JOS Session

Topic : The basis, history, present status, and progress of edgewise treatment, which remains unchanged today

Speakers:

1. James L. Vaden
2. Will A. Andrews
3. Carl F. Gugino

Summary:

Orthodontic treatment using the edgewise appliance was first conceived by Edward H. Angle, then further refined by Charles H. Tweed, and although the concepts of extraction and non-extraction have been debated, the Tweed (Tweed-Merrifield) method with the standard edgewise appliance continues to be used today in orthodontic practice and education. Lawrence F. Andrews later developed a straight wire method using pre-adjusted brackets to minimize bending, and a number of methods with varied bracket prescriptions have appeared since then. At present, this is the most widely used orthodontic appliance in the world. In the course of development so far, several approaches have come into widespread use in educational settings, including the Jarabak method and the Begg method; the standard edgewise method and the straight wire method, which include refinements of those methods; and the bioprogressive method, which incorporates growth prediction and treatment in the mixed dentition period.

Meanwhile, since the era of gnathostatic models, the development of the cephalogram, development from the full band method to the direct bonding method, aesthetic braces and lingual braces, and the development of various materials, including super-elastic Ni-Ti alloy wires, have had a considerable influence on the evolution and development of each of these methods. In addition, orthodontic anchor screws and dental CBCT have come into widespread use, producing significant changes in concepts of securing anchorage and limits of tooth movement that were previously considered impossible; and this has resulted in considerable changes in the textbook concepts related to problem lists and the corresponding treatment goals and treatment planning. In this session, we will hear about the basis, history, present status, and progress of edgewise treatment, which still remains unchanged since the advent of TADs and CBCT, from renowned international speakers who are familiar with orthodontic treatment for Japanese people, whose jaw characteristics differ from those of Westerners, requiring special measures in jaw control and treatment mechanics. (312 words)

Abstract:

The Standard Edgewise Appliance

James L. Vaden

The edgewise appliance has been in use, almost as Angle designed it, for well over a century. It has also been modified many times by numerous clinicians. Yet, it remains as modern as tomorrow and is in use all over the world. This presentation gives a brief history of its evolution, from Angle through Tweed and then Merrifield. The force systems used with the appliance today are outlined and illustrated. The presentation will, hopefully, give the viewer a deeper understanding of and a greater appreciation for the edgewise appliance.

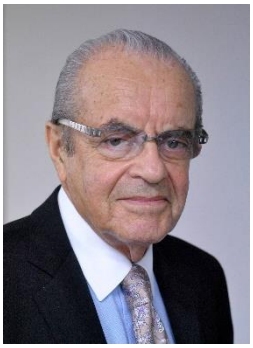
The Straight-Wire Appliance; origins, permutations, and misconceptions

Will A. Andrews

The Straight-Wire Appliance was conceived of and developed by Dr. Lawrence F. Andrews in San Diego, California in the late 1960's and became commercially available in 1970. By the 1980's it's use had become widespread and today is likely the most commonly used orthodontic appliance in the world. Variations in prescription, material, design features, slot size, and ligation mechanism have emerged over time, some of which have enhanced performance, others which have not. Significant misconceptions persist about how best to utilize the appliance as it was originally intended. Factors that potentially affect performance including bracket siting, prescription values, deviation angle between archwire and slot, and variations in dental morphology, will be discussed. Suggestions to improve performance regardless of malocclusion type or race will be offered.

Past, Present, Future of Orthodontics using Ethics - Professionalism - Excellence – Leadership

Carl F. Gugino



This lecture will show that orthodontics can be the starting point to incorporate health science into your practice. This has always been an important part in Contemporary ZeroBase Bioprogressive Philosophy. It takes a business model and a systems approach to incorporate this into your practice.

In a short presentation we will attempt to show you a systems approach that will allow you to incorporate new technologies into you r practice. We will overview a diagnostic and treatment design system that allows you to individualize treatment based on the degree of difficulty of the patient. We consider technology a design for instrumental action, which may be hardware or software-based that increases the reliability of achieving a desired outcome.

We have quickly gone from analog to the digital age and need to keep incorporating technologies such as conebeam (CBCT), awareness/ wellness training and other technologies. Artificial Intelligence is going to play a large part in the future.