

# IMMEDIATE DENTAL IMPLANT PLACEMENT

**Dr. Meghna Sharma**  
B.D.S.

**Dr. Kulbhushan Sharma**  
B.D.S., Implantologist

**Dr. Samita Mittal**  
B.D.S.

Meghna Dental Implant & Orthodontic Clinic, H.No.- 125, Sector- 21C, Faridabad.

## Implant Placement into fresh extracted site

When the tooth has to be extracted, and the implant is a choice of treatment for substitution of removed tooth, immediate placement of implant into extracted site could be done. There are a lot of advantages to this technique.

- In a classical 2 stage technique, after the extraction is done, we would wait for about **6 month** for the bone to build up, and then proceed with the implant surgery.
- The immediate placement of implants **eliminates** this 6 month waiting period,

### Case Presentation:

A 48 year old working female presented with a chief complaint of a cracked tooth. On examination it was found that she had fractured the cusp of her left upper first bicuspid.

It was fractured below the gum line to the crest of the bone. The main reason it fractured was the existence of a large filling which weakened the tooth.

### Treatment Options:

The patient had two treatment choices.

1. Perform root canal therapy, place a post and core, (root canal therapy was not preferred because there was very less root support).
2. The other option would be to remove the tooth, place an implant and immediately place a temporary crown.

### The Patient Opted for an Implant and Crown

#### Immediate Implant placement Criteria

To do an immediate implant placement, certain criteria have to be met:

- There has to be adequate bone, a large enough implant needs to be placed, and the implant once placed has to be able to resist at least 40 ncm of force.
- The temporary crown has to be adjusted so that no forces are placed on it during function. Meeting these criteria allows the bone to grow around the implant (**osseointegration**).
- A template was made of the tooth prior to removing the fractured tooth so as to facilitate fabrication of a temporary crown.
- An important factor in this procedure is to carefully remove the tooth without removing any bone in the process.

**Use a Periosteal, a thin instrument, to separate the root from the bone.**

The photo here shows successful removal of the broken

bicuspid and all root material.

The remaining bony socket can be seen after the tooth was removed.

The socket was prepared with sequentially sized bone drills to accept an implant.

The implant is placed and tested with a torque wrench to see if it can be displaced with a force of 40 ncm.

This implant was proven to be extremely stable.

### X-ray Confirmation: Successful Implant

This is an immediate post operative x-ray. Note how well centered the implant is between the canine and 2nd bicuspid.

The size of the implant and surrounding bone give more than adequate anchorage to place an immediate abutment and temporary crown.

### Failure

- Failure of a dental implant is often related to failure to Osseo integrate correctly.
- Dental implants are not susceptible to dental caries but they can develop a condition called peri-implantitis, (an inflammatory condition of the mucosa and/or bone around the implant which may result in bone loss and eventual loss of the implant.) Peri-implantitis is more likely to occur in heavy smokers, patients with diabetes, patients with poor oral hygiene and cases where the mucosa around the implant is thin.
- Risk of failure is increased in smokers.

### Contraindications

There are few absolute contraindications to implant dentistry. However there are some systemic, behavioral and anatomic considerations that should be assessed.

- Uncontrolled type II diabetes is a significant relative contraindication as healing following any type of surgical procedure is delayed due to poor peripheral blood circulation.
- Bruxism (tooth clenching or grinding) is another consideration which may reduce the prognosis for treatment. The forces generated during bruxism are particularly detrimental to implants while bone is healing; micro movements in the implant positioning are associated with increased rates of implant failure. Bruxism continues to pose a threat to implants throughout the life of the recipient. Natural teeth contain a periodontal ligament allowing each tooth to move and absorb shock in response to vertical and horizontal forces. Once replaced by dental implants, this ligament is lost and teeth are immovably anchored directly into the jaw bone.



Indirect view of broken bicuspid (on left side)



Preparation of Implant Socket



Dental Implant Placement (Indirect View)



X-Ray Confirmation (Successful Implant)



Placement of permanent Crown