

Detailed Discussion about Single Tooth Replacement: A Clinical Case Report

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Abstract: *There are different treatment options available for tooth replacement. Replacement of missing teeth depends upon multiple factors and patients' awareness about dental prosthesis is one of the most important factors. However, patients' knowledge of different treatment options for missing teeth is very limited. Hence there is a need to discuss in detail about the various treatment options available of dental prosthesis for tooth replacement. This paper attempts to describe in detail about the various treatment options available for replacing a missing tooth. Various options in detail were discussed with patient verbally as well as a comprehensive letter was sent to the patient. The letter described all the treatment options with their advantages & drawbacks and each procedure was further explained with diagram in a very simplified manner which was easily understood by the patient. Finally, after much discussion the patient opted the most conventional method which was resin-bonded fixed partial denture (RBBFD)*

Keywords: treatment options, missing tooth, resin modified fixed partial denture

1. Introduction

Teeth may be lost due to many different reasons.⁽¹⁾ Dental caries and periodontal disease count of major causes of loose teeth.⁽²⁾ The posterior regions of the mouth, especially the first molars often require the replacement of a single tooth.⁽³⁾ The most common reason for loss of posterior teeth includes caries, failed endodontic treatment, and failure of the post endodontic restorations. Single-tooth replacement may be effected through use of a resin-bonded fixed partial denture (RBB), a conventional fixed dental prosthesis (FDP), a removable prosthesis, or a single implant-supported crown (SIC).⁽⁴⁾

There are many options for replacement of missing teeth and each option has its own advantages and disadvantages. However, the patient's information for different treatment options for missing teeth is very limited. Hence there is a need to discuss in detail about the various treatment options available of dental prosthesis for replacement for missing teeth. FDP offers the advantage of clinical ease, reduced treatment time, and also can meet the esthetic, functional requirements and the patient comfort. A major shortcoming of fixed dental prosthesis is the need for abutment preparation⁽⁵⁾ and subgingival margins in esthetic situations, which can be associated with increased gingival inflammation.^(6,7) In addition, a three unit fixed dental prosthesis presents a survival limitations to the restoration and the abutment teeth.^(8,9)

Today, numerous types of fixed prostheses are available to replace missing teeth. Developments in the field of implantology and adhesive dentistry have increased the

options available for the partially edentulous patient but have also made treatment planning more complex. However, it still remains important to identify a positive 'need' to restore a space and to undertake a cost-benefit analysis for any proposed restoration – not only in financial terms but also in biological cost to tooth structure and the supporting tissues.⁽¹⁰⁾

History of presenting complaints

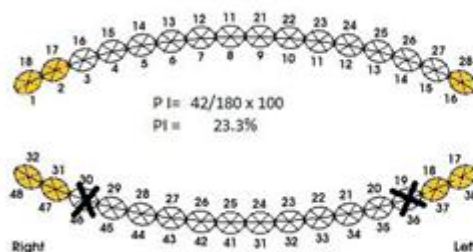
A 35-year-old female patient came to the dental department to restore her missing space. She wants to restore her missing tooth as well as protect the root treated tooth adjacent to it. The tooth has been lost more than 10 years ago. She feels that she has been neglecting her teeth in the previous years and wants to really take care of her teeth now. She wanted the most conservative way to treat her missing space. She seems to be motivated now but still has dental phobia.

Patient has no significant past medical history. Previous visit to dentist were only for relief of pain. She only brushes once daily, not using any interdental aids or mouthwashes but has been using whitening tooth paste and has the habit of vigorous tooth brushing as well.

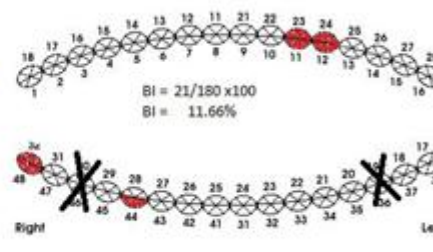
Pocket Charting

BPE score:

2	2	1
1	2	2



Plaque Indices



Plaque Indices

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Bleeding indices

Clinical Photographs



Anterior view in occlusion



Anterior View teeth apart



Left buccal view



Right buccal view



Maxillary occlusal view



Mandibular occlusal

Radiograph

Intraoral periapical radiographs were taken to assess the periapical region of 47 and 45 and also the quality of treatment of 47. The tooth showed radiographic evidence of

good seal and complete obturation of canals and no periapical radiolucency.

Diagnostic cast



Periapical of 47



Periapical of 45



Diagnostic waxup

Articulated diagnostic casts are essential in planning fixed prosthodontic treatment. They provide critical information not directly available during the clinical examination, static and dynamic relationships of the teeth can be examined without interference from protective neuromuscular reflexes. They also reveal those aspects of occlusion not detectable within the confines of the mouth.



Cast mounted in RCP (right side Cast mounted in ICP with diagnostic wax up)



Cast mounted in RCP



Cast mounted in RCP (left side)

The diagnostic casts were mounted on a semiadjustable articulator with a face bow. By the use of lateral interocclusal records or check bites, reasonably accurate simulations of jaw movements were possible. With the help of diagnostic cast various things were evident i.e.: the length of the abutment teeth was accurately gauged to determine which preparation designs will provide adequate retention and resistance. Mesiodistal drifting, rotation and faciolingual displacement of prospective abutment teeth was clearly seen. A thorough evaluation of wear facets – their number, size and location were possible. Discrepancies in the occlusal plane become very apparent on the articulated casts. Occlusal discrepancies were evaluated and the presence of centric prematurities or excursive interferences were easily determined. The findings were as follows:

Class I skeletal base with class I canine relationship.

Missing lower 1st molars bilaterally.

1mm over jet and overbite.

She has midline diastema since she remembers.

Tooth 47 is tilted distally and tooth 16 is slightly supraerupted.

RCP is 2mm posterior to ICP.

Lateral excursions –In group function.

LHS, 23, 24, 25 contacts with, 33, 34, and 35; has no non-working side interference.

RHS 13, 14, 15 and 44, 45 are in group function – no working side interference

Protrusion-During protrusive movement only anterior teeth contact and no posterior interference is seen.

Aesthetic assessment

Smile line – The patient has an average to low smile line with 2/3rd of upper anterior teeth are visible and 1/3rd of lower anteriors visible. No interproximal gingivae is revealed. The average length for maxillary central incisors has been measured at between 10 mm to 11 mm^(11,12,13) and The width-to-length esthetic relationship has been discussed in the literature to be between 70% to 80%^(11,12)

Midline: The maxillary and mandibular midlines are coincident. Facial and dental midlines coincide in 70% of people; maxillary and mandibular midlines fail to coincide in almost three fourths of the population⁽¹⁴⁾

Gingival assessment: - Gingival tissues appear healthy and of a thick biotype. Gingival symmetry is present – the gingival level is the same for the anterior teeth bilaterally. Gingival shape is elliptical for the canines and central incisors and half-oval shaped for the lateral incisors.

Assessment of the ridge/ remaining bone structure:bone density: D2: Dense to porous cortical bone surrounding dense buccal cortical plate is thin buccolingual defect.

Length is the mesiodistal dimension and was about 10mm. Molar teeth are wider mesiodistally and for molar implant restorations the implant needs to be placed 2.5 mm away from the adjacent tooth to allow development of appropriate restorative contours. Placing an implant for a molar tooth too close or too far from the adjacent tooth will also result in compromised restorative contour. So an Implant of 5mm diameter would need at least 10mm of length mesiodistally which is sufficient in this case. The width is the buccolingual dimension and was about 4.5mm which is not sufficient because atleast 7 mm of bone buccolingually is required for placement of a 5 mm diameter implant and won't be sufficient in this case as there is buccal bone loss, so grafting will be needed before placement of implant. The depth is measured from the crest of the ridge to the nearest landmark i.e. inferior alveolar nerve it is around 14mm.

Abutment Evaluation

Abutment teeth are called upon to withstand the forces normally directed to the missing teeth, in addition to those usually applied to the abutments. Whenever possible an abutment should be a vital tooth. In this case one of the distal abutments would be a root treated tooth. However, a tooth that has been endodontically treated which is asymptomatic with radiographic evidence of a good seal and complete obturation of the canal can be used as an abutment. If the endodontically treated tooth does not have sound tooth structure, it must be treated through the use of a dowel core, or a pin-retained amalgam or composite resin core. In this case one of the distal abutment would be root treated tooth. The quality of the treatment was assessed and was asymptomatic with radiographic evidence of a good seal and complete obturation of a canal and no periapical radiolucency.

The supporting tissues surrounding the abutment teeth were healthy and free from inflammation. The roots and their supporting tissues were functionally adequate. The alveolar bone of the edentulous ridge between, or distal to, the abutment teeth is adequate in quantity and quality except that there is some loss of labial alveolar bone and flattened the arch contour.

Patient assessment

Assessment of patient attitude to, and expectation of, the proposed dental treatment was done. The patient was given full information and made aware of the treatment options available and the prognosis and limitations of what can be achieved. Time was taken to know the patient in order to understand fully her motivation and expectation for requesting a particular treatment, ensuring that they understand what it is possible to achieve in any given clinical situation and the long-term sequelae of the restorations. It is important to draw the patient's attention to the number, length and frequency of appointments to complete treatment, along with the need for interim temporary restorations.

Treatment options

The treatment options were discussed with patients and where summarized as following, implant, FPD and RB Bridge, cantilever bridge, RPD were presented to the patient,

and the time, expenditure, advantages, and disadvantages of each plan were introduced

Option 1

Resin-bonded Bridge: - The fixed options to restore the space was discussed in detail. It was explained that a resin bonded bridge consisting of a porcelain tooth, and metal wing on the adjacent tooth could be used as a conservative method of restoring the space. It was explained that this would require minimal preparation of the teeth. The success rate of resin bonded bridges was discussed and it was explained that this treatment modality has a reasonably good success rate. With improvements in the field of adhesive dentistry, resin-bonded bridgework has become a viable option for the long-term replacement of missing teeth. One study reported a media survival time of 7 years 10 months.⁽¹⁵⁾

A major advantage of resin-bonded prostheses is that minimal tooth preparation is required and so they can usually be considered a reversible procedure. As dentine preparation is not involved, the integrity of a young pulp is maintained. Other advantages include the fact that anesthesia is not normally required, soft tissues are not disturbed which simplifies impression procedures, and margins are supragingival, facilitating plaque removal. Disadvantages include the fact that aesthetics may be compromised by 'shine through' of metal retainers, resulting in discoloration of the abutment teeth. It should be noted that the occlusal coverage required when replacing posterior teeth can be particularly unsightly. Many posterior teeth which have been root treated are at risk of fracture and will benefit from a protective cusp covering cast restoration.⁽¹⁶⁾

One practical clinical problem is the aesthetics, a problem that will not resolve itself even if a D-shaped design is applied as long as a metal alloy is used in the retainer. The aesthetic problem was discussed with the patient in detail. The key to solving this problem may be to use tooth-coloured material such as Zirconium oxide⁽¹⁷⁻¹⁹⁾ and fiber-reinforced composite⁽²⁰⁻²⁴⁾ as the framework of the resin-bonded prosthesis. There is a basic problem because the toughness of these materials is lower than that of dental alloys. It was reported that in zirconia restorations, the inlay and buccal retainers have a failure load equivalent to that of a full crown⁽²⁵⁾ Especially with zirconia, the retainer design also depends on the performance of the CAD/CAM system. On the other hand, in their review paper, van Heumen et al. stated that it was not possible to build a reliable regression model indicating the risk factors in fiber-reinforced composite-RBFPDs.⁽²⁶⁾

Option 2

Fixed partial denture: - The option of a conventional bridge was then discussed with the patient. It was explained that this option would involve preparing the adjacent teeth for a crown and this was demonstrated to the patient via series of photographs. It was explained that although this option has good long-term success rates but a major shortcoming of this alternative is the significant tooth reduction of the abutments.⁽²⁷⁾ The lifespan of conventional bridgework is thought to be in the region of 15 to 20 years. Loss of retention and fractures of both teeth and reconstructions in fixed⁽²⁸⁾ & removable⁽²⁹⁾ prosthodontics

have been shown to be more frequent when the distal abutments are non-vital. As the distal abutment tooth will be a non – vital tooth in this case the shortcomings were explained clearly to the patient. Higher frequency of fractures for non-vital abutment teeth is in accordance with other studies⁽³⁰⁻³²⁾ one of which⁽³⁰⁾ noted that 75% of the abutment teeth that fractured were endodontically treated, had posts and were terminal abutments. In a widely quoted retrospective clinical investigation⁽³¹⁾ comparing 1273 endodontically treated teeth as abutments or crowns, it was found that the success rate was higher for single crowns (94.8%) than FPD (89.2%) and RPD abutments (77.4%). This is related to the greater lateral functional stresses. On the other hand, with the advent of newer materials and advancing technologies, endodontically treated teeth can be used successfully as abutment teeth.⁽³³⁾

Option 3 Implant: - The option of implant placement was discussed with the patient. The implant process was explained and a series of photographs were used to demonstrate the treatment stages and final restoration. The success rate for replacement of a molar or premolar with a dental implant restoration has been shown to be greater than 95%.⁽³⁴⁾ Many clinicians feel that, due to the substantial success rate, implants should be considered as the definitive choice over other tooth-replacement alternatives.⁽³⁵⁾ This is supported by the dental literature for many implant systems in every area of the mouth.⁽³⁶⁾

They provide the advantages of preservation of adjacent natural tooth structure, preservation of the alveolar ridge and achievement of optimal esthetic and restorative results⁽³⁷⁾ was explained to the patient. It was explained that in this particular case, as the patient is a healthy non-smoker, with sufficient depth but loss of width due to buccal bone loss it becomes necessary to do Bone Grafting. However, the requirement for long term maintenance was reinforced and the possible biological, technical and aesthetic complications were outlined to the patient. The limitations faced for the implant patient includes inadequate available space, inadequate alveolar ridge thickness and inadequate alveolar bone support for gingival papilla.^(38,39)

Option 4: -Cantilever fixed partial dentures: - This option and its limitation in this case were explained in details to the patient. Technical failures are more common when nonvital teeth are abutments, because deterioration of tooth structure can be insidious. More occlusal force can also be inadvertently extended to nonvital teeth because their pain threshold is more tolerant.⁽⁴⁰⁾ When the cantilevered pontic is placed under occlusal function, forces are placed on the abutments.

Landolt and Lang⁽⁴¹⁾ confirmed that RCT teeth showed a higher frequency of root fracture. Karlsson⁽⁴²⁾ remarked that the combination of a cantilever extension and an RCT terminal abutment was predisposed to failure. Comparing vital and non-vital teeth, 18 yr survival rates for crowns were respectively 75% and 79% (NS). For 3-unit bridges, 15-yr survival rates were 83% and 76% (NS); for all bridges they were 84% and 64% ($P < 0.01$); for cantilever bridges, vital group survival was 74% at 16 yrs, and non-vital survival was 52% at 18 yrs ($P < 0.01$).⁽⁴³⁾

Option 5: RPD The option of fabricating a removable partial denture to replace the space was discussed. The nature of the appliance was discussed with the patient using photographs and it was explained that although the space would be filled but the appliance would be removable. Abutment failure, retreatment of the abutments, RDP metal framework fractures, and failure of components of the RDP, such as clasps and artificial teeth, are examples of RDP failure definitions

and they were discussed with the patient. Alternative definitions include removing the

RPD to eat and difficulty speaking, which are reasons why a patient may discontinue use of the RDP.^(44, 45, 46) Due to the removable nature of a denture the patient didn't like this option.

Confirmative approach: As there are sufficient good occlusal contacts on teeth that are not going to be restored to ensure that the patient will occlude into the same jaw relation. The patient doesn't have TMJ problem so the confirmative approach is the obvious decision. No reason to change the occlusion⁽⁴⁷⁾

2. Final Decision



RBFDP on model

RBFDP in situ

3. Conclusion

The patient's awareness for different treatment options for missing teeth is very important because it helps the patients to have early replacement of missing teeth. The timely provision of adequate dental prosthesis will help the patients to achieve better quality. The choice between several treatment options for replacing a single missing tooth is influenced by clinical, dentist- and patient-immanent factors. The final choice depends on several factors which affects the decision making; among these is cost and patients' awareness of the different treatment options.

Case selection is crucial to success when considering any form of tooth replacement. Whichever treatment modality is finally selected, it should suit the needs of the patient, be carefully planned and skillfully executed. The success and limitations of removable partial dentures and conventional bridgework are well known to the profession. Resin-bonded bridges and dental implants now have proven track records and should be offered to patients as predictable alternatives. Resin bonded bridges can be highly effective in replacing

The treatment plan was explained and discussed to the patient. It included all procedures required for the establishment and maintenance of oral health. The patient's treatment options were outlined, including a discussion on what the treatment would involve, the risks/benefits, and long-term success. Resin-bonded bridges with ceramic overlays on the pontics can be an excellent treatment option, but there are some disadvantages of this procedure as well. While they are much less invasive than conventional three-unit or even two-unit canine cantilevered fixed bridges, these bridges do require some tooth preparation on the lingual and interproximal surfaces of the abutment teeth.

The patient was certain that she did not want to undergo any surgical procedure. As she has dental phobia and she didn't even want to undergo any tooth reduction of other two teeth either. She wanted to have the most conservative way to treat her missing space and had no problem about the retainers. Patient didn't want anything removable. So, these points lead to discussions that resin retained bridge. In this particular case the patient has good height of the abutments (8mm) and (7mm) in order to allow a rigid retainer to be made with a large surface area for bonding, reducing the risk of failure. Moreover, there were no history of parafunction/grinding habits, which may further reduce the risk of failure

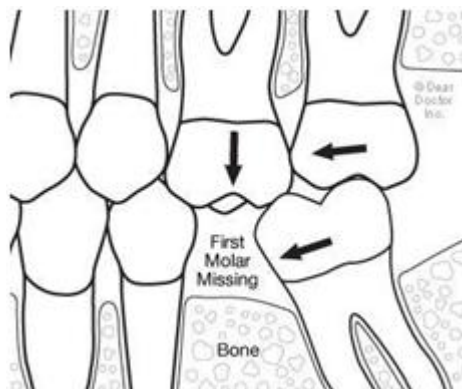
missing teeth, restoring oral function and aesthetics and result in high levels of patient satisfaction. They represent a minimally invasive, cost effective and long lasting treatment modality. Given thorough patient assessment and the use of careful clinical techniques, some authors suggest that RBBs should be considered more frequently as the restoration of choice for short spans⁽⁴⁸⁾ by using an RBB it is possible to provide a fixed replacement for missing teeth which is essentially reversible and does not compromise the abutment tooth. This is especially important for young patients who may be more likely to experience endodontic complications as a result of extensive tooth preparation.⁽⁴⁹⁾

Letter to patient outlining treatment options

Dear

It was pleasure to see you today in my clinic. We already discussed about the treatment option for your missing tooth. Let me further explain it to you in details so that it becomes easier for you to decide the treatment option.

First of all, let me explain to you what has happened and may further aggravate or complicate more by not replacing the missing space. When we lose a tooth, we lose some ability to chew food properly. This may mean that we either place more stress on the other teeth in order to chew all the food we eat, or we do not chew well enough. The more teeth we have missing, the more heavily we begin to rely on the remaining teeth. With this added pressure, we often find teeth will wear more quickly and fillings/restorations may break and fracture more often under the increased pressure. Wear is most obvious in patients who lose their back teeth and start to rely on their front teeth for chewing- something they were not designed for. That is the reason some of your fillings have chipped off in the previous years and there is some wear seen in your teeth.



This is what has happened in your case. The teeth adjacent to the space left by the missing tooth has eventually shifted. The opposing tooth in the upper jaw grew slowly longer in a downward direction into the missing tooth space. This is called extrusion or supraeruption.

The teeth on either side of the missing tooth have moved and tilted off and drifted into the missing tooth's space. This can make these teeth more prone to decay and gum disease because it is much harder to keep the teeth clean when they are not aligned properly. That is why the tooth adjacent to the missing space developed severe decay and we had to do root treatment to save it.

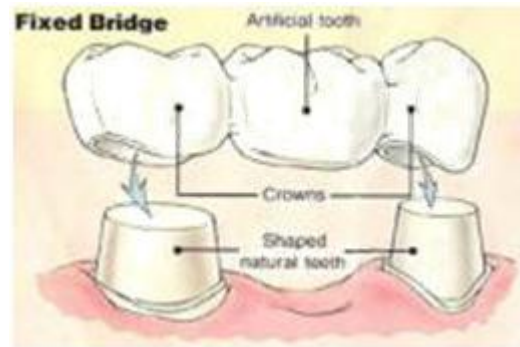
The bone that supported the teeth has also shrunk over time and has led to resorption on the buccal side. Resorption of the alveolar bone (bone that supports the teeth) begins almost as soon as the tooth is removed and proceeds over time. The bone has lost some amount of both height and width from resorption.

Following are the various treatment options to fill your missing space: -

Option 1: Do nothing is really not an option as it will lead to further a complication which is already mentioned.

Option 2 Traditional Bridge Work: A dental bridge is a way to replace a missing tooth or teeth. It is a fixed option for replacing the space meaning it stays permanently in your mouth. Dental bridges literally bridge the gap created by the missing teeth. The bridge will be two teeth from either, attached together via a fake tooth in the middle which is the

missing space. This diagram is a simpler way to make you understand. The main disadvantage of this is the grinding of the two adjacent teeth.



The procedure involves the grinding of the adjacent teeth for support. The dental bridge can be made of gold, porcelain or porcelain fused to metal. Since it is custom made in a dental laboratory it may take two or more visits to complete the procedure.

The procedure is as follows

- The area is numbered to make you comfortable.
- The adjacent teeth that will support the bridge are shaped.
- An impression of your teeth will be taken.
- The lab will use this to make a model of your mouth.
- The model in turn will be used to create a bridge that precisely fits your mouth and bite.
- A temporary bridge may be placed while this is being done.
- On the next visit the temporary bridge is removed.
- Several steps are taken to confirm the fit of your three-unit dental bridges.
- The new bridge is then fitted in and your bite is checked.
- Once everything is confirmed the dental bridges are cemented or bonded in place.

The Dental Bridge Procedure



The main limitation of this form of treatment has to do with the irreversible preparation of the adjacent teeth for support.

Advantages

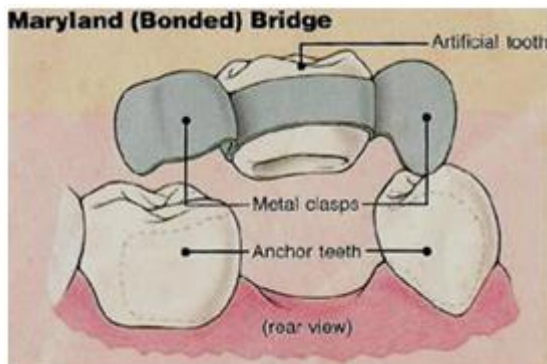
- Don't have to take them out
- Doesn't affect your eating experience
- Doesn't affect speech as much
- The best aesthetics
- Not conscious of having it in your mouth (after the first week)
- Can function pretty much as normal
- Can change the shape and colour of existing teeth (with a bridge)

- Can provide protection and strength to heavily filled teeth either side of the gap Disadvantages
- Irreversible

May involve removing healthy tooth structure from the tooth

Requires extra cleaning/maintenance

Option 3 Bonded Fixed Bridge (Maryland Bridge): This may also be called a 'Maryland Bridge' or a 'Sticky Bridge'. It has metal or porcelain wings that are bonded to the teeth either side of the gap, suspending the fake tooth in the middle. A bonded bridge consists of one or more artificial teeth between metal wings. The anchor teeth are reshaped slightly, and the wings are bonded to them using resin cement.



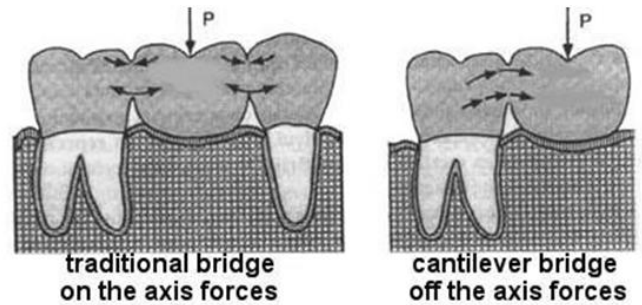
Advantages

- Requires less tooth reduction than conventional bridge
- Does not require full crowns on either side of the missing teeth
- Costs less than a conventional bridge

Disadvantages

- May not last as long as a conventional bridge
- Less ability to alter shape and size of teeth
- Metal backing may show if teeth are thin
- Gum can shrink around teeth, leaving empty spaces

Option 4 Cantilever bridges: - Here the missing space will be attached only on the one side of the space. Depending on the tooth that is being replaced. Imagine the fixed-fixed bridge but forgetting the crown on one side and usually preferred in areas with less chewing stress and in front teeth. Cantilever bridges involve increased, off the axis forces that will act on the abutment teeth. Therefore, cantilever bridges should be carefully planned; otherwise, there is the risk of jeopardizing abutment teeth stability. As in your case the supporting tooth will be a root treated tooth, the success rate for this type is not very good. Technical failures are more common when non vital (root treated tooth) teeth are abutments.



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.

Option 5 Implant: A dental implant is an artificial tooth root placed into your jaw to hold a replacement tooth – the crown - in place. The implant emulates the shape of the root and is usually made of titanium and other materials that are well-suited to the human body. The implant is surgically placed into the jaw and incorporates into the bone over time to become a stable base for crowns. The good thing about implants is that you do activate the jaw bone by chewing on that surface. You will also have full functionality of that chewing surface, as well as a place holder to keep other teeth from shifting in the mouth



As in your case there is insufficient bone in the buccal side for the placement of dental implants, it becomes necessary to 'create' the bone in this area prior to placing implants. This procedure of building up the bone is known as Bone Grafting. Bone grafting is a very common procedure in dentistry and it is used commonly for dental implants and in periodontal procedures around natural teeth. If you are opting for implant, we will discuss this procedure further with you.

Procedure for implant

First, the implant is placed into the jaw and the gum is secured over the implant. Over the next three to six months the implant will fuse with the jaw bone. Once the implant and bone have bonded together, an extension is attached, called an abutment, to the implant. Once healed, the implant

and abutment act as the foundation for the new tooth. In the final step, crown in the right size is made, shape and color to match your natural teeth. The crown is attached to the implant post. Replacing a missing or diseased tooth with an implant has several advantages.

Advantages

- Natural appearance
- Don't require dental procedures on neighboring teeth
- Reliable
- Dental implants will preserve bone and significantly reduce bone resorption and deterioration that results in loss of jawbone height

Though nothing looks, feels or functions exactly like your natural tooth, dental implants are a viable alternative to help you maintain a beautiful smile. This allows normal flossing as if the replacement implant were a natural tooth.

Disadvantages

Implant procedure is quite expensive

Mechanical fracture of fixtures, bridges, bridge attaching screws or abutment screws and loosening of screws can occur. Reported occurrences are less than 5% of patients. Trauma to the mouth or jaws or stress concentration from the bridge could result in mechanical failure and complications

Option 6

Removable Partial Dentures

Removable partial dentures usually consist of replacement teeth attached to pink or gum-colored plastic bases, which are connected by metal framework. Removable partial dentures attach to your natural teeth with metal clasps or devices called precision attachments. Precision attachments are generally more esthetic than metal clasps and are nearly invisible. Crowns on your natural teeth may improve the fit of a removable partial denture and they are usually required with attachments. Dentures with precision attachments generally cost more than those with metal clasps.

Removable partial dentures are usually given to patients who have a number of teeth missing and where fixed partial dentures are not recommended. As you have two missing teeth on right side as well as left side of your lower jaw so this be one of the options. They usually consist of replacement teeth attached to gum colored plastic bases, which are connected by a metal framework. Removable partial dentures attach to natural teeth with the help of metal clasps or devices called precision attachments, which are more esthetic than clasps. Crowns may be required on the natural teeth as they improve the fit of removable partial denture.

Advantages

- Less expensive than fixed bridges
- Prevents movement of adjacent and opposing teeth
- Helps to increase chewing efficiency by replacing missing teeth



Disadvantages

- May not be as esthetic as a fixed bridge.
- Takes more time to get adjusted to than a bridge.

To sum up with, in all you have five options, out of which four are fixed treatment options available and one is removable option. The fixed treatment options are the first four options i.e.; Resin retained bridge, conventional bridge, cantilever bridge and the implant whereas the removable option is the last one i.e. the removable partial denture. I have tried to explain each procedure in detail and hope this letter has helped you to understand a little bit more about the treatment plan of your missing space. You will no doubt have further questions, and I will look forward to discussing them with you on your next visit. As your appointment is scheduled next week, hope till then you go through all these treatment options and let me know your final decision so that we can discuss it further more.

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