

NAME: FAWAD ALI

I'd No: 13430

Subject: Conservative Dentistry

Program: Ba DT (5th)

Question No 1:

MUCOSAL & NON MUCOSAL PONTIC DESIGN

Based on mucosa contact:

saddle pontic:

is a pontic with a concave gingival surface that overlaps the ridge buccally and lingually. The gingival surface of the saddle pontic will not have continuous contact with the ridge instead only the buccal and lingual ends of the gingival surface will contact the tissue.

Disadvantage of saddle pontic:

difficulty in maintenance. Special instruction to floss/ clean the gingival surface should be given to patient.

Ridge lap pontic:

resembles a natural tooth. it is designed to adapt closely to the ridge. It is avoided because its difficult to maintain and often leads to inflammation of tissue contact areas.

Modified ridge lap:

these pontics are designed to further reduce tissue contact. they do not overlap the ridge on either sides but instead are limited to contact on buccal/labial side of alveolar ridge. This pontic also is designed with slight bucco-lingual concavity where the food entrapment can occur. This entrapment can be avoided by designing the pontic with a convex surface. There is a T-shaped mucosal contact with the mucosa. The horizontal part of the T forms the contact of the buccal surface of ridge and the vertical part the T ends at crest of ridge.

Ovate pontics:

are used in cases where residual ridge is defective or incompletely healed. They can also be used in broad and flat ridges. The pontic is designed so that its cervical end extends into the defect of the

edentulous ridge. The pontic should be reduced as healing progresses. This design of pontic is more aesthetic and it appears to form socket like a natural tooth.

Bullet shaped pontics:

convex tissue surface which contacts the tissue at a single point without any pressure. this pontic is very easy to clean and maintain but has poor aesthetics with its wide embrasures. indicated for mandibular posterior teeth.

Sanitary pontics:

have zero tissue contact. They are easy to maintain but are very unaesthetic hence also used for posterior teeth. There should be a occluso-gingival height of 3mm minimum.

Question No 2:

Root canal procedure in visits

Endodontic (Root Canal) Treatment, Step By Step

Preliminary treatment to remove the decay and the source of infection of the pulp is necessary, along with a determination of whether the lost tooth structure can be restored. If a fracture of the tooth has reached the pulp, or infection is associated with gum disease, it could be more difficult, if not impossible, to save the tooth.

Step 1

Local anesthesia is administered via injections to numb the tooth to be treated and the surrounding tissues. If the pulp in a tooth is acutely inflamed, and therefore very painful, it may take a while to get it numb, but your dentist will not start the treatment until it is.

Step 2

A dental dam — a thin sheet of rubber or vinyl — will be placed over the affected and adjacent teeth. The tooth undergoing treatment protrudes through a hole punched in the dam, isolating it from the rest of the mouth. This allows the root canal treatment to be carried out in a sterile environment free from contamination by bacteria found in saliva or the rest of the mouth.

Step 3

A small access hole is drilled through the biting surface of an affected back tooth or from behind a front tooth, allowing access to the pulp chamber and root canals for treatment.

Step 4

The diseased and dead pulp tissue is removed from the tooth with specially designed instruments used to clean out the root canals and pulp chamber. This is not painful; the area is numb and the tissue being removed is either dead or dying. Once the pulp, along with the nerves contained in it, is removed, the tooth itself can no longer feel pain.

Step 5

The canals are disinfected with antiseptic and antibacterial solutions.

Step 6

The canals are then shaped with tiny flexible instruments to allow them to receive root canal fillings and sealers. The canals are washed and cleaned again to remove root canal debris prior to sealing them.

Step 7

Root canal fillings are selected that will exactly fit into the freshly prepared canals. Usually a rubber-like material called gutta-percha is used to fill the canal space. It is a thermoplastic material (“thermo” – heat; “plastic” – to shape), which literally is heated and then compressed into and against the walls of the root canals to seal them. Together with adhesive cement called a sealer, the gutta-percha fills the prepared canal space. Sealing the canals is critically important to prevent them from becoming reinfected with bacteria.

Step 8

A temporary or permanent filling material will then be placed to seal the access hole that was made to treat the canals, and the dental dam is removed. If the tooth lacks sufficient structure to hold a restoration (filling) in place, the dentist or endodontist may place a post (either metal or a very strong plastic) in one of the canals inside the tooth to help retain it.

Step 9

After the procedure, an antibiotic may be prescribed to treat or prevent infection. Be sure to follow the instructions of your dentist or endodontist carefully. After-effects of treatment are minimal, generally lasting from a couple of days to about a week. It is normal to have some minor discomfort after treatment including slight soreness that can usually be managed with over-the-counter (aspirin, ibuprofen) medications or prescription (codeine-type) drugs, or a combination of the two.

Step 10

Your tooth will need a permanent restoration — a filling or a crown — to replace lost tooth structure, and provide a complete seal to the top of the tooth. Your endodontist will send you back to your general dentist to determine which type of restoration is best for you. This step is of particular importance since many studies show that if the filled root canals are recontaminated with bacteria from the mouth, there could be a recurrence of infection around the tooth.

Question No 3:

FAILURE OF ENDODONTICS TREATMENT

1) PERSISTENCE OF BACTERIA

One of the foremost causes of endodontic failure is persistent microbiological infection. The role of bacteria in periradicular infection has been well established in literature and endodontic treatment will be afflicted with a higher chance of failure if microorganisms persist in the canals at the time of root canal obturation. Bacteria harbored in root canal areas such as isthmuses, dentinal tubules and ramifications may evade disinfectants.

2) INADEQUATE OR OVEREXTENDED

ROOT FILLING Apart from proper disinfection and debridement of canals, another factor which is of colossal importance is the quality of obturation. The quality of root canal obturation was the most important factor in the success of the endodontic treatment in a study carried out on 1001 endodontically treated teeth. In another study which assessed teeth with endodontic failures, 65% of the cases exhibited poor quality obturation whereas 42% of the teeth had some canals which were left untreated. Success rates are naturally lower for obturations which are under or overextended and are highest for those which end flush or within 2 mm of the apex.

3) IMPROPER CORONAL SEAL

A well-sealing coronal restoration is essential after the completion of obturation as it would prevent the ingress of any microorganisms, which are present in the ambient environment. Swanson and Madison emphasized in their study that coronal leakage should be considered as a potential factor resulting in endodontic failure.

4) COMPLICATIONS OF INSTRUMENTATION

Rotary instruments tend to fracture in the canals when either laws of access cavity preparation are not adhered to or guidelines regarding the use of rotary instruments are not followed. As a consequence of fracture, the access to the apical portion of the root canal is decreased and this could have a deleterious effect on canal disinfection and later on, on obturation. Most of the studies done on the effect of fractured instruments have demonstrated the minimal influence on the success rate of the treatment.

5) UNTREATED CANALS

It is not an uncommon practice to miss a canal while carrying out endodontic treatment especially in molar teeth where one root, one canal formula is frequently over ruled by the fact that number of canals are more than the number of roots. Moreover, a less than adequate access opening makes it difficult for the primary dentist to locate the supplemental canals. The inability to treat all the canals is one of the causes leading to endodontic failure.

Thank you so much !!!