

Advances in nonsurgical transverse dimension development and tissue engineering for long-term cosmetic results

Interview with Dr. Michael Williams

With which indications has the series 2000-system already been used successfully?

The Series 2000®-system has been used for every malocclusion available, including bimaxillary protrusion, and that means even patients of Hispanic and African-American heritage in a non-extraction modality. It has been used successfully on class III patients, it has been used on class I [crowded with transverse deficiency] cases, it has been used on both dental and skeletal class II relationships, and also it has been used on patients that have mid-face deficiency as well retrognathic or prognathic mandibles.

means simultaneous development of the maxilla and the mandible even in the absence of dental cross bites.

There is an article presently on the orthodontic cyber journal that you can refer to, which was co-authored with Dr. Anthony Magazini, chairman of the Albert Einstein Department of Orthodontics. If you have access to the winter issue of the World Journal of Orthodontics, there is also a publication that was co-authored with Dr. Larry W. White, former editor of the Journal of Clinical Orthodontics in America, entitled "A Rationale for Expansion." This manuscript goes into

er results which had acceptable stability, and so we went often to this extraction – non-extraction debate.

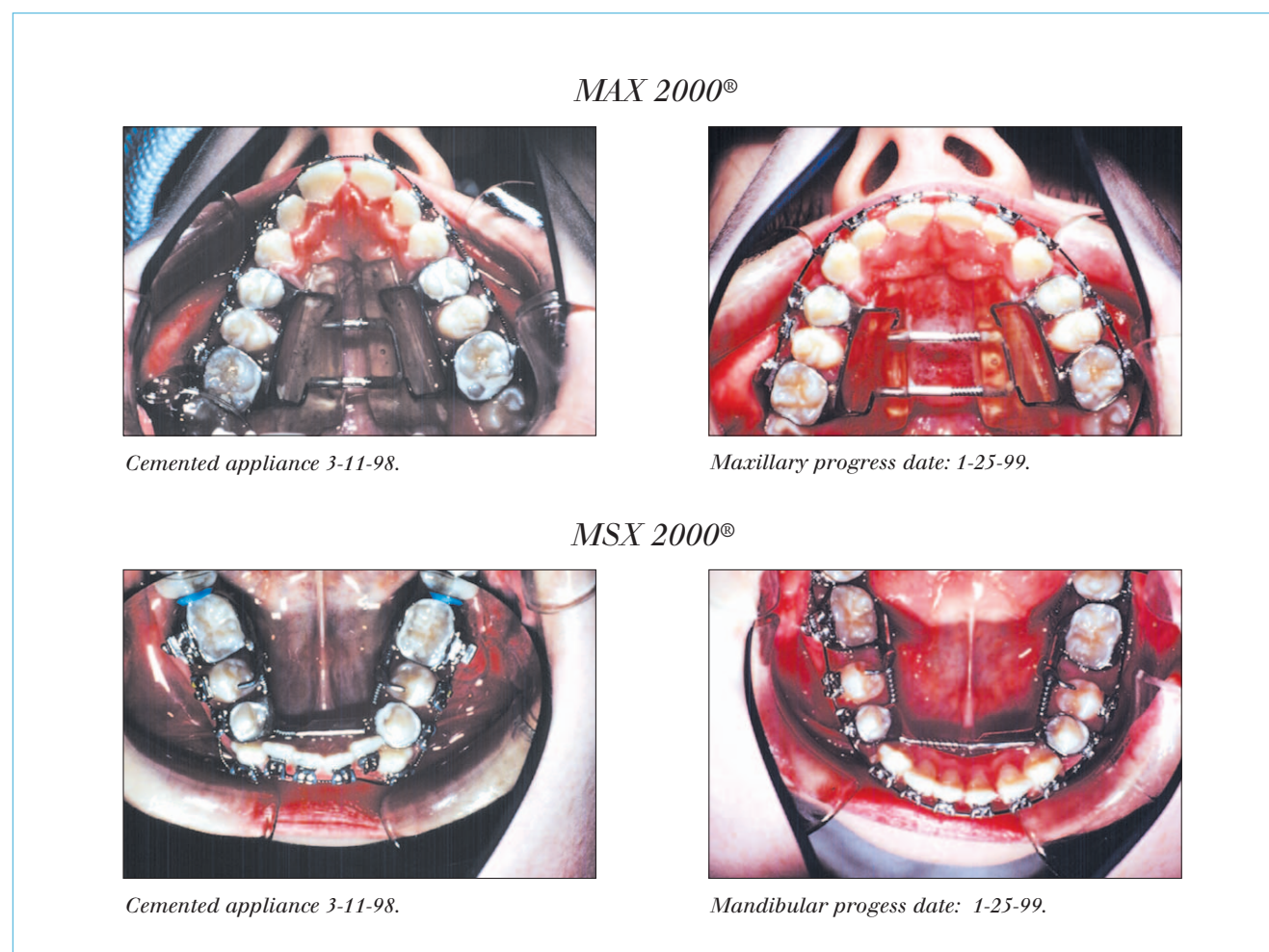
If we were going to establish a priority of procedure, we would first of all address the matter of transverse dimension development. If we could only select one venue of treatment, transverse dimension development would be priority No. 1, even in the absence of any other form of correction. In the U.S., it is generally thought that the most difficult arch to develop is the mandible. Many doctors might think that they should select the lower arch if that was their only

in the long run by the muscular functional matrix of that patient.

So when we examine cases in an early phase treatment for acceptability for Series 2000® mechanics, what we generally need to start treatment is the presence of permanent first molars. We also require good root structure on the deciduous first molars. The reason being is that when you look at the MSX 2000® design in the lower arch, many doctors falsely think that this appliance is a lower molar distalizing design. And this is a false understanding of what was originally intended by the interviewee, okay.

We know in our research that the first bicuspid area has the greatest potential for expansion with the most ability and the least amount of relapse. So our goal was to have an active type Fränkel appliance response that we would stimulate that area to develop wider and actually stress the alveolus and stimulate it to grow wider and pick up the dimension in the first bicuspid area where we have the greatest potential for this development. What we generally need to do when we would diagnose a patient that displays a class II dental malocclusion is make a termination as to whether or not they were skeletally class II as well. If they were skeletally class II as the result of a retrognathic mandible, we would have to debate whether or not we would use a MAX 2000® on the upper arch in hope that we might either get some spontaneous class II skeletal reposturing so we could get our class II correction. Or if we are feeling that we are not going to get this kind of response, then we might want to consider utilizing our distalizing maxillary expander, called the DMAX 2000®, which automatically and simultaneously would expand the arch and distalize the first molars to bring on a class I molar relationship.

On early treatment, we generally find that the lower appliance can be removed within six months. In some cases the lower appliance can be removed within 90 days. When we take the lower appliance off, we still have the upper appliance working. We make an impression and have a lingual holding arch made to hold our molar position transversely and if there is some distalization we will hold it so that we will have some extra leeway space in the area of the deciduous second molar.



In what order do you proceed?

Now, in our practice, if one has the optimum opportunity to deliver treatment, we would routinely select to do an orthopaedic early phase treatment, with the idea that you would like to develop intercanine width between the ages of 6 and 9. This would allow the lower incisors to erupt and for the periodontal attachments to attach in a non-rotated dental position. This is significant because the most difficult area to maintain orthodontic long-term treatment stability is the lower incisor area. Generally, this phase 1 treatment is strictly orthopaedic and usually it requires dual arch development, which

depth as to an explanation as to the thought process as to why you would consider doing dual arch development.

When we do an early phase treatment, our intention is that what we are trying to do is avoid the possible need for bicuspid extraction whenever possible. We are following the statement by the father of orthodontics in America, Dr. Edward Angle, who said in 1905 "The best proportions, the best balance require full complement of teeth in a normal position." That was the original intent by the orthodontic speciality in America. Our technology of the time to deliver

choice because that is what's going to limit their ability to treat the case non-extraction. There are chronicles of articles attesting to the futility of mandibular arch development. But in reality, the maxilla is most important key to mid-face development. If early treatment is limited to only one option, it should be maxillary transverse development. And if you did nothing other than that, you could not really damage the patient; the reason being that you cannot over expand bone. The muscular tissue will not allow you to over-expand bone. You can over expand teeth in bone, but you cannot over expand bone, because the bone will be limited