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SUBJECT : "ORTHODONTIC".

PROGRAMM : BS(D·T)
6TH SEMESTER.

DATE : 27TH · JUNE · 2020.

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QUESTION : 02

Q2:- Illustrate the management of Anterior Cross bite?

A. ANTERIOR CROSS BITE

Anterior cross bite is a type of malocclusion or misalignment of teeth which upper teeth fit inside the lower teeth.

OR

An abnormal labiolingual relationship b/w one or more maxillary and mandible incisors teeth. The cause of the anterior cross bite including a lingual eruption path of maxillary anterior incisor trauma to primary incisors resulting in a lingual displacement of the permanent tooth germs.

MANAGEMENT

The methods to treat the anterior cross-bite will depend on the aetiology of cross bite, their eruption stages of teeth, patient's age depended,

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Space problems and also depended on the treatment's affordability.

On the other side the patient's requirement cooperation and laboratory procedures its uncomfotablness are considered its disadvantages.

In Angle Class I Type 3 patients, there is habitual established crossbite of anterior teeth resulting in functional forward of mandible. When mouth is closed. When mandible shift anteriorly then condyle position will not remain in the centric position of their glenoid fossa.

TREATMENT METHODS

To correct the anterior cross bite by various treatment methods. Such as tongue blades reversed, stainless steel crown, fixed acrylic planes, bonded resin-composite and removable acrylic appliances with finger spring. Bite plane very uncomfortable to patients.

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TREATMENT ❖

The treatment for the patient to correct anterior crossbite to establish normal overbite and overjet to align their anterior teeth and to improve the patient's facial and esthetics.

To correct the upper anterior teeth and correct crossbite, a removable acrylic appliance with posterior bite opening platform was used.

After two months the maxillary and mandibular incisors displayed on edge-to-edge relationship & ^{on edge-} ^{bite} crossbite was corrected.

During the course of treatment (at 6 months) the permanent upper lateral incisors erupted with the left lateral tooth in crossbite.

A new acrylic plate with labiolingual spring was prepared and spring was activated every 2 months until this crossbite is resolved.

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At the 8th month of this treatment of all upper (maxillary) teeth was successfully corrected.

Cross bite also corrected using a reversed, pre fabricated stainless steel crown.

This type of treatment's disadvantage is to difficult adapting to performed crown to fit the tooth in crossbite condition.

In this cases the composite plane cannot be used $\frac{1}{3}$ the crown length. Removable orthodontic appliances represented another safe, easily and esthetically treatment for anterior cross bite conditions.

Anterior cross bite removing the interferences by occlusal grinding or extracting primary incisors.

Choice of treatment depends upon the causes:

- * Dental Cause.
- * Functional cause.
- * Skeletal Cause.

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(i) DENTAL CAUSE ❖

- * Habits of the biting of upper lips.
- * Cleft lips repaired cases.
- * Supernumerary teeth.
- * Traumatic injury to primary dentition that causes a lingual displacement of permanent tooth buds.



Persistence of deciduous teeth.



Palatal deflection of its erupting successor.



Single tooth to Anterior Cross bite.

(ii) SKELETAL CAUSE ❖

- * Deficient of anterior growth of maxilla.
- * Excessive abnormal mandibular growth in anteriorly.

* Genetically caused.

(iii) FUNCTIONAL CAUSE ❖

- * Habitual forward positioning of mandible to maintain / obtain maximum intercuspation to their Anterior cross bite.

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QUESTION : 03

Q3. Summarize the division I and division II of class II malocclusion?

A. CLASS II DIVISION I

Class II division I malocclusion treatment occurs in one or two phase. In 2 phases carried in mixed dentition with potential application of maxillary functional orthopedics followed by a perfect phase in early permanent dentition phase.

In division I their upper central incisors are proclined and there are increasing in overjet.

Class II division I malocclusion are the removable appliances and proclined the upper incisors.

FUNCTIONAL APPLIANCES

In a patient for a growth modification.

P.T.O
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- * Deep overbite.
- * There will be no crowding in upper and lower arch of a patient.
- * Mild to Moderate class II division I.
- * Proclined upper incisors.

SIDE EFFECTS ❖

Commonly found in patient's Treatment Completion including posterior over bite protrusion of mandibular incisors, Increase facial height anteriorly and proclined maxillary incisors.

TREATMENT MODALITIES ❖

- * Growth modification :-
functional Appliances.
- * Removable Appliances.
- * Fixed Appliances.
- * Surgery.

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≡ CLASS II DIVISION II MALOCCLUSION ≡

Class II division II malocclusion has a horizontal growth pattern with decreased lower anterior facial height, upper incisors retroclined & significantly increased maxillary arch.

The lower incisors edges lies anterior to the Lingulum plateau of the upper incisors in class III.

The upper central incisors are retroclined. The overjet is usually minimal or may be increased.

Class II division II malocclusion with the classic retroinclination of upper incisors is one of the most difficult restorative phases.

TREATMENT PLANE ≡

The treatment plan of class II division II malocclusion the anterior teeth simply not restored in the preoperative position.

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Without any excessive removal of tooth/ tooth structure.

The prepared tooth are very likely required endodontics & have lack of adequate ferrule.

TREATMENT PHASES ❖

There are completed into four phases.

- (i) pre-treatment in phase I. ❖
- (ii) phase - 2 :: Caries restorative Related.
- (iii) phase - 3 :: Orthodontics treatment.
- (iv) phase - 4 :: Restorative treatment.

❖ QUESTION: 01 ❖

Q1:- Describe the procedure for mandibular and maxilla uses of acrylic in activator?

A. ACTIVATOR ❖

The activator is a mono-block appliances (solid block of acrylic) loose fitting in a patient's mouth.

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They cause the muscles of mastication becomes active in order to hold the appliances in place.

The activator is a orthodontic appliances. ~~Activator~~ This was a first functional appliances to corrected the functional jaw in early 1900s.

∴ USE OF ACRYLIC IN ACTIVATOR ∴

The activator appliances started as from one block of acrylic. These was fit into both maxillary and mandibular arch.

In the upper arch of patient's covered from canine to canine anteriorly which later modified as seen with appliances such as bioactivator appliances.

In the lower arch of patient's lingual palatal extending from the distal of the last erupted molar and they are available horse shoe shaped.

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Component ::

Activator :: Consists of the acrylic and the wire components.

WIRE ::

This wire is a component of activator which are usually placed 1 mm away from front incisors. which are present canine to canine.

Wire Thickness ::

The wire of activator is 0.9 - 0.8 mm thickness.

TYPES OF ACTIVATOR ::

There are mainly two types of activator one is Horizontal and other is Vertical activator.

(i) Horizontal (H) Activator.

Significantly changes in Anteroposterior Dimension.

(ii) Vertical (V) Activator.

Significantly changes in vertically Dimension.

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❖ QUESTION: 04 ❖

Q4: Demonstrate the recent trend modification of Oral Screening?

A: ORAL SCREEN ❖

The oral screen is a functional appliance suitable for the treatment of malocclusion associated with muscular patterns. The better muscles balance tongue and the buccinators mechanisms can established & re-established of normal growth of developing.

The effect of oral screen elevated through the lip seal exercise.

The patient should be wear the oral screen every night and also day whenever possible.

USES:

The Oral Screen be used for correction of Teeth of following conditions.

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The oral Screen are used for:

- * Mouth breathing.
- * Incompetent lips.
- * Thumb Sucking, Tongue Thrusting and lip biting.
- * Open bite in deciduous and their mixed Dentition.

MODIFICATION OF ORAL SCREEN

- * A patient who feels difficulty in breathing. Then their multiple holes can be made that are closed by one a period of time.
- * Double oral Screen an additional lingual Screen for Tongue Thrusting habit.
- * Hotz modification: They made of additional metal rings.

A metallic ring is made and placed at midline of the appliances with the help of a key to the hold oral Screen.

This ring can be used to carry out various muscle exercises.

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❖ QUESTION : 05 ❖

Q5:- What is Finger Spring? Why 'Z' Spring is called double Cantilever Spring?

A: FINGER SPRING ❖

The Finger Spring are often used in removable orthodontic appliances. This Spring are placed buccally and used when the tooth is moved palatally and mesiodistally Direction.

This Spring are also called Single Cantilever Spring.

This Spring is fixed one end in acrylic and their end is free. It is used to move teeth labially and also used for their correction of minor rotation.

This Spring is consist of two coils of small diameter. It also placed perpendicular to the palatal surface of the tooth. This Spring for movement of single / double incisors.

"Z" SPRING CALLED DOUBLE CANTILEVER SPRING ::

The "Z" Spring is also a type of Spring which is used in orthodontic removable appliances.

The "Z" Spring also called double Cantilever Spring because this Spring is consist of double coils of small internal diameter, and placed perpendicular to the palatal surface of a tooth.

The double cantilever Spring are made of 0.5 mm wire.

The arm of the Spring should be as long as possible to reduce the stiffness of the Spring.

In case there is some doubt about stability of Spring a guard prevent downward displacement of Spring.

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ADJUSTMENT:

- * First adjustment is carry out to the palatal limb close the coil of wire fixed end of Spring.
- * Secondly, adjustment at other ends of the limb to make free limb perpendicular to the extended path of movement.

The 'Z' or double cantilever Spring used for correction of minor rotation. They used for most conservative appliances it is easy to fabricate and applies magnitude of forces to advance teeth in cross bites.

Its disadvantages is effectually only in enough space to correct individual tooth in Segmental Cross bite.

