? Is there any way to move the upper molars distally into Class I if extractions are not done, or should the upper first molars simply be moved into a stable Class II position? Thanks for the input.
This is a retrognathic mandible. It looks like I would treat this non-extraction. Does this patient have TMJ symptoms? Tomos of the joint would be nice. The profile and occlusion can be corrected non-surgically by Herbst, Mara, or Twin Block. I feel that camouflage treatment could result in a poor profile and a trapped mandible with future TMJ issues.

14-year-old male…usually still growing…dentoalveolar correction of Class II is still easy. I would try to get as much Class II correction as possible with either headgear or functional appliance (fixed or removable i.e. Herbst or Twin Block).

You could also treat this case with extraction of upper first bicuspids if the patient was not willing to wear Class II correction appliances. Seeing as how the patient has an acceptable nasolabial angle and acceptable upper lip position—it “may” result in some retraction of the upper lip—but given the crowding in the upper arch—I don’t think it would be a lot. I wouldn’t think of surgery in someone this young.

If “pure” distalization of the upper first molars is desired, then you can use any number of “distalizing” appliances available on the market—headgear being the most common.

Stability is related to a number of factors. I do not think putting the first molars in full cusp Class II is any more “stable” than distalizing them into Class I.

Gnahirney, he has beautiful maxillary thirds. Extract maxillary seconds and use distal drive sagittal or Cheng distalizer (fixed). Have the appliance in the mouth prior to extracting the teeth. After the maxillary first molars have been distalized, then place a lingual arch to anchor the molars. Move the bis [bicuspids] back and fit the canines in with straight wire. If profile needs Class II correction use Twin Block, Splint, Mara, etc. to move the mandible forward. I think the mandible starts moving forward if a lower Schwarz [appliance] is done at the same time as the first appliance being done on the maxillary. This is a slam dunk for second molar replacement. You might get his lower thirds out at the same time he gets his upper seconds out. To guard against supraeruption of the lower seconds, do a lingual arch with an extension over the occlusal of the lower seconds until the maxillary thirds have erupted.

Very nice records. This case can be successfully treated in a number of ways. You can make it really complicated and use removable appliance followed by fixed, or you can use fixed with any number of Class II correctors. What I look for is:

1) Growth—the cephal shows he is in stage two to three of growth out of five.

2) Good lower arch with non-proclined lower incisors—gives you latitude on Class II correction with out causing proclined lower incisors.

3) Normal-to-low facial height—no concerns about a clockwise grower. Give me these cases all day long and I would be one happy orthodontist! My personal approach on this case would be: full appliances, if cooperative use Wilson distalizing arch. If for any reason Class II correction [is] not progressing properly, I would consider extraction of maxillary second molars. If not cooperative—I would use Forsus, also having maxillary second molars as a back up. I don’t extract upper first premolars in cases like this. I’m not convinced that it has TMJ or breathing implications. I have a personal preference against mid-arch extractions if they could be avoided. Definitely not a surgical case! These are reserved for facial deformities, not a slightly retrognathic profile.
Distal Jet, Pendulum, Wilson arch distalizers, and the like are best used in a Class II dental, Class 1 skeletal malocclusion. So, best case scenario here is some type of tx mechanics which opens the bite, unlocks the mandible and lets this good grower grow. If only he were closer to [being] through growing and a poor cooperator would I consider upper first bicuspids extractions, and then only if the Class II skeletal had been reduced by half, making him Class 1 skeletal.

Many have suggested “distalization” in this Class II case with very little support for bicuspids extraction. Unlocking the mandible and hoping for repositioning is also good when it happens, but of course it does not always work that way. ...

Growth restraint alone will NOT be enough to correct this amount of Class II dental, and distalization. Any appliance will NOT be successful with these large upper second and third molars in the way of the first molars moving back. ...

Put me down for upper second molar extractions, cervical headgear, full upper and lower fixed appliances. You will have a non-extraction look at the end as the extracted seconds will be replaced by the thirds.

Treatment plan
1. Align on 012N for two months followed by 18x25N “cool and retie” for six months to finish alignment, establish archform, level the lower curve of spee, and establish incisor torque. Eight to ten week intervals are suggested. Cervical headgear added at the first adjustment interval.

2. Change to 19x25ss T loops upper and 19x25ss (no loops) lower.

3. Niti open coil upper first premolar to first molar (second premolars no brackets until finishing as they drift distal on their own) and headgear until 2-3 mm Class III, then palatal bar to stabilize. Eight week intervals.

4. Niti closed coil upper first molar TPA [transplatal arch] to first premolar activated 150 grams, plus Class II elastics (6 oz. 1/4”) lower first molar to upper canine until bicuspid Class I. Eight week intervals.

5. Niti closed coil upper first molar TPA to canine activated 150 grams, plus Class II elastics lower first molar to upper canine until cuspid Class I.
6. Activate the T loop by cinchback to retract the upper incisors.
7. Finishing as needed.

I used to avoid the upper four extraction diagnosis at almost all costs when I was “limited” by the straight wire appliance, but today this is a good diagnosis in full Class II cases in my world of individual patient orthodontics, since I have more “tools” (as in bracket and archwire choices) to reach a good occlusion. You need to be exceptionally talented in straight wire appliances (Roth Rx) to get a good finish with upper four extraction (take a look around), I know, since I have many cases that I am not so happy with the result. This diagnosis is one of the best examples of the need for variable torque brackets and multiple choices of preformed archwires.

Rules to follow in upper four extraction diagnosis, if only using straight wire (Roth Rx) are:
1) No lower crowding.
2) No posterior crossbite.
3) Deep-bite cases are more difficult, but possible if you manage your appliance well.
4) Avoid full-tooth distalization (molar in full molar Class II), remembering that orthodontics has been called a “6 mm profession.” [You] can do 8 mm, but you need to be more skilled.

The upper second molar extraction distalization diagnosis is much more “friendly” to getting a good occlusion, and is much more favorable in dental and skeletal deep bite cases. Do NOT distalize in skeletal open bite cases, no matter what appliance or gadget you are using, as you will find on final overlays that the molar that you thought you distalized, did not...that is if you do not get dental open-bite and a big problem during treatment. ONLY choose a distalization diagnosis when skeletal average or closed-bite.

Maxillary sinus height can influence your differential diagnosis: If low sinus on the molar roots (half way down the root is sinus floor), then forget distalization and go with bicuspid extraction (or surgery).

Anticipated patient cooperation (or lack of it) can influence your decision, although both diagnosis (extract upper bis or extract upper first molars and distalize) can be done with limited patient compliance.

Is Class I molar that important to you? Not to me. Full Class II molar finish, full Class III molar finish, and Class I molar finish are the same to me. Most dentists would NOT look at the occlusions with the same feeling, however, which Class III molar being the least agreeable to your “trained” eyes. Class I cuspid is necessary in almost all cases to have an occlusion that is considered “good” in the eyes of a dentist.

A few comments about this case. Look closely at the front on pictures. Does anyone else see the canted maxilla and facial asymmetry? Look at the front on smile in centric and end-to-end...notice the midline has changed position when he opens. Now look at the cephalometric and the lower border of the mandible...two images...asymmetry.

Look at the side view of the molars and note that one appears more anterior than the other. For me, this is a second molar extraction case and I would use an upper ALF [Alternative Lightwire Functionals] to distalize the first molars, level out the maxilla and round out the upper arch. Then upper and lower bracketing, etc. I have been using these appliances for three years now and they have made my work so much easier. In growing kids like this, I often find that the mandible will normalize often by itself once the constricted maxilla is corrected. I have been using a modified basic ALF on about 70% of my cases and my treatment time is reduced, the stability appears improved and the quality of my finished cases seems better. Diagnosis is the key....