COURSE ID: ODO.11
HISTORY OF ORTHODONTIC FIXED APPLIANCES

INCLUDES:
HISTORICAL PREVIEW
APPLIANCE EVOLUTION WITH TIME FROM E-ARCH TO INVISALIGN

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Goals: This series of courses will cover the following issues:
  1. The different treatment methods available in early civilizations as well as appliance designs developed throughout the ages.
  2. A primary focus on Dr Edward Angle as the father of modern orthodontics. Four of his major appliances are discussed, mainly the Edgewise appliance: The blueprint for all future appliances.
  3. A detailed evolution from the edgewise to the most contemporary designs is explained with an overview of the different available techniques.

Objectives: Upon completion of this course, residents will be able to:
  1. Appreciate the history and origins of primitive dental and orthodontic devices.
  2. Identify the natural evolution and development towards modern and contemporary appliances.
  3. Differentiate the conceptual differences between the original edgewise and straight wire appliances.
  4. Become familiar with the panoply of bracket materials, designs and auxiliaries as well as the advantages, drawbacks and differences between .018 and .022 inch slot prescriptions.

COURSE DURATION AND SCOPE: This course is part of the introductory course scheduled on October for the first year residents. It is given every Thursday at a 2-hour session between 10:00 a.m. and 12:00 a.m. in the orientation stage of first year residents. It includes a review on the history of orthodontics and the evolution of the appliances used.

POLICY ON EXAMINATIONS: One examination is given for this course, usually scheduled in the progress examination in December.
HISTORY OF FIXED ORTHODONTIC APPLIANCES

SUMMARY OUTLINE
- DENTISTRY THROUGH ANTIQUITY
- OVERVIEW THROUGH THE MIDDLE AGES & RENAISSANCE
- EDGewise EVOLUTION
- APPLIANCE FABRICATION
- OTHER EARLY FIXED APPLIANCES
- CONTEMPORARY EDGewise APPLIANCES
- ANDREW’S SIX KEYS. STRAIGHT WIRE APPLIANCE
- SELF-LIGATING BRACKETS
- VERTICAL SLOT
- OTHER EARLY FIXED APPLIANCES
- EDGewise / BEGG COMBINATION
- BI-DIMENSIONAL
- PLASTIC BRACKETS
- CERAMIC BRACKETS
- PLASTIC BRACKETS IMPROVEMENTS
- PLASTIC/CERAMIC FILLER COMBINATION
- GOLDEN APPLIANCES
- ALLERGY & SENSITIVITY
- AUXILIARY ATTACHMENTS
- WHAT IS INVISALIGN?

COURSE OUTLINE

1. DENTISTRY THROUGH ANTIQUITY
   A. Egyptian mummies and Sumerian civilizations
   B. Phoenician dental art
   C. Etruscan masterpieces…

2. OVERVIEW THROUGH THE MIDDLE AGES & RENAISSANCE
   A. Norman W. KINGSLEY
   B. Edward H. ANGLE
   C. Classification of malocclusion
   D. Angle’s orthopedic appliances
   E. Appliance development
      a. E-Arch
      b. Pin and tube
      c. Ribbon arch (1915)
      d. Edgewise (1928)

3. EDGewise EVOLUTION
   A. Bracket slot alteration
   B. 22 versus 18 slot brackets

4. OTHER EARLY FIXED APPLIANCES
5. APPLIANCE FABRICATION
   A. Stamped
   B. Casting

6. CONTEMPORARY EDGEWISE APPLIANCES

7. ANDREW’S SIX KEYS

8. STRAIGHT WIRE APPLIANCE
   A. Major appliance prescriptions
   B. Torque in bracket versus base

9. SELF-LIGATING BRACKETS

10. VERTICAL SLOT

11. OTHER EARLY FIXED APPLIANCES

12. EDGEWISE / BEGG COMBINATION

13. BI-DIMENSIONAL

14. PLASTIC BRACKETS

15. CERAMIC BRACKETS (80’s)
   A. Advantages & disadvantages
   B. Recommendations & suggestions

16. PLASTIC BRACKETS IMPROVEMENTS

17. PLASTIC/CERAMIC FILLER COMBINATION

18. GOLDEN APPLIANCES

19. ALLERGY & SENSITIVITY
   A. Titanium brackets

20. AUXILIARY ATTACHMENTS

21. WHAT IS INVISALIGN?
REFERENCES

Books
   Chapter 12: Contemporary Fixed Appliances.
   Chapter 13: The Tweed-Merifield Edgewise Appliance: Philosophy, Diagnosis and Treatment.
   Chapter 14: Fixed Edgewise Orthodontic Appliances and Bonding Techniques.
   Chapter 6: The Edgewise Appliance Today.

Articles (by journals)