NAME = FAZLE SUBHAN

I.D = 13795

SUBJECT = OPERATIVE DENTISTRY

PROGRAMME = BS DENTAL TECHNOLOGY (6TH SEMESTER)

QNO 5):

ANSWER:

BRIDGES:

Any dental prosthesis that is luted, screwed or mechanically attached to natural teeth, tooth roots and/ or implant abutments that furnish primary support for dental prosthesis

A bridge is a fixed dental restoration use to replace one or more missing teeth by joining an artificial tooth definitively to adjacent teeth or dental implants

MATERIAL FOR CONSTRUCTION OF BRIDGE WORK:

- The following material are used for dental bridges
- Metal
- Metal- ceramic
- All ceramic
- Acrylic

DIFFERENT TYPES OF BRIDGES:

- Fixed bridge
- Fixed movable
- Cantilever
- Spring cantilever

FIXED BRIDGE:

Has rigid connectors at both ends of pontics which form a rigid prosthesis.

ADVANTAGES

Provides cross arch splinting

Ease of handling

DISADVANTAGES

Possible bending of bridge

Mobility of abutments may result in open margins

All unit have to be cemented simultaneously

FIXED MOVABLE BRIDGE:

It has a rigid connector usually at the distal end of the pontic and a movable connector that allow some verticle movement of the mesial abutment tooth

ADVANTAGES

Allow flexure of mandible

Allow units to be cemented as individual section

DISADVANTAGES

More space required

Metal may show occlusally

Food impaction

CANTILEVER BRIDGE:

It's a kind minimal preparation bridge. It provides support for the pontic at one end only. The pontic may be attached to a single retainer splinted together.

E.g Maryland bridge, rochette bridge

ADVANTAGES

Preserve tooth structure

Minimal pulp trauma

Rebond possible

DISADVANTAGES

Length of span is limited to one pontic only

Occlusal forces on the pontic encourage tilting of abutment tooth.

Not successful for posterior prosthesis

SPRING CONTILEVER BRIDGES

They are restricted to the replacement of upper Incisor teeth. Only one pontic could be supported by a spring cantilever bridge

ADVANTAGES

Restoration of spaced dentition

DISADVANTAGES

Food impaction under metal connector

Fracture of metal connector

Dislodgment of retainer

QNO 4):

ANSWER:

PONTICS:

An artificial tooth on a fixed dental prosthesis that replaces a missing natural tooth, restores its function, and usually fills the space previously occupied by the clinical crown

FUNCTION:

Mastication

Speech

Esthetics

DIFFERENTIATE TYPES OF PONTICS:

1) **MODIFFIED RIDGE LAP PONTIC**

The modified ridge lap pontic combines the best feature of the hygienic and saddle pontic design, combining esthetic with easy cleaning.
Overlaps the residual ridge on the facial (to achieve the appearance of the tooth emerging from the gingiva).
Remain clear of the ridge on the lingual side.

2) **OVATE PONTIC**:

The ovate pontic is the most esthetically appealing pontic design. It convex tissue surface resides in a soft tissue depression or hollow in the residual ridge, which make at appear that a tooth is literally emerging from the gingival. Careful treatment planning is necessary for successful results.

3) **CONICAL PONTIC:**

Often called egg-shaped, bullet-shaped, or heart shaped, the conical pontic is easy for the patient to keep clean. It should be made as convex as possible, with only one point of contact at the center of the residual ridge.

4) **RIDGE LAP PONTIC:**

The ridge lap pontic has a concave fitting surface that overlaps the residual ridge buccolingually, simulating the contours and emergence profile of the missing tooth on both side of the residual ridge.

QNO1):

ANSWER: A)

There's a high prevalence of periapical lesion when we have missed and untreated canals that causes endodontic failure. This influences the prognosis of an endodontically treated teeth. For this reason is so important to have knowledge about teeth anatomy, root canal configuration and possible variation, before starting an endodontic treatment.

QNO1

ANSWER B:

File should be removed by one of the following procedures, and then perform root canal treatment.

CHEMICAL SOLVENT:

The use of EDTA has been suggested is a method of softening root canal wall dentin around separated instrument, facilitating the placement of files for the removal of the fragment.

MINI FORCEPS:

If the presence of sufficient space within the root canal system, an instrument separated in a more coronal portion of the root canal can be grasped and removed by using forceps such as Stieglitz forceps, peet silver point forceps, endo forceps

BROACH AND COTTON:

If the separated fragment is a barbed broach and not tightly wedged in the root canal, another small barbed broach with a small piece of cotton roll twisted around it can be inserted inside the root canal to engage the fragment ; then the whole assembly is with drawn.

WIRE LOOPS :

The loop can be either small circular or long elliptical in shape according to canal size and the location of the fragment. This technique can be used to receive object there are not tightly bound in the root canal.

BRADING OF ENDODONTIC FILES:

The largest possible size of files should be used with caution because of the possibility of separation of the braided files.

ULTRA SONICS:

Ultrasonic instruments have a contra- angled design with alloy tips of different lengths and size to enable use in different parts of the root canal. Most ultrasonic instrument have in SS copre coated entirely with diamond or zirconium nitride; there for the instruments abrades alongs its sides in addition to its tips.

SOFTENED GUTTA PERCAH

Rahimi and parashos reported a novel, but simple, technique to remove loose fragment located in the apical third of the root canal by using softened gutta percha point

LASER IRRADIATION:

The yag laser has been tested recently in labartory studies foe removal of separated instrument

QNO 2):

ANWERE:

ROOT CANAL:

Root canal treatment is the process of removing the inflamed or infected pulp tissue from within the tooth.

ROOT CANAL PROCEDURE FOR MAXILLARY 1ST PRE MOLAR:

ISOLATION WITH RUBBER DAM:

Isolation of the tooth is accomplished with a rubber dam

- Keep bacteria in the saliva from entering into the tooth
- Prevent debris, instrument, etc. from going down the patients throat

HIGH-TECH INSTRUMENTS:

Rotary nickel- titanium (NI-TI) Files

- Efficiency way to clean the canal system, significantly reducing operating time
- Able to navigate curved canal due to their flexure

CLEANING THE ROOT CANAL:

We use many instrument of different sizes and different shapes to properly clean and shape your specific root canal anatomy.

DISINFECTION OF THE ROOT CANAL:

Sodium hypochlorite is one of the disinfectant used to reduce the bacteria load within the tooth. Specialized blunt-ended needles are used to deliver these disinfectants to the end of the root in a safe and effective way

ACCESSING THE ROOT CANAL:

To gain access to the root canal of the tooth, a small opening is made either on the occlusal surface of the tooth or on the lingual of

In a multi-rooted tooth, gaining access into the root canal is more challenging

With the aid of a microscope we are able to locate any hidden or calcified canal

FINAL PREPARATION:

After thoroughly cleaning and shaping the canals, the canal are dried with absorbing paper point.

OBTURING:

Finally, the canal are sealed with two components:
-sealer – a cement that sets over time
- gutta percha – a filler made of a natural form of latex

Upon completion of the root canal treatment, a temporary filling is placed over the sealed canal that has two parts
-coton pellet soaked an in antibacterial solution
-a solid temporary filling on top

A final restoration(usually a crown) is placed by your dentist
-this will restore functionality to your tooth and protect it from fracturing

QN0 3)
ANSWER:

STEP OF THE TECHNIQUE:

1)- The effected tooth is carefully isolated with a ruber dam, and an access opening is made into the pulp chamber
2)- a file is placed in the root canal, and a radiograph is made to establish the root length accurately. It is important to avoid placing the instrument through the apex, which might injure the epithelial diaphragm

3)- after the remnants of the pulp have been removed using barbed broaches and files, the canal is flooded with hydrogen peroxide to aid in the removal of debris. The canal is then irrigated with sodium hydrochlorite

4)- the canal is dried with absorbent paper points and loose cotton

STEP OF THE TECHNIQUE USING CALCIUM HYDROXIDE:

5)- A thick paste of calcium hydroxide is transferred to the canal. An endodntic plugger may be used to push the material to the apical end, but excess material should not be forced beyond the apex.

6)- a cotton plagette is placed over the calcium hydroxide, and the seal is completed with the layer of rienfirced zinc oxide – eugenol cement

One month after initial treatment
Six month after initial treatment
The root canal is reopened to determine whether the to for a conventional gutta percha filling
Five months after the placement of the gutta percha canal filling.

If apical closure has not occurred in 6 months, the root canal is retreated with the calcium hydroxide paste. If weeping in the canal was not controlled before the canal was filled, retreatment is recommended 2 or 3 months after the first treatment.

USING MTA:

1The canal has been opened, rinsed with 5% sodium hypochlorite, dried, and calcium hydroxide was then placed in the canal for 1 week

7days after initial treatment with calcium hydroxide, the incisor was instrumented to remove calcium hydroxide and all the remaining tissue before further treatment

The apical 4-5 mm of the incisor root has been filled with mineral trioxide aggregate

A moist cotton wool pledget was then placed in the canal overnight in the system temporarily sealed using thermoplasticized gutta percha using obturation, and a zinc oxide/eugenol dressing.
Check radiographwas obtained to evaluate the apical seal
The gutta percha was cotton wool pledget was removed the following day and a definitive root – filling placed coronal to the MTA using thermoplasticized gutta percha

The has completed initial treatment with MTA. A temporary restoration has ben placed to seal the canal opening
At the 6 months and 1 year follow ups the clinical and radiographic appearance of the teeth showed resolution of the periapical lesions.