



# Research & Education in Implant Dentistry

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*“Help your daily practice superior”*

## *Case Reports*

**CWM**  
Cowellmedi Co., Ltd.

*The pioneers in Dental Implant & E.rhBMP-2*

## What is REID?



REID: Research & Education in Implant Dentistry

### >> Overview:

REID stands for Research and Education in Implant Dentistry and is advanced research and education institute in implant dentistry, dedicated to training proficient implantologists with world-class lecturers clinicians, and advanced education curriculums as well as to researching new technology in order to have implant dentistry simpler, speedier, safer and superior.

### >> Our Mission

- To conduct education program and to share the knowledge from the past to the future.
- To provide international and local academic and scientific events.
- To develop new technology to be applied in implant dentistry.

## Clinical Case 1

### Clinical Case 1 \_ Patient info

Gender	F
Age	52
Date of surgery (MM.DD.YY)	07. 13. 2010
Defect site	7 6
	7 6 5

### A. Diagnosis and treatment plan

#16, 47 periodontitis  
 #16, 47 Extraction and immediate implant placement with socket bone augmentation

### B. Surgery

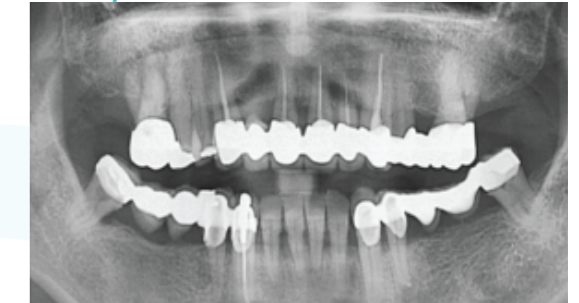
- 07.13.2010  
 #16, 47 Extraction and 1<sup>st</sup> OP with bone grafting  
 #17, 45, 46 1<sup>st</sup> OP
- 12.10.2010  
 #16, 17, 45, 46, 47 2<sup>nd</sup> OP
- 01.07.2011  
 #45, 46, 47 Splinted crown  
 #16, 17 Splinted crown

\* Used materials: INNO Submerged Implant and Bio-C(BCP)

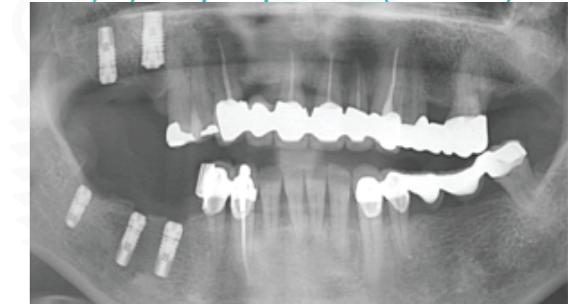
### C. Pre-post differences of operation

- Socket bone graft site was maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 38 months after loading shows that there are 0 mm marginal bone loss in 5 implants .

### 1. Pre-operation



### 2. #16, 47 Implant placement with bone grafting, #17, 45, 46 Implant placement (7. 13. 2010)



### 3. #45, 46, 47 Splinted crown #16, 17 Splinted crown (1. 7. 2011)



### 4. 38months follow up check



## Clinical Case 2

### Clinical Case 2 \_ Patient info

Gender	F
Age	74
Date of surgery (MM.DD.YY)	05.10.2011
Defect site	6 5 4

#### A. Diagnosis and treatment plan

#14, 15 Extraction, Implant placement and lateral bone augmentation

#### B. Surgery

1. 05.10.2011

#14(Ø4.0 x 12), 15(Ø4.0 x 12), 16(Ø5.0 x 12) Implant placement and lateral bone augmentation

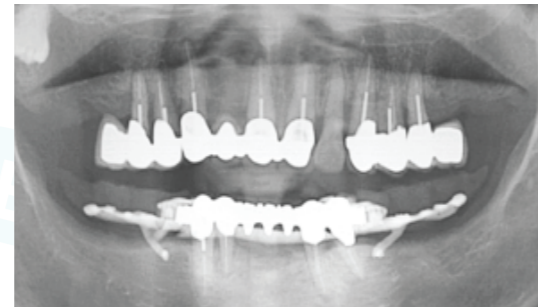
2. 09.29.2011

#14, 15, 16 Splinted crown

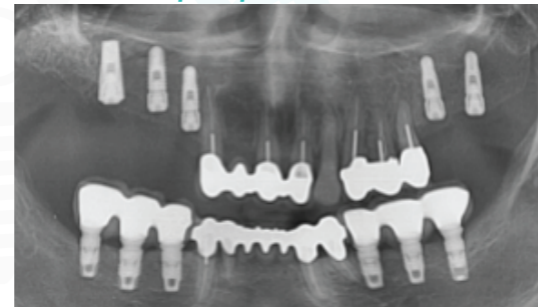
#### C. Pre-post differences of operation

- #14, 15, 16: lateral bone augmentation were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 3 months, 20 months, 32 months and 39 months after loading shows 0 mm marginal bone loss in 3 implants.

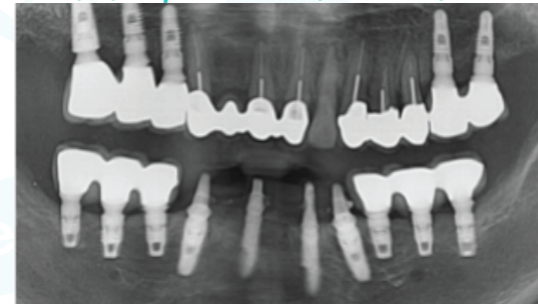
#### 1. Pre-operation



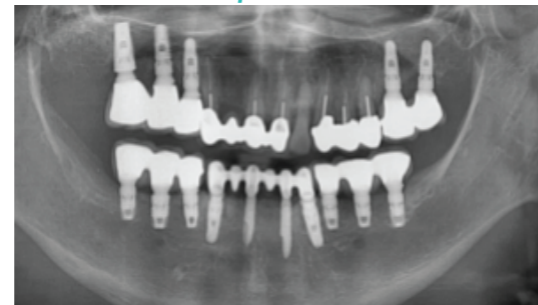
#### 2. #14,15,16 Implant placement (5. 10. 2011)



#### 3. #14,15,16 Splinted crown (9. 29. 2011)



#### 4. 39months follow up check



## Clinical Case 3

### Clinical Case 3 \_ Patient info

Gender	F
Age	66
Date of surgery (MM.DD.YY)	01.05.2011
Defect site	4 6 7 7 6 5 6 7

#### A. Diagnosis and treatment plan

#26, 36 Periodontitis

#24, 25, 27, 37, 45, 46, 47 Edentulous site

#26, 36 Extraction, immediate implant placement with bone grafting

#24, 25, 27, 37, 45, 46, 47 Implant placement

#### B. Surgery

1. 01.05.2011

#26, 36 Extraction, immediate implant placement with bone grafting

#24, 27, 37, 45, 46, 47 Implant placement

2. 06.12.2011

#36, 37 PFM splinted crown

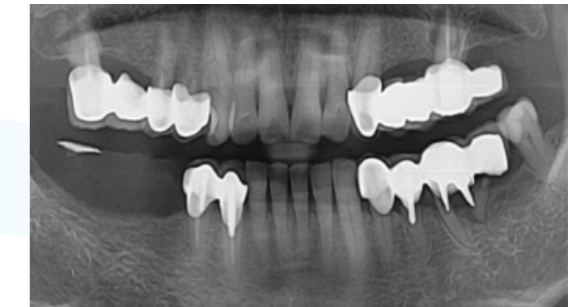
#45, 46, 47 PFM splinted crown

#24, 26, 27 PFM bridge

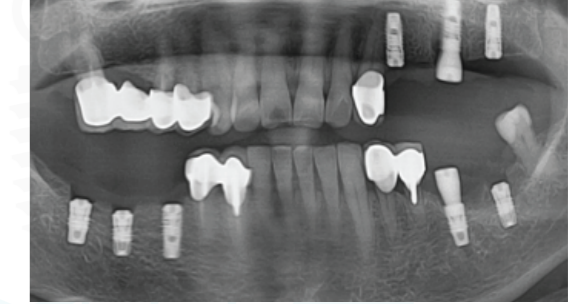
#### C. Pre-post differences of operation

- #26, 36 socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-rays of 16 months and 35 months after loading shows 0 mm marginal bone loss in 7 implants and 0.1 mm marginal bone loss in #26 implant.

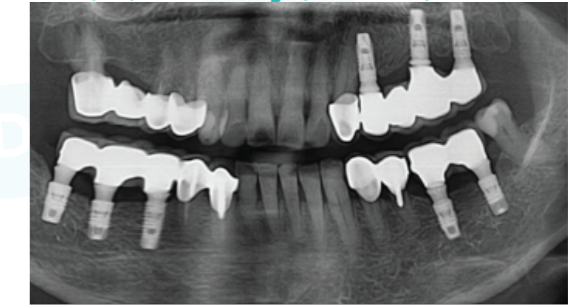
#### 1. Pre-operation



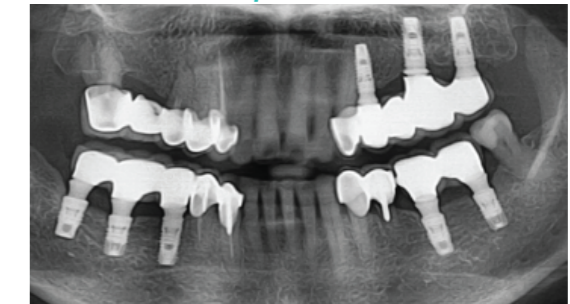
#### 2. #26, 36 implant placement with bone grafting #24, 27, 37, 45, 46, 47 Implant placement (01. 05. 2011)



#### 3. #36, 37 PFM splinted crown #45, 46, 47 PFM splinted crown #24, 26, 27 PFM bridge (6. 12. 2011)



#### 4. 35months follow up check



## Clinical Case 4

### Clinical Case 4 \_ Patient info

Gender	M
Age	70
Date of surgery (MM.DD.YY)	06.25.2011
Defect site	4 7 6

#### A. Diagnosis and treatment plan

- #14 crown fracture
- #46, 47 Periodontitis
- #14, 46, 47 Extraction, immediate implant placement with bone grafting

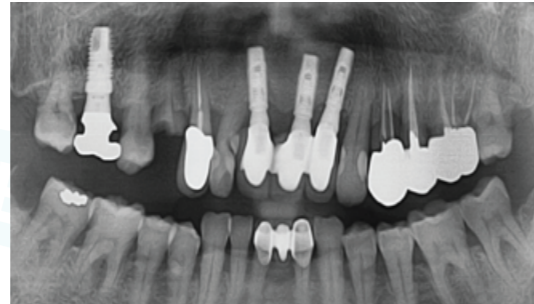
#### B. Surgery

- 06.25.2011  
#14(Ø4.0 x 12) Extraction, immediate implant placement with bone grafting
- 03.18.2012  
#14 crown restoration
- 05.10.2012  
#46, 47 Extraction, immediate implant placement with bone grafting
- 11.12.2012  
#46, 47 Splinted crown

#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 2 months, 8 months, 12 months and 46 months after loading shows 0 mm marginal bone loss in 3 implants.

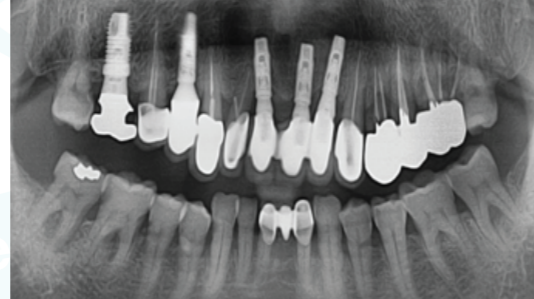
1. Pre-operation



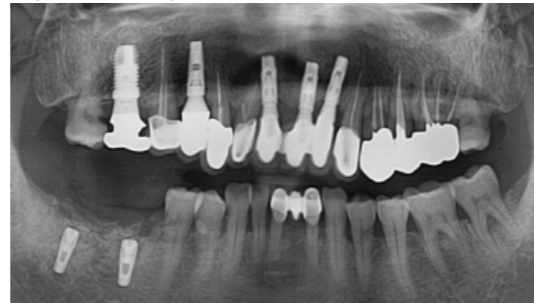
2. #14 implant placement with bone grafting (6. 25. 2011)



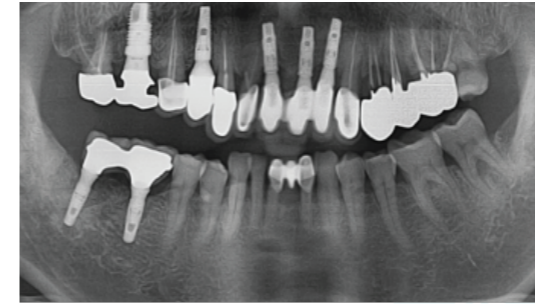
3. #14 crown restoration (3. 18. 2012)



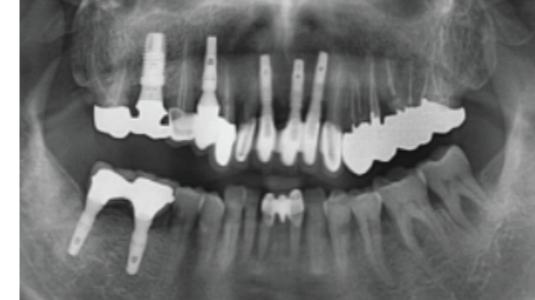
4. #46, 47 implant placement with bone grafting (05. 10. 2012)



5. #46, 47 Splinted crown (11. 12. 2012)



6. 46months follow up check



1 week

2 week

4 month



## Clinical Case 5

### Clinical Case 5 \_ Patient info

Gender	F	
Age	61	
Date of surgery (MM.DD.YY)	05.06.2009	
Defect site	7 6	
	7 6 5	2 5 6

#### A. Diagnosis and treatment plan

#16, 32, 45, 47, 36, 45, 47 Extraction, immediate implant placement and immediate loading  
#17, 35, 46 implant placement

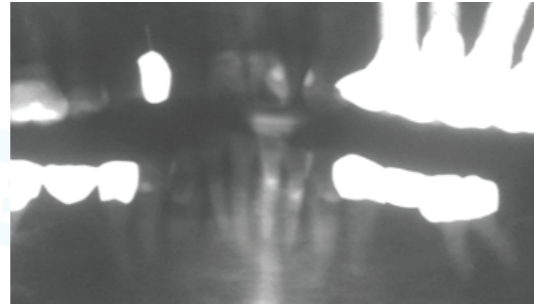
#### B. Surgery

- 5.6.2009  
#32(Ø4.0 x 16) Extraction, immediate implant placement
- 10.24.2011  
#16 Extraction, immediate implant placement with bone grafting  
#17 implant placement
- 11.22.2012  
#17, 16 splinted crown
- 04.11.2013  
#45, 47 Extraction, immediate implant placement with bone grafting  
#46 implant placement
- 10.10.2013  
#45, 46, 47 Splinted crown
- 11.14.2013  
#35 implant placement  
#36 Extraction, immediate implant placement with bone grafting
- 02.07.2014  
#35, 36 Splinted crown

#### C. Pre-post differences of operation

- Socket and sinus bone graft were maintained in functional loading of implant prosthesis
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 3 months, 42 months and 59 month after loading shows 0 mm marginal bone loss in 8 implants.

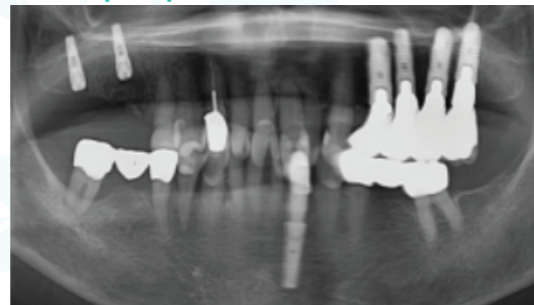
1. Pre-operation



2. #32 implant placement (05. 06. 2009)



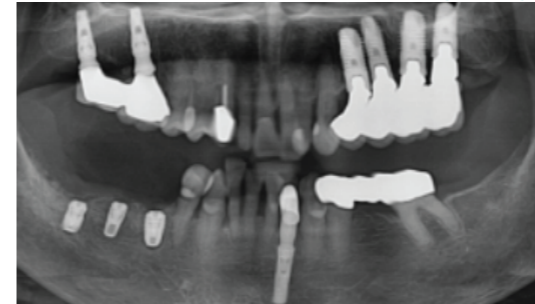
3. #16 implant placement with bone grafting  
#17 implant placement (10. 24. 2011)



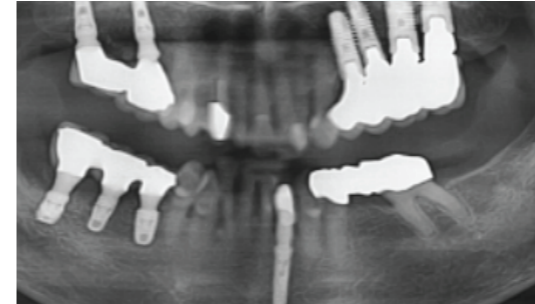
4. #17, 16 splinted crown (11. 22. 2012)



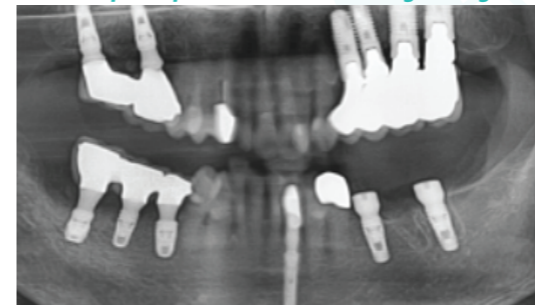
5. #45, 47 implant placement with bone grafting (04. 11. 2013)



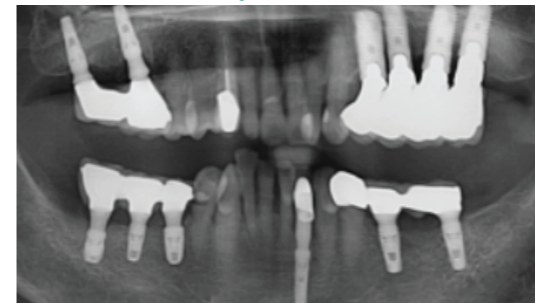
6. #45, 46, 47 Splinted crown (10. 10. 2013)



7. #35 implant placement  
#36 implant placement with bone grafting (11. 14. 2013)



8. 59months follow up check



## Clinical Case 6

### Clinical Case 6 \_ Patient info

Gender	M
Age	55
Date of surgery (MM.DD.YY)	10.11.2010
Defect site	6      6

#### A. Diagnosis and treatment plan

- #26 edentulous ridge
- #16 periodontitis
- #26 implant placement
- #16 Extraction and socket and sinus bone graft with implant placement

#### B. Surgery

1. 10.11.2010
- #26 implant placement
2. 11.04.2011
- #26 Crown restoration
3. 10.13.2012
- #16 Extraction, immediate implant placement with sinus bone grafting
4. 04.27.2013
- #16 Crown restoration

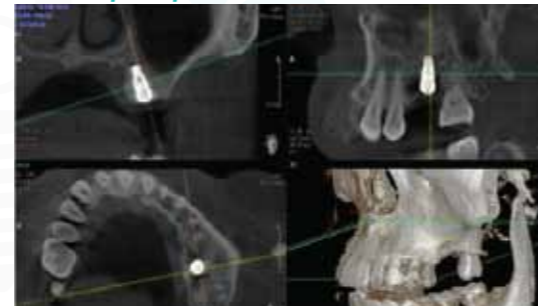
#### C. Pre-post differences of operation

1. Socket bone graft and sinus graft site were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 10 months, 21 months and 41 months after loading show 0 mm marginal bone loss in 2 implants.

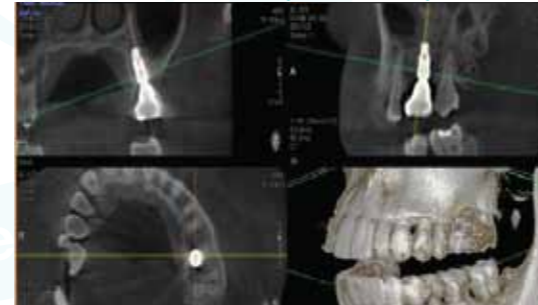
1. Pre-operation



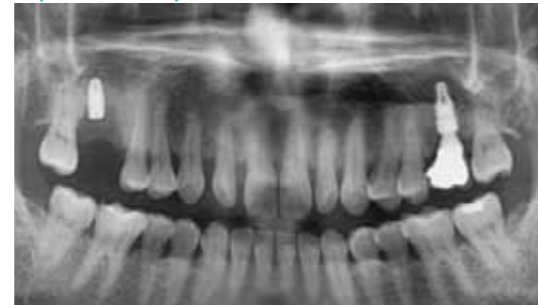
2. #26 implant placement (10. 11. 2010)



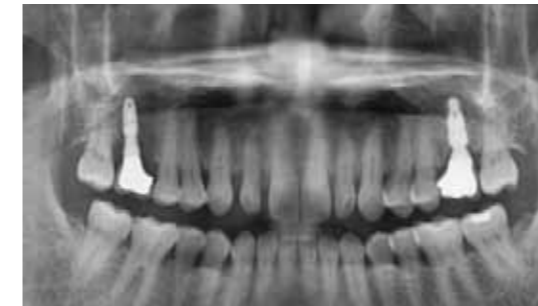
3. #26 Crown restoration (11. 04. 2011)



4. #16 implant placement with sinus bone grafting (10. 13. 2012)



5. #16 Crown restoration (04. 27. 2013)



6. 21 months follow up check



7. 41 months follow up check



## Clinical Case 7

### Clinical Case 7 \_ Patient info

Gender	M
Age	67
Date of surgery (MM.DD.YY)	12.27.2009
Defect site	7 6 5      2 6 7

#### A. Diagnosis and treatment plan

- #17, 16, 15, 14, 26, 27 edentulous site
- #22 periodontitis
- #22 Extraction, immediate implant placement with bone grafting
- #17, 16, 15, 14, 26, 27 implant placement and immediate loading

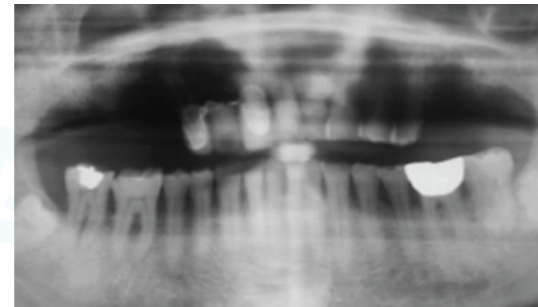
#### B. Surgery

- 12.27.2009
  - #22 Extraction, immediate implant placement with bone grafting
  - #17, 16, 14, 26, 27 implant placement and immediate loading
- 3.29.2010
  - #17, 16, 15, 14 Bridge restoration
  - #22 Crown restoration
  - #37, 46 Splinted crown restoration

#### C. Pre-post differences of operation

1. Socket bone graft were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 3months, 5months, 11months, 17months, 35 months, 41months and 47months after loading show 0 mm marginal bone loss in 6 implants.

### 1. Pre-operation



### 2. #22 implant placement with bone grafting #17, 16, 14, 26, 27 implant placement (12. 27. 2009)



### 3. #17, 16, 15, 14 Bridge restoration #22 Crown restoration #37, 46 Splinted crown restoration (03. 29. 2010)



### 4. 47months follow up check



## Clinical Case 8

### Clinical Case 8 \_ Patient info

Gender	F
Age	53
Date of surgery (MM.DD.YY)	08.12.2010
Defect site	6 5 3      4 5 6 7 6              4 6 7

#### A. Diagnosis and treatment plan

- #16, 15, 13, 24, 25, 26, 27, 37, 36, 34, 46 edentulous site
- #47 periodontitis
- #16, 14, 13, 24, 25, 26, 27, 37, 36, 34, 46 Implant placement
- #47 Extraction and socket bone graft with immediate implant placement

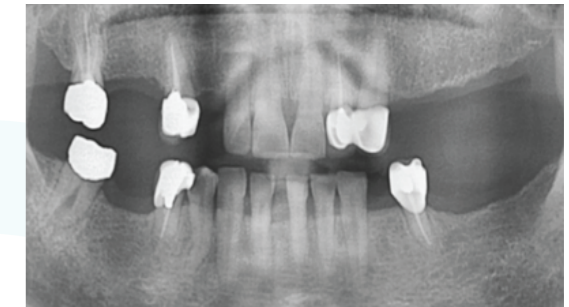
#### B. Surgery

- 08.12.2010
  - #16, 15, 13, 24, 25, 26, 27, 37, 36, 34, 46, Implant placement
- 08.11.2011
  - #15, 16 splinted crown, 13 crown
  - #24, 25, 26, 27 splinted crown
  - #36, 37 splinted crown
  - #34 crown
  - #46 crown
  - #47 Extraction and socket bone graft with immediate implant placement
- 03.21.2012
  - #15, 16 splinted crown, 13 crown

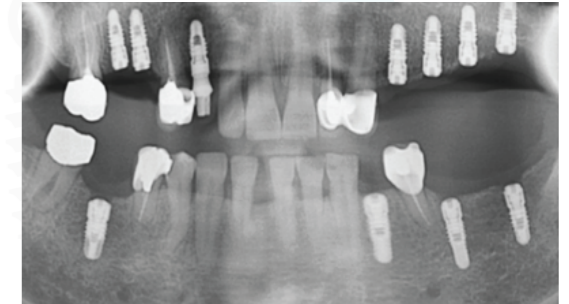
#### C. Pre-post differences of operation

1. Socket bone graft were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 7 months, 19 months, 31 months, 43months and 53 months after loading shows 0 mm marginal bone loss in 11 implants.

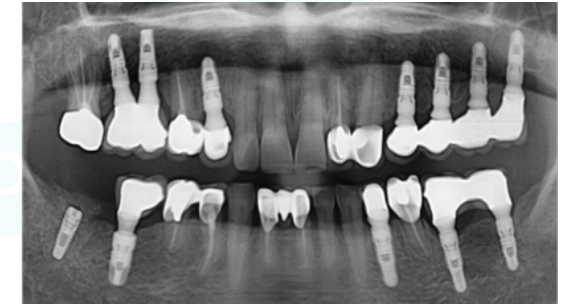
### 1. Pre-operation



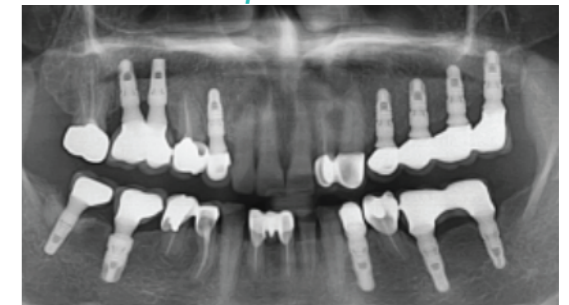
### 2. #16, 15, 13, 24, 25, 26, 27, 37, 36, 34, 46, Implant placement (08.12.2010)



### 3. #47 socket bone graft with implant placement (08.11.2011)



### 4. 53months follow up check



## Clinical Case 9

### Clinical Case 9 \_ Patient info

Gender	M	
Age	74	
Date of surgery (MM.DD.YY)	10.09.2010	
Defect site	6 5 4 7 6 5 4	6 7 4 5 6 7

#### A. Diagnosis and treatment plan

- #18 extraction and bone graft
- #37, 36, 35, 44, 45, 46, 47 implant placement
- #14, 15, 33, 34, 42, 43 Extraction and Implant placement

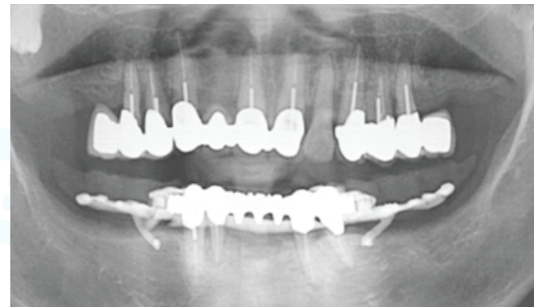
#### B. Surgery

- 10.9.2010  
#37, 36, 35, 44, 45, 46, 47(Ø4.0 x 8) implant placement  
#15, 14 extraction and socket graft
- 05.10.2011  
#16(Ø5.0 x 12), 15(Ø4.0 x 12), 14(Ø4.0 x 12), 26(Ø4.0 x 12), 27 Implant placement and lateral bone augmentation  
#35, 36, 37 Splinted crown  
#47, 46, 45 Splinted crown
- 09.29.2011  
#16, 15, 14 Splinted crown  
#26, 27 Splinted crown  
#34(Ø4.0 x 12), 44(Ø4.0 x 12), Extraction and Implant placement
- 06.12.2012  
#34, 33, 42, 44 bridge restoration

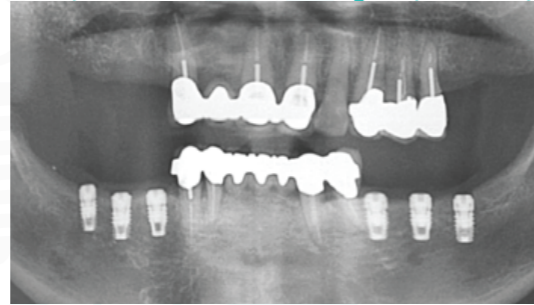
#### C. Pre-post differences of operation

- #16, 15, 14, 26, 27 lateral and socket bone augmentation were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 10 months, 24months, 36months and 48 months after loading shows 0.1 mm marginal bone loss in 13 implants.

#### 1. Pre-operation



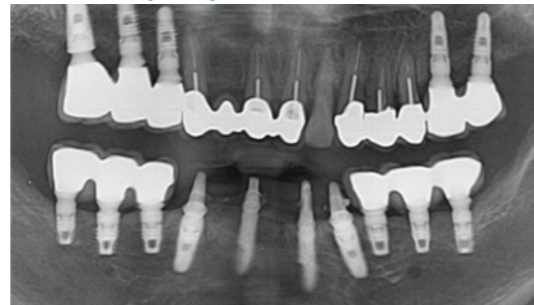
#### 2. #37, 36, 35, 44, 45, 46, 47 implant placement #15, 14 extraction and socket graft (10.9.2010)



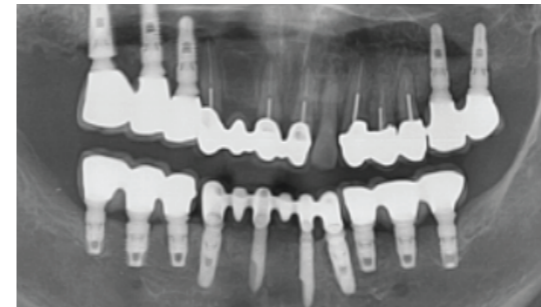
#### 3. #16, 15, 14, 26, 27 Implant placement and lateral bone augmentation #35, 36, 37, 47, 46, 45 Splinted crown (05.10.2011)



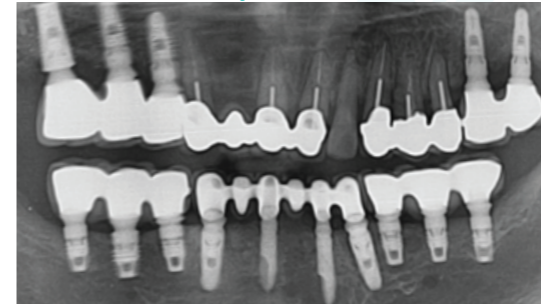
#### 4. #16, 15, 14, 26, 27 Splinted crown #34, 44 implant placement (09.29.2011)



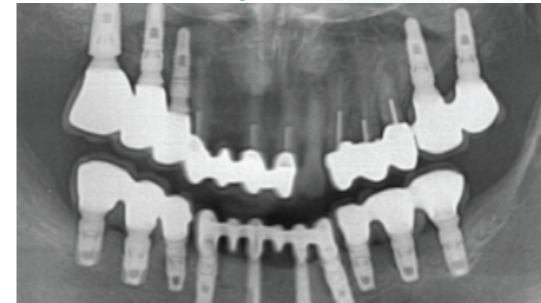
#### 5. #34, 33, 42, 44 bridge restoration (06.12.2012)



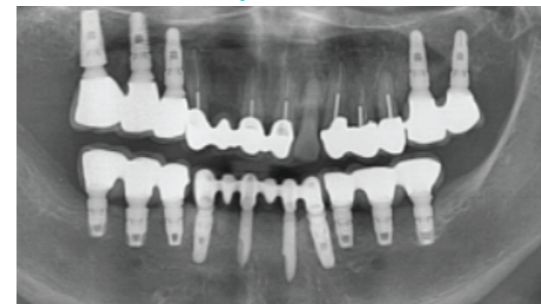
#### 6. 24months follow up check



#### 7. 36months follow up check



#### 8. 48months follow up check





## Clinical Case 10

### Clinical Case 10 \_ Patient info

Gender	M
Age	53
Date of surgery (MM.DD.YY)	01.12.2010
Defect site	7 6 2 1      1 2 6 7

#### A. Diagnosis and treatment plan

#12, 11, 21, 22 Periodontitis  
 #17, 16, 27 missing tooth  
 #26 Periodontitis Hypertension and DM  
 #12, 11, 21, 22 Extraction and socket bone graft with immediate implant placement Right sinus bone augmentation and #17, 16 implant  
 #26 Socket bone graft and implant

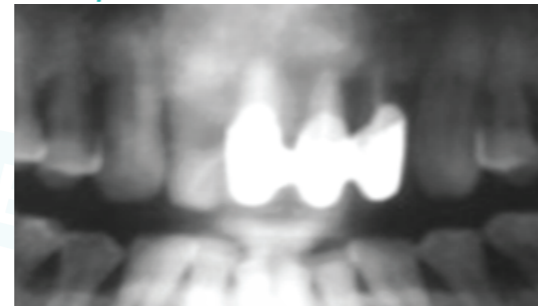
#### B. Surgery

1. 01.12.2010  
 #12, 11, 21, 22 Extraction and socket bone graft with immediate implant placement with splinted crown  
 2. 06.08.2010  
 #17, 16 Sinus bone graft  
 3. 10.08.2010  
 #17, 16 Staged implant placement and #26 Socket bone graft  
 4. 04.29.2011  
 #17, 16 splinted crown and #26, 27 implant placement  
 5. 04.23. 2013  
 #26, 17 splinted crown

#### C. Pre-post differences of operation

1. Socket bone graft and sinus bone graft were maintained in functional loading of implant prosthesis.  
 2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.  
 3. The follow-up check panoramic X-ray of 5months, 10months and 29month after loading shows 0 mm marginal bone loss in 8 implants.

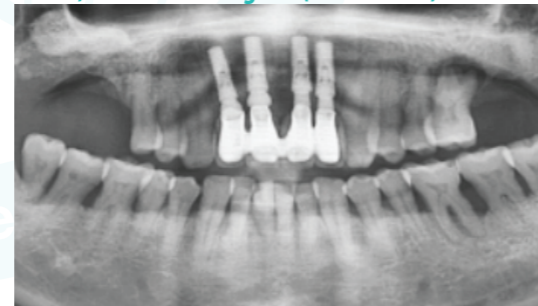
1. Pre-operation



2. #12, 11, 21, 22 socket bone graft with immediate implant placement with splinted crown (01.12.2010)



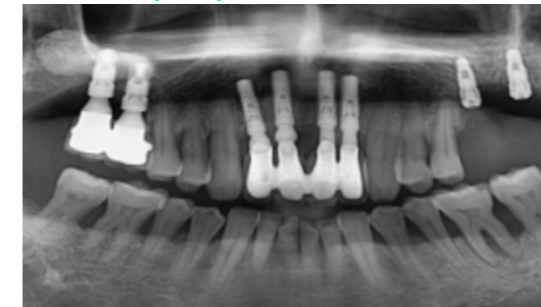
3. #17, 16 Sinus bone graft (06.08.2010)



4. #17, 16 Staged implant placement and #26 Socket bone graft (10.08.2010)



5. #17, 16 splinted crown #26, 27 implant placement (04.29.2011)



6. #26, 17 splinted crown (04.23. 2013)



7. 29months follow up check



## Clinical Case 11

### Clinical Case 11 \_ Patient info

Gender	M	
Age	69	
Date of surgery (MM.DD.YY)	06.22.2011	
Defect site	7 6 5	6 7
	7 6 5	5 6 7

#### A. Diagnosis and treatment plan

#35, 36, 37, 46, 47 edentulous site  
 #15, 16, 17, 26, 27, 45 periodontitis  
 #26, 27 Extraction and socket bone graft with immediate implant placement  
 #37, 36, 35, implant placement

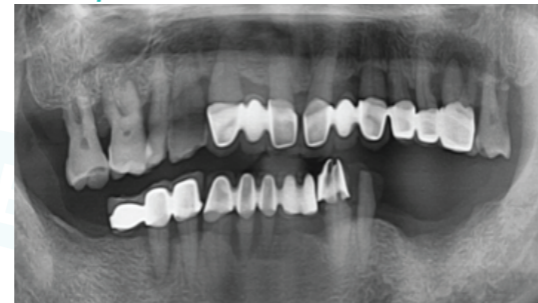
#### B. Surgery

1. 06.22.2011  
 #26, 27 Extraction and socket bone graft with immediate implant placement  
 #37, 36, 35 implant placement  
 2. 07.05.2012  
 #26, 27 Splinted Crown  
 #17, 16, 15, 45 Extraction and Socket bone graft with implant placement  
 #46, 47 Implant placement  
 3. 11.29.2012  
 #17, 16, 15, 27, 26, 25 Splinted crown

#### C. Pre-post differences of operation

1. Socket bone graft were maintained in functional loading of implant prosthesis.  
 2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.  
 3. The follow-up check panoramic X-ray of 20 months after loading shows 0 mm marginal bone loss in 11 implants.

#### 1. Pre-operation



#### 2. #26, 27 socket bone graft with implant placement #37, 36, 35 implant placement (06.22.2011)



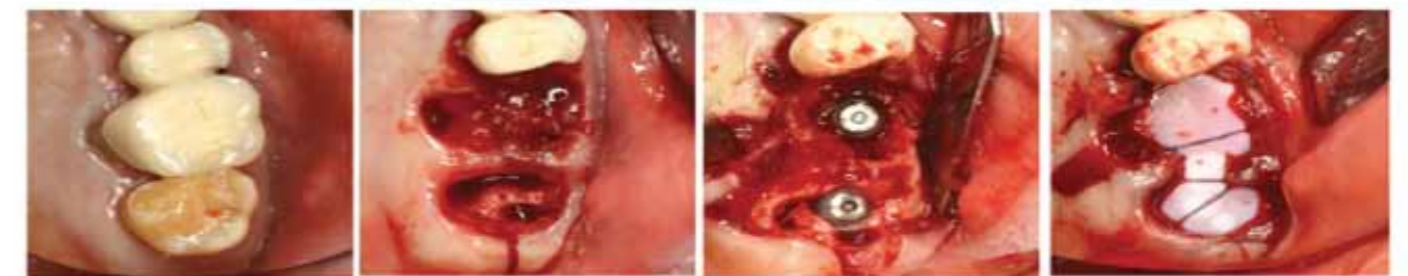
#### 3. #26, 27 Splinted Crown #17, 16, 15, 45 Socket bone graft with implant placement #46, 47 Implant placement (07.05.2012)



#### 4. #17, 16, 15, 27, 26, 25 Splinted crown (11.29.2012)



#### 5. 20months follow up check



3 week

6 month

## Clinical Case 12

### Clinical Case 12 \_ Patient info

Gender	M
Age	56
Date of surgery (MM.DD.YY)	08.09.2010
Defect site	7 7

#### A. Diagnosis and treatment plan

#37, 47 Extraction, Socket bone graft, Staged implant placement

#### B. Surgery

- 08.09.2010  
#37 Extraction, Socket bone graft with autogenous bone of mandibular ramus
- 12.30.2010  
4 months healing period  
#37 Implant placement(Ø5.0 x 10)
- 03.29.2011  
Conventional loading on 3 months  
#37 Crown restoration
- 09.08.2011  
#47, 48 Extraction and socket bone graft
- 01.05.2012  
#47 Implant placement
- 04.11.2012  
#47 Crown

#### C. Pre-post differences of operation

- #37, 47 socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 50 months after loading shows 0 mm marginal bone loss in 2 implants.

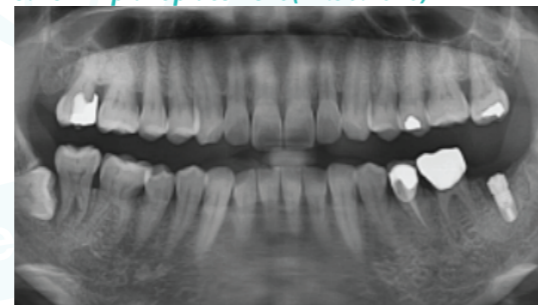
1. Pre-operation



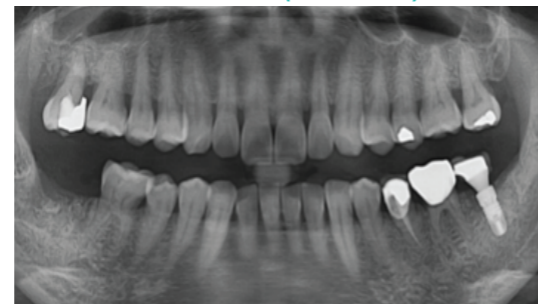
2. #37 bone graft (08.09.2010)



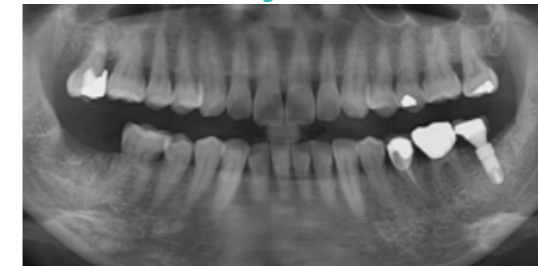
3. #37 Implant placement (12.30.2010)



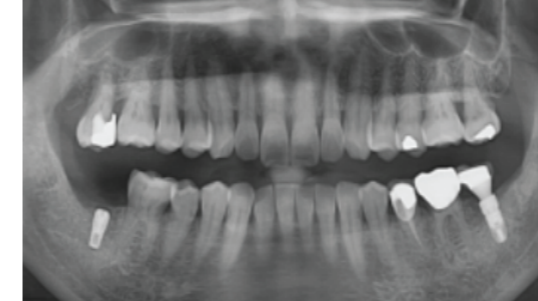
4. #37 Crown restoration (03.29.2011)



5. #47, 48 socket bone graft (09.08.2011)



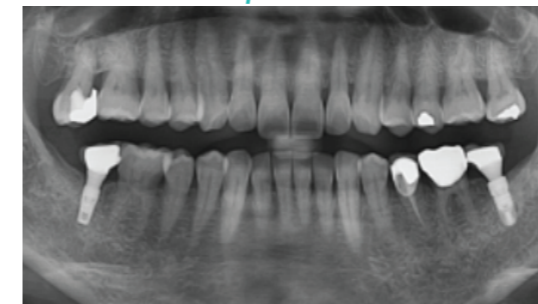
6. #47 Implant placement (01.05.2012)



7. #47 Crown (04.11.2012)



8. 50months follow up check



## Clinical Case 13

### Clinical Case 13 \_ Patient info

Gender	F	
Age	72	
Date of surgery (MM.DD.YY)	06.13.2010	
Defect site	4	5 6 7
	7 6	

#### A. Diagnosis and treatment plan

- #14, 35 Periodontitis
- #47, 46, 37, 36 Edentulous site
- #14, 35 Extraction, immediate implant placement and immediate loading
- #47, 46, 37, 36 Implant placement and immediate loading

#### B. Surgery

- 06.13.2010  
#35 Extraction, immediate implant placement and immediate loading with splinted resin crown
- 04.13.2012  
#47, 46, 37, 36 Implant placement and immediate loading with splinted resin crown
- 11.09.2012  
#14 Extraction and socket bone graft with implant placement
- 11.09.2012  
#14 Crown

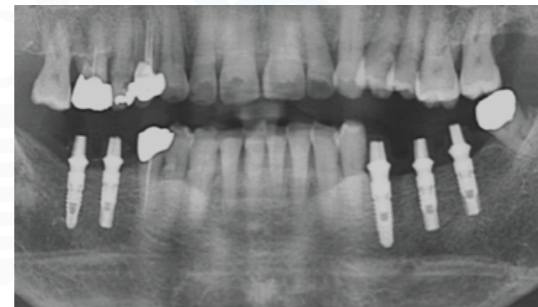
#### C. Pre-post differences of operation

- #14, 35 Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 17months, 29months, 35months and 58 months after loading shows 0 mm marginal bone loss in 6 implants.

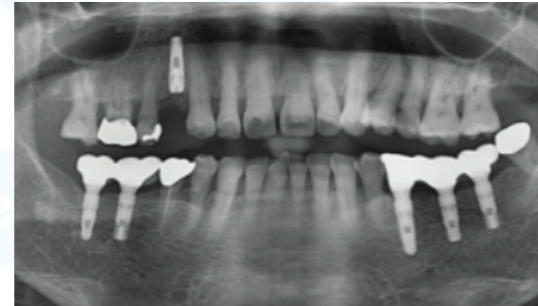
#### 1. Pre-operation



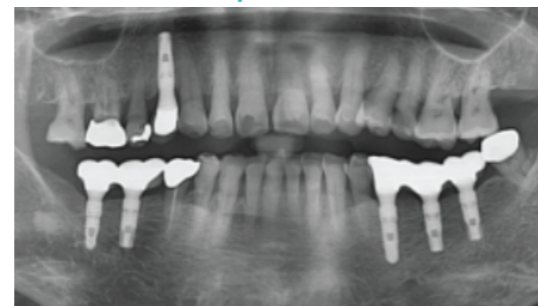
#### 2. #35, 36, 67, 46, 47 Implant placement (06.13.2010)



#### 3. #14 socket bone graft with implant placement (04.13.2012)



#### 4. 35months follow up check



## Clinical Case 14

### Clinical Case 14 \_ Patient info

Gender	M	
Age	60	
Date of surgery (MM.DD.YY)	06.07.2011	
Defect site	7 5	6 7

#### A. Diagnosis and treatment plan

- #17, 15, 37 Periodontitis
- #17, 15 Extraction and implant placement with socket bone graft

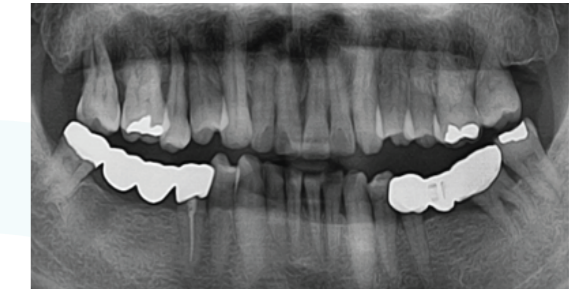
#### B. Surgery

- 06.07.2011  
#17, 15 Extraction and implant placement with socket bone graft
- 10.04.2011  
#17, 15 Crown restoration
- 06.27.2012  
#37 Extraction and socket bone graft with implant placement
- 10.12.2012  
#36 implant placement
- 10.12.2012  
#36, 37 Splinted crown

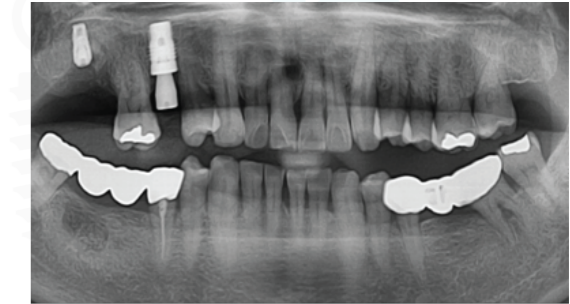
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 1 year, 19 months and 35 months after loading show 0 mm marginal bone loss in 4 implants.

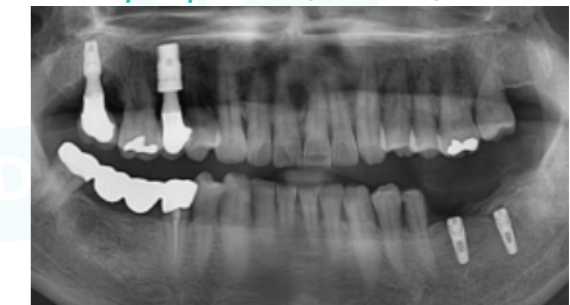
#### 1. Pre-operation



#### 2. #17, 15 implant placement with socket bone graft (06.07.2011)



#### 3. #37 socket bone graft with implant placement #36 implant placement (06.27.2012)



#### 4. 35months follow up check



## Clinical Case 15

### Clinical Case 15 \_ Patient info

Gender	M
Age	68
Date of surgery (MM.DD.YY)	06.11.2011
Defect site	7 6 5 4      4 5

#### A. Diagnosis and treatment plan

- #17, 16, 15, 14, 24, 25, 26, 27 Edentulous site
- #16, 17 sinus bone graft with simultaneous implant placement
- #15, 14, 24, 25, 26, 27 implant placement
- #13, 12, 45 Extraction, immediate implant placement with bone grafting

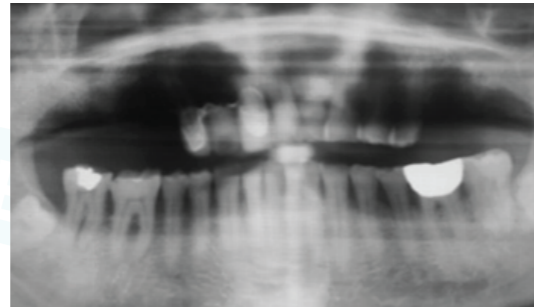
#### B. Surgery

- 06.11.2011  
#16, 17 sinus bone graft with simultaneous implant placement  
#15, 14, 24, 25, 26, 27 implant placement
- 01.21.2012  
#17, 16, 15, 14 Splinted crown  
#27, 26, 25, 24 Splinted crown  
#45 Extraction, immediate implant placement with bone grafting
- 08.28.2012  
#45 Crown
- 06.12.2013  
#13, 12 Extraction, immediate implant placement with bone grafting
- 1.22.2014  
#13, 12 Splinted crown

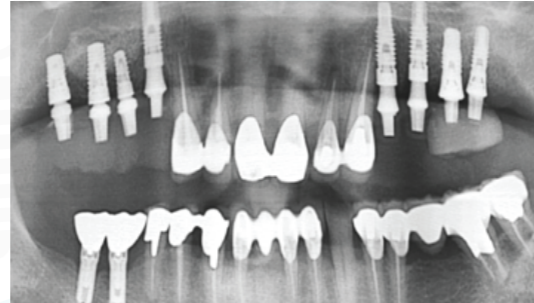
#### C. Pre-post differences of operation

- #16, 17 sinus bone graft . and #13, 12 and 45 socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 7months, 17months and 24 months and 42 months after loading shows 0 mm marginal bone loss in 6 implants.

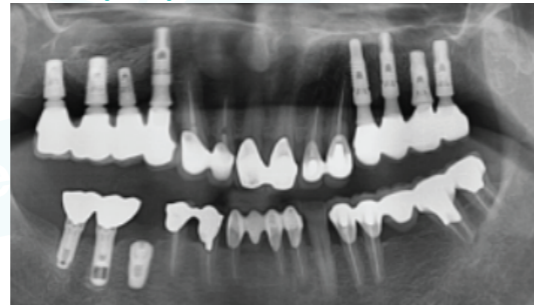
#### 1. Pre-operation



#### 2. #16, 17 sinus bone graft with implant placement #15, 14, 24, 25, 26, 27 implant placement (06. 11. 2011)



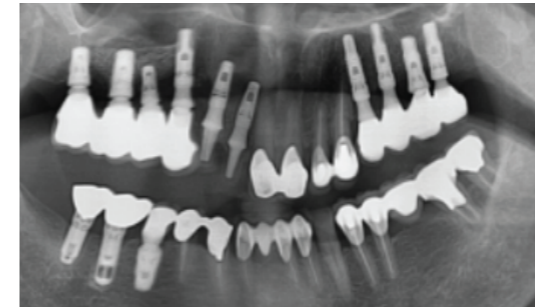
#### 3. #17, 16, 15, 14, 27, 26, 25, 24 Splinted crown #45 implant placement (01. 21. 2012)



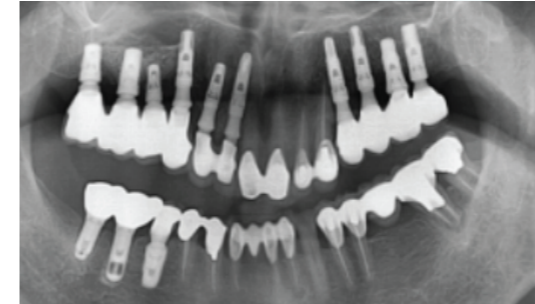
#### 4. #45 Crown (08. 28. 2012)



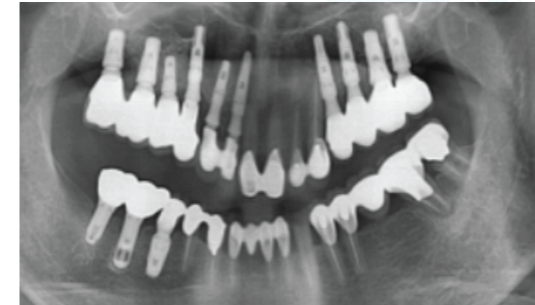
#### 5. #13, 12 implant placement with bone grafting (06. 12. 2013)



#### 6. #13, 12 Splinted crown (1. 22. 2014)



#### 7. 60months follow up check



## Clinical Case 16

### Clinical Case 16 \_ Patient info

Gender	M
Age	65
Date of surgery (MM.DD.YY)	01.30.2010
Defect site	3

#### A. Diagnosis and treatment plan

- #23 Root caries
- #23 Implant placement and immediate loading

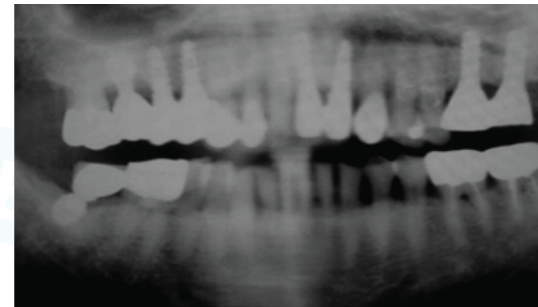
#### B. Surgery

- 01.30.2010  
#23 Implant placement and crown restoration
- 07.06.2010  
#12 Extraction and socket bone graft with immediate loading and implant placement
- 11.24.2010  
#12 Crown  
#13 Extraction and socket bone graft with immediate loading and implant placement
- 07.22.2011  
#13 Crown

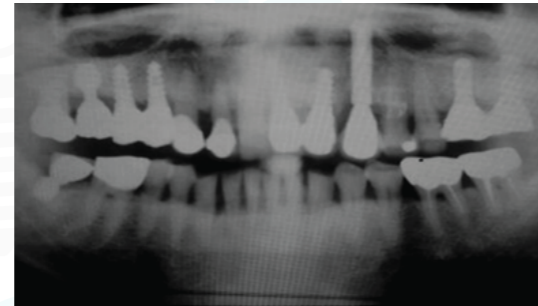
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 5 months, 10 months, 18 months, 30 months after loading show 0 mm marginal bone loss in 1 implant.

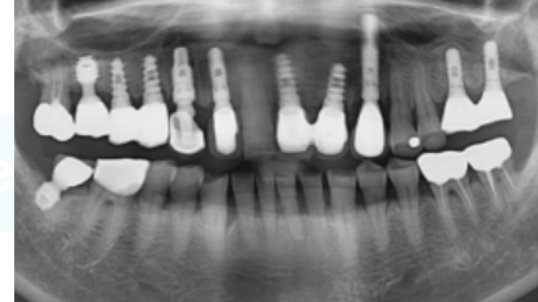
#### 1. Pre-operation



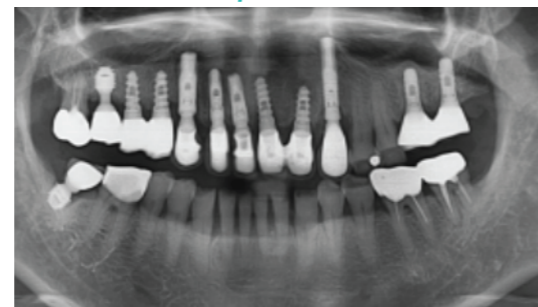
#### 2. #23 Implant placement and crown restoration (01.30.2010)



#### 3. #12 Crown (01.24.2010) #13 socket bone graft with implant placement



#### 4. 30months follow up check



## Clinical Case 17

### Clinical Case 17 \_ Patient info

Gender	M
Age	58
Date of surgery (MM.DD.YY)	09.21.2011
Defect site	7 6 5 6 7

#### A. Diagnosis and treatment plan

- #17, 16, 15, 36 edentulous site
- #37 Caries
- #37 Extraction and socket graft with immediate implant placement
- #17, 16, 15 Sinus bone graft and staged implant placement

#### B. Surgery

- 09.11.201  
#36 implant placement  
#37 Extraction and socket bone graft with immediate implant placement  
#15, 16, 17 sinus bone graft with window approach
- 01.04.2012  
#36, 37 splinted crown  
#15, 16, 17 implant placement
- 06.16.2012  
#24, 25, 26 PFM Splinted crown
- 06.13.2014  
#35 extraction and socket bone graft and immediate implant placement
- 12.11.2014  
#35 Crown

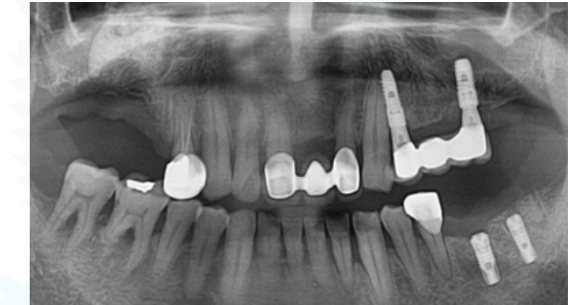
#### C. Pre-post differences of operation

- Socket and sinus bone graft were maintained in functional loading of implant prosthesis.
- There were not pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 3 months and 9 month and 2 years 4 months after loading shows 0 mm marginal bone loss in 2 implants.

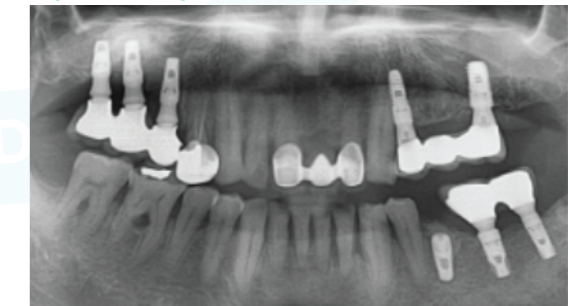
#### 1. Pre-operation



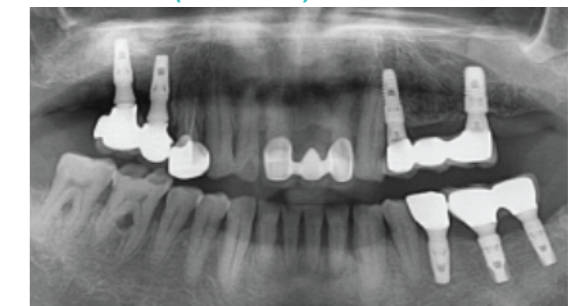
#### 2. #15, 16, 17 sinus bone graft #37 socket bone graft with immediate implant placement #36 implant placement (09.11.2011)



#### 3. #35 socket bone graft and implant placement (06.13.2014)



#### 4. #35 Crown (12.11.2014)



## Clinical Case 18

### Clinical Case 18 \_ Patient info

Gender	M
Age	64
Date of surgery (MM.DD.YY)	04.04.2010
Defect site	7 6 5 4 3 2 1   1 2 3 4 5 6 7 7 6 5 4 3 2 1   1 2 3 4 5 6 7

#### A. Diagnosis and treatment plan

maxillary full edentulous ridge  
#38, 34, 33, 43, 44, 45, 46, 47 periodontitis All teeth , extraction and immediate implant placement and socket bone graft  
Right sinus bone graft and staged implant placement Implant placement in edentulous ridge

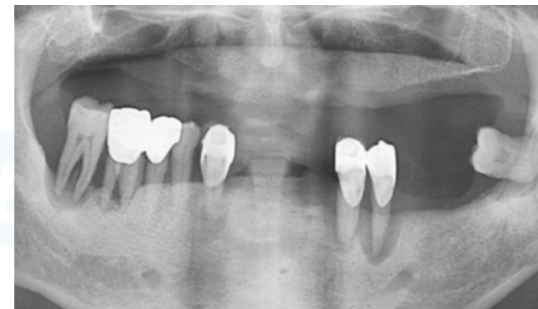
#### B. Surgery

- 04.04.2010  
#14, 13, 12, 22, 23, 24, 25 implant placement and immediate loading  
#26, 27 implant placement Right sinus bone augmentation
- 06.10.2010  
#38, 34, 33, 43, 44, 45, 46, 47 extraction with socket bone graft  
#12 Implants placement and immediate loading in mandible
- 11.09.2010  
#47 healing abutment connection  
#26, 27 abutment connection  
#17, 16 implant placement
- 03.12.2011  
#Full anchorage bridge in mandible  
#26 implant removal
- 07.13.2011  
Full anchorage bridge in maxilla

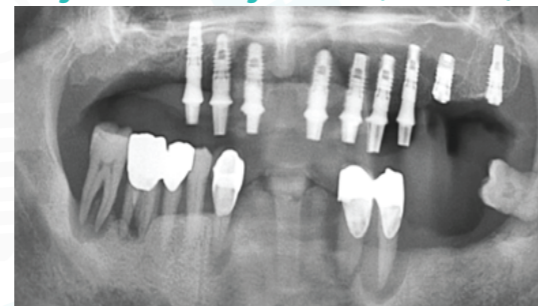
#### C. Pre-post differences of operation

- Socket and sinus bone graft were maintained in functional loading of implant prosthesis.
- There was not pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 8 months, 18 months and 46 months after loading shows 0 mm marginal bone loss in 21 implants.

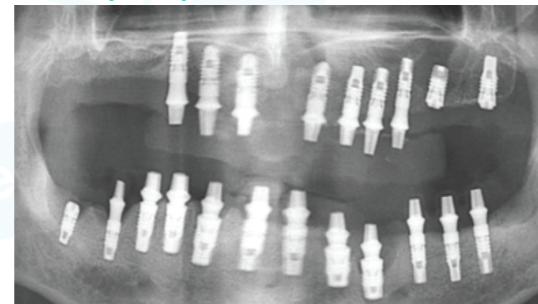
1. Pre-operation



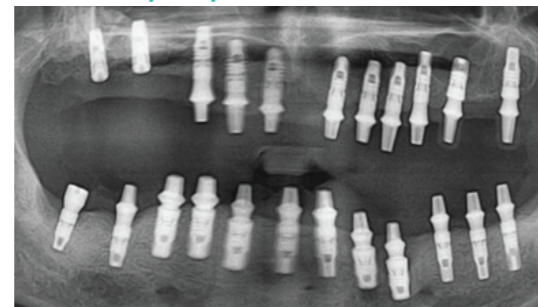
2. #14, 13, 12, 22, 23, 24, 25, 27 implant placement  
Right sinus bone augmentation (04.04.2010)



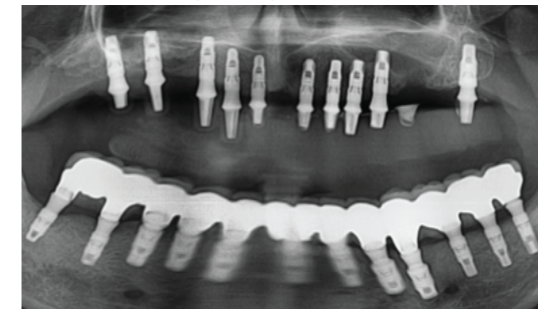
3. #38, 34, 33, 43, 44, 45, 46, 47 socket bone graft  
#12 Implants placement (06.10.2010)



4. #17, 16 implant placement (11.09.2010)



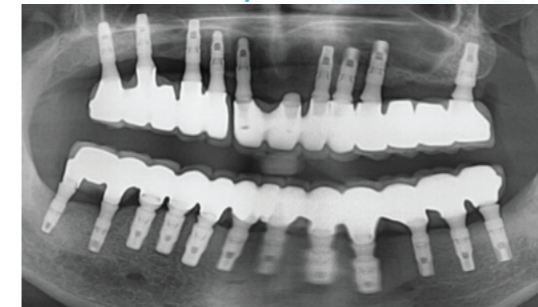
5. #Full anchorage bridge in mandible



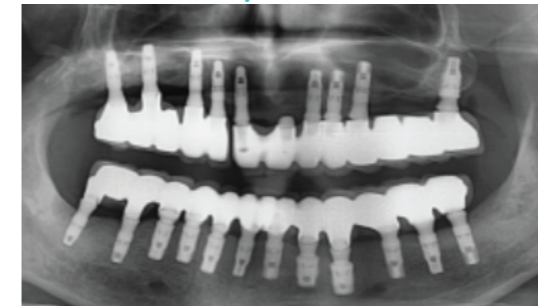
6. Full anchorage bridge in maxilla (07.13.2011)



7. 35months follow up check



8. 46months follow up check



## Clinical Case 19

### Clinical Case 19 \_ Patient info

Gender	M
Age	69
Date of surgery (MM.DD.YY)	07.11.2010
Defect site	7 6 5 4 3 2 1   1 2 3 3 2 1   1 2 3 4 5 6 7

#### A. Diagnosis and treatment plan

- #17, 16, 15, 14, 33, 32, 31, 41, 42, 43 edentulous ridge
- #13, 12, 11, 21, 22, 23, 37, 36, 35, 34, Root caries and periodontitis
- #17, 16, 15, 14, 33, 32, 31, 41, 42, 43, implant placement
- #13, 12, 11, 21, 22, 23, 37, 36, 35, 34 Extraction and immediate implant placement with socket bone graft

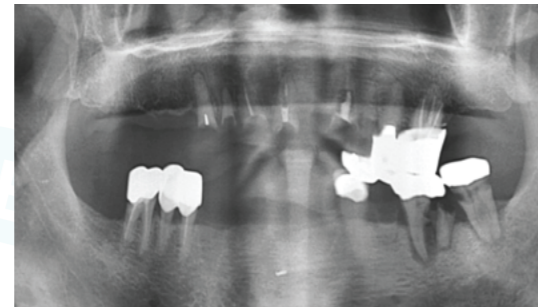
#### B. Surgery

- 07.11.2010  
#17, 16, 15, 14, 33, 32, 31, 41, 42, 43 implant placement  
#13, 12, 11, 21, 22, 23, 37, 36, 35, 34 Extraction and immediate implant placement with socket bone graft
- 11.14.2010  
#17, 16, 15 healing abutment connection
- 02.07.2011  
Final prosthesis of all implants

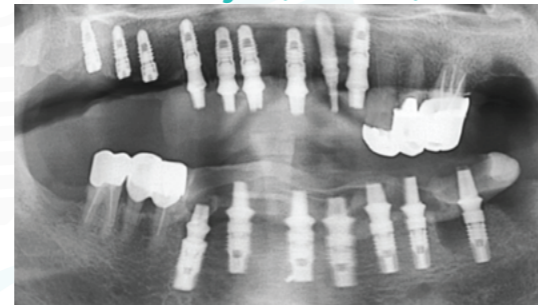
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 4 months, 18 months, 24 months and 30 months, 36 months and 39 months after loading shows 0 mm marginal bone loss in 20 implants.

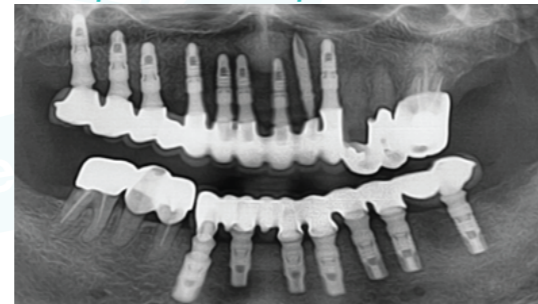
#### 1. Pre-operation



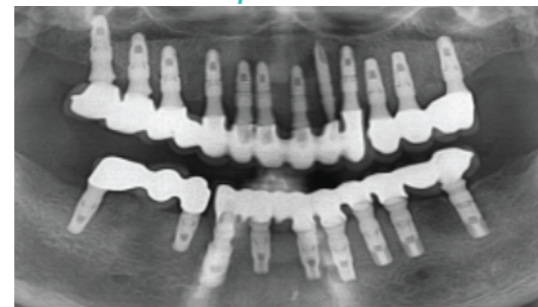
#### 2. #17, 16, 15, 14, 33, 32, 31, 41, 42, 43 implant placement #13, 12, 11, 21, 22, 23, 37, 36, 35, 34 implant placement with socket bone graft (07.11.2010)



#### 3. Final prosthesis of all implants (02.07.2011)



#### 4. 39months follow up check



## Clinical Case 20

### Clinical Case 20 \_ Patient info

Gender	F
Age	53
Date of surgery (MM.DD.YY)	08.15.2010
Defect site	7   7

#### A. Diagnosis and treatment plan

- #17, 47 edentulous ridge
- #17 sinus bone graft and staged implant placement
- #47 implant placement

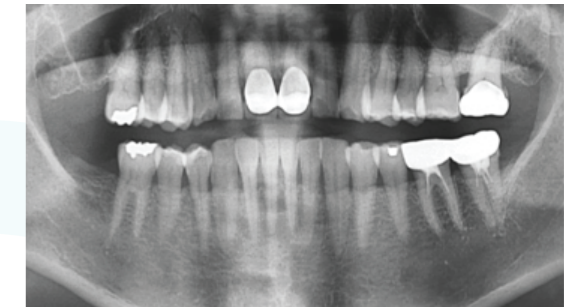
#### B. Surgery

- 08.15.2010  
#17 sinus bone graft
- 12.04.2010  
#17, 47 implant placement
- 06.14.2011  
#17, 47 healing abutment connection
- 02.03.2012  
#17, 47 crown restoration

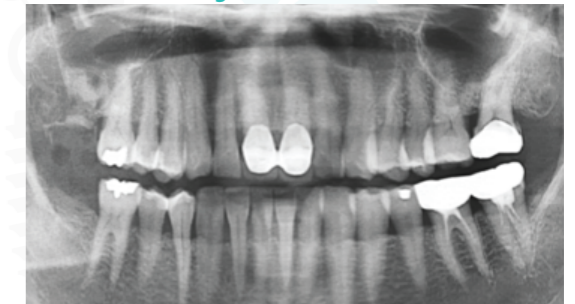
#### C. Pre-post differences of operation

- sinus bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 8 months, 13 months and 32months after loading shows 0.2 mm marginal bone loss in 2 implants.

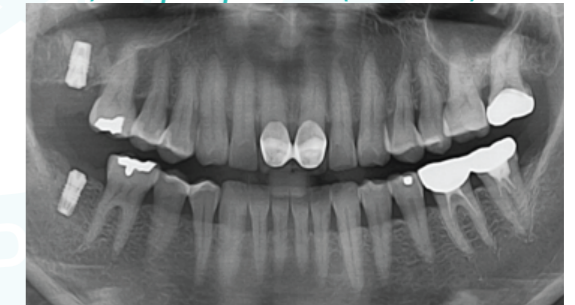
#### 1. Pre-operation



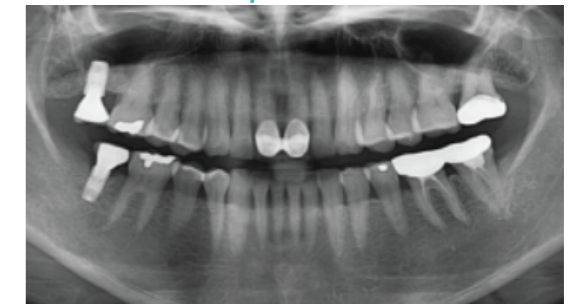
#### 2. #17 sinus bone graft (08.15.2010)



#### 3. #17, 47 implant placement (12.04.2010)



#### 4. 32months follow up check





## Clinical Case 21

### Clinical Case 21 \_ Patient info

Gender	M
Age	53
Date of surgery (MM.DD.YY)	04.14.2010
Defect site	6

#### A. Diagnosis and treatment plan

- #26 Socket graft site
- #26 Implant placement

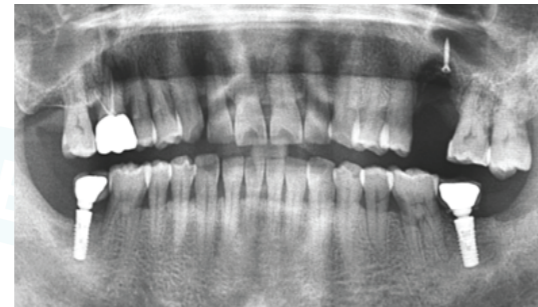
#### B. Surgery

- 04.14.2010
- #26 Implant placement
- 07.08.2010
- #26 Abutment connection
- 02.26.2011
- #26 Crown

#### C. Pre-post differences of operation

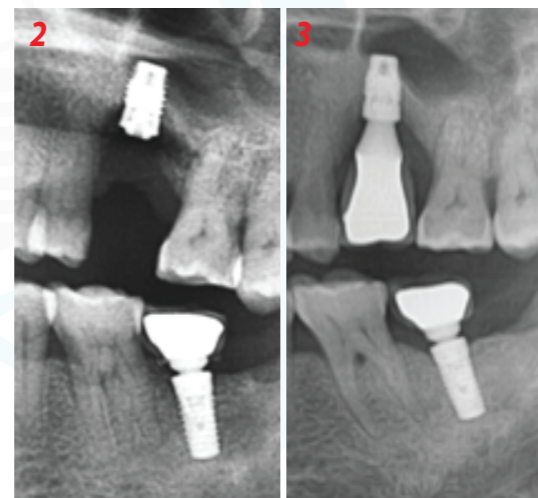
- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 2 month, 4 months and 59 months after loading shows 2 mm marginal bone loss in 2 implants.

#### 1. Pre-operation



#### 2. #26 Implant placement (04.14.2010)

#### 3. #26 Crown (02.26.2011)



#### 4. 59months follow up check



## Clinical Case 22

### Clinical Case 22 \_ Patient info

Gender	F
Age	62
Date of surgery (MM.DD.YY)	07.23.2009
Defect site	7 6   7

#### A. Diagnosis and treatment plan

- #47 Socket bone graft with Simultaneous implant placement
- #17, 16 Sinus bone graft and implant placement
- #27, 46 implant placement

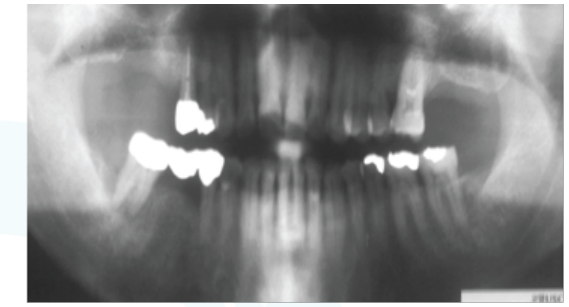
#### B. Surgery

- 07.23.2009
- #47 Socket bone graft with Simultaneous implant placement
- #17, 16 Sinus bone graft with Immediate implant placement
- #27, 46 implant placement
- 04.26.2010
- #46 Splinted PFM crown

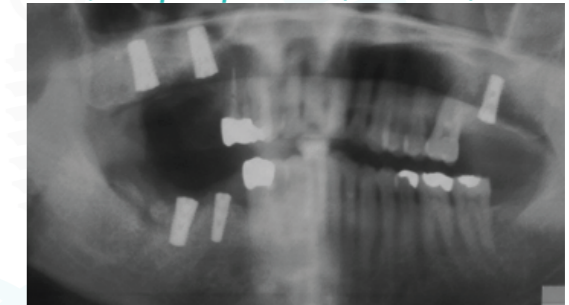
#### C. Pre-post differences of operation

- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 16 months and 25 months and 54 month after loading shows 0 mm marginal bone loss in 5 implants.

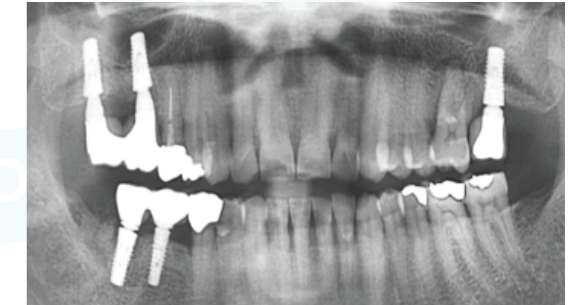
#### 1. Pre-operation



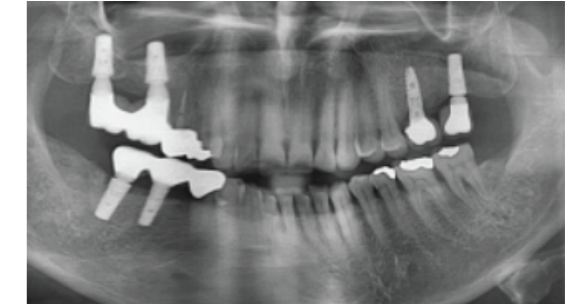
#### 2. #47 Socket bone graft with implant placement #17, 16 Sinus bone graft with implant placement #27, 46 implant placement (07.23.2009)



#### 3. #46 Splinted crown (04.26.2010)



#### 4. 25months follow up check



## Clinical Case 23

### Clinical Case 23 \_ Patient info

Gender	F	
Age	71	
Date of surgery (MM.DD.YY)	07.11.2010	
Defect site	76	67

#### A. Diagnosis and treatment plan

- #17, 16, 26, 27 residual cyst
- #17, 16, 26, 27 Socket bone graft and staged implant placement

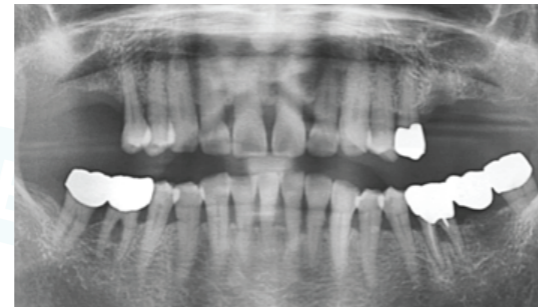
#### B. Surgery

- 07.11.2010  
#17 Socket bone graft  
#16 implant placement
- 08.04.2010  
#26, 27 Socket bone graft and sinus bone graft
- 10.05.2010  
#26 implant placement
- 11.07.2010  
#17 implant placement
- 02.21.2011  
#26, 27 implant placement
- 03.15.2011  
#17, 16 Healing abutment connection
- 07.25.2011  
#17, 16 Splinted crown
- 05.15.2012  
#26, 27 Splinted crown

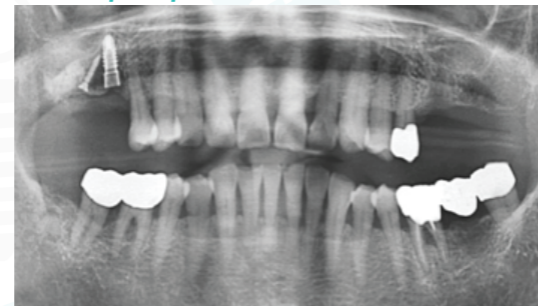
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 10 months, 24 months and 32 months after loading show 0 mm marginal bone loss in 5 implants.

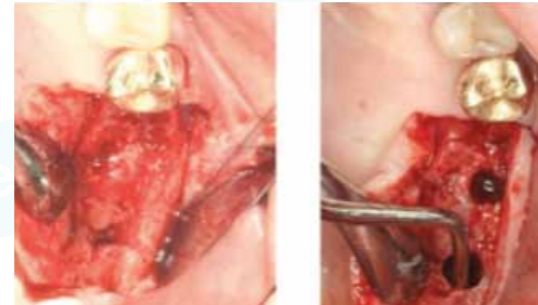
#### 1. Pre-operation



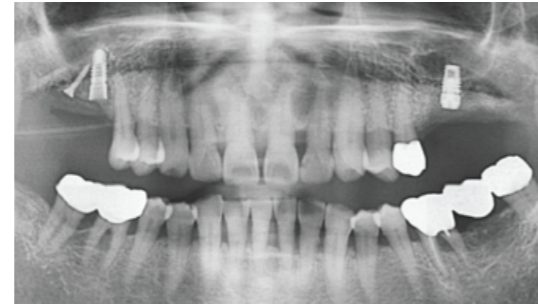
#### 2. #17 Socket bone graft #16 implant placement (07.11.2010)



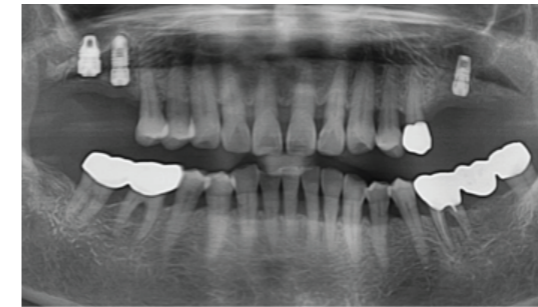
#### 3. #26, 27 Socket bone graft and sinus bone graft (08.04.2010)



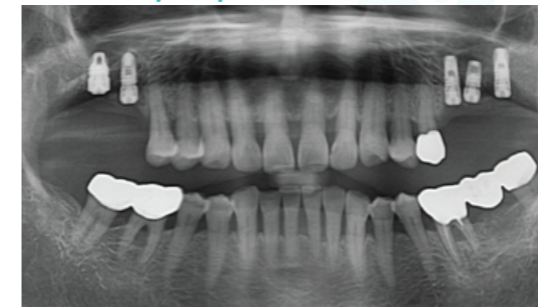
#### 4. #26 implant placement (10.05.2010)



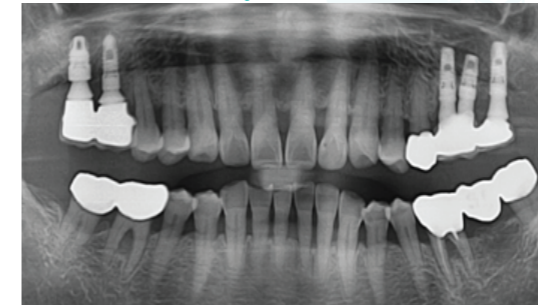
#### 5. #17 implant placement (11.07.2010)



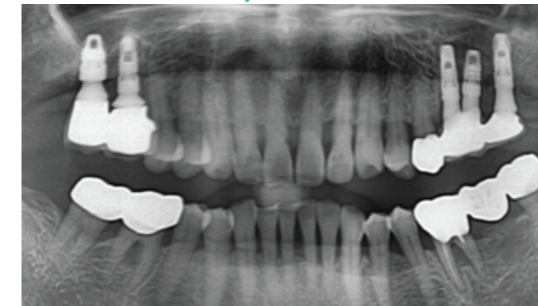
#### 6. #26, 27 implant placement (02.21.2011)



#### 7. 24months follow up check



#### 8. 32months follow up check



## Clinical Case 24

### Clinical Case 24 \_ Patient info

Gender	F	
Age	68	
Date of surgery (MM.DD.YY)	10.12.2010	
Defect site	7	7
	7	7

#### A. Diagnosis and treatment plan

Mandible edentulous ridge  
 Maxillary edentulous ridge except to #16, 15, 14  
 #16, 15, 14 Periodontitis  
 #16, 15, 14 Extraction and Immediate implant placement  
 Mandible and maxillary full anchored bridge

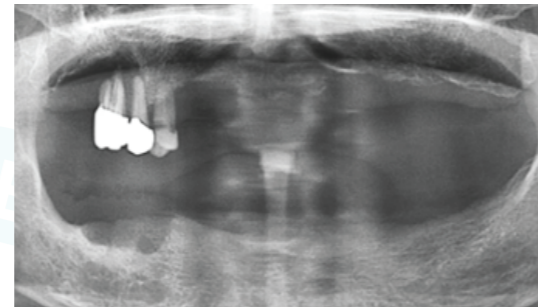
#### B. Surgery

1. 10.12.2010  
 #44, 43, 33, 34, 36, Implant placement and immediate loading with resin bridge  
 #42, 37, Implant placement  
 #47, 46, 45 Implant placement and socket bone graft  
 Bone graft of residual cyst in left maxillary arch  
 2. 03.27.2011  
 #Mandible full anchored bridge  
 #17, 16, 15, 14, 13, 22, 23, 24, 26, 27, Implantation  
 Lateral bone augmentation in anterior maxilla for esthetic appearance.  
 3. 05.04.2012  
 Maxillary full anchored bridge

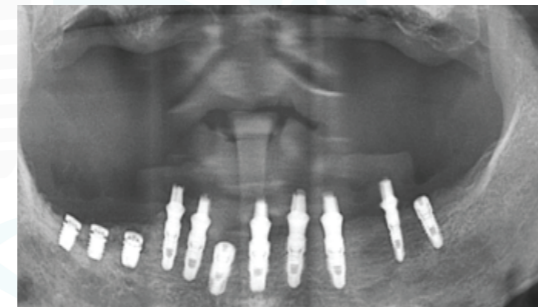
#### C. Pre-post differences of operation

1. Socket bone graft were maintained in functional loading of implant prosthesis.  
 2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.  
 3. The follow-up check panoramic X-ray of 12 months, 27 months, 39 months and 48 months after loading shows 0 mm marginal bone loss in 21 implants.

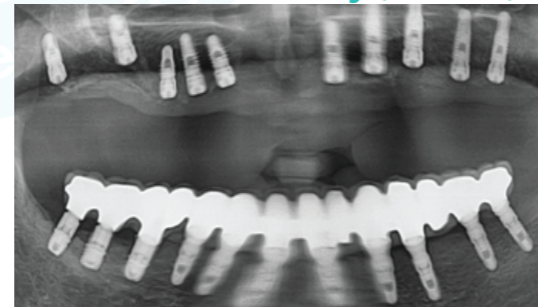
#### 1. Pre-operation



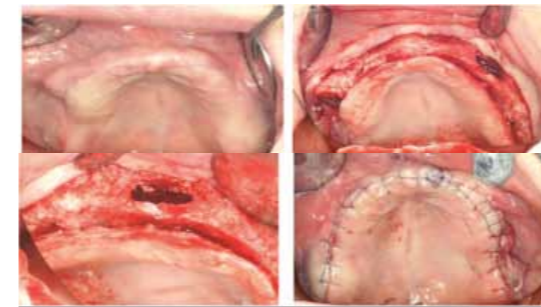
#### 2. #44, 43, 42, 33, 34, 36, 37 Implant #47, 46, 45 Implant placement and socket bone graft Bone graft of residual cyst in left maxillary arch (10.12.2010)



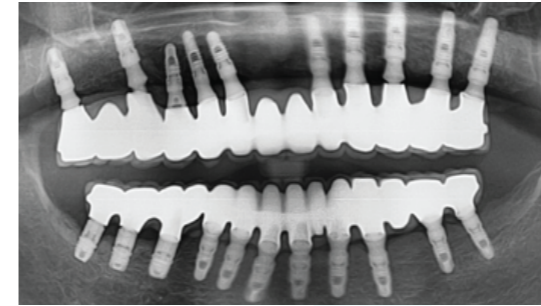
#### 3. Lateral bone augmentation in anterior maxilla #17, 16, 15, 14, 13, 22, 23, 24, 26, 27, Implantation #Mandible full anchored bridge (03.27.2011)



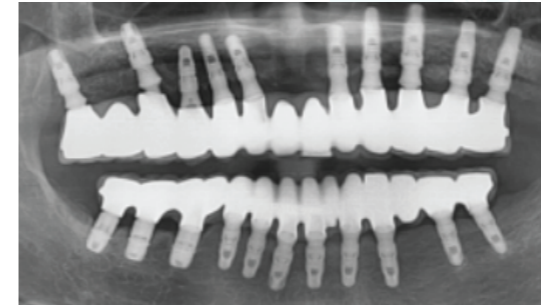
#### Bone graft of residual cyst in left maxillary arch



#### 4. Maxillary full anchored bridge (05.04.2012)



#### 5. 48months follow up check



## Clinical Case 25

### Clinical Case 25 \_ Patient info

Gender	F
Age	68
Date of surgery (MM.DD.YY)	04.12.2010
Defect site	7 6

#### A. Diagnosis and treatment plan

- #17, 16, 26, 27 residual cyst
- #17, 16, 26, 27 Socket bone graft and staged implant placement

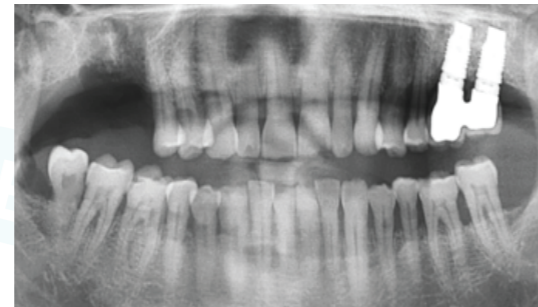
#### B. Surgery

- 07.21.2010  
#17, 16 Socket and sinus bone graft
- 11.14.2010  
#17, 16 implant placement
- 10.21.2012  
#17, 16 Splinted Crown

#### C. Pre-post differences of operation

- Socket and sinus bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 5 months, 12 months and 19 months after loading shows 0 mm marginal bone loss in 2 implants.

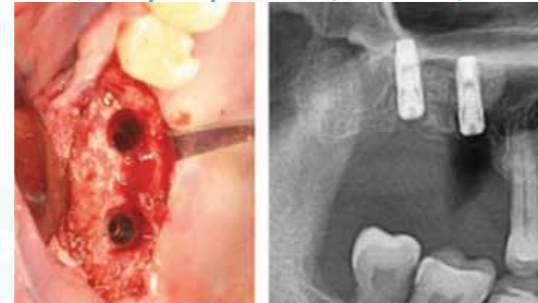
#### 1. Pre-operation



#### 2. #17, 16 Socket and sinus bone graft (07.21.2010)



#### 3. #17, 16 implant placement (11.14.2010)



#### 4. 19months follow up check



## Clinical Case 26

### Clinical Case 26 \_ Patient info

Gender	M
Age	56
Date of surgery (MM.DD.YY)	06.21.2011
Defect site	7 6 5 6 7
	7

#### A. Diagnosis and treatment plan

- #16, 25, 26, 27, 47 edentulous site
- #17 periodontitis
- #17 Extraction and socket bone graft with immediate implant placement
- #16, 25, 26, 27, 47 implant placement

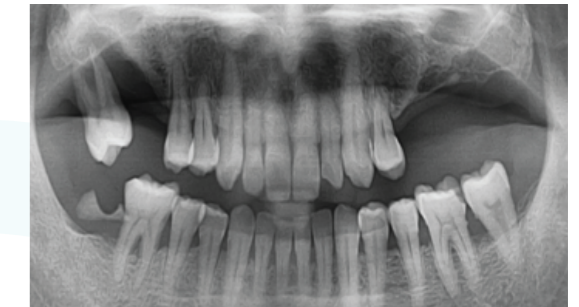
#### B. Surgery

- 06.21.2011  
#16, 47 implant placement
- 06.11.2012  
#17 Extraction and socket bone graft with immediate implant placement
- 06.11.2012  
#25, 26, 27 implant placement
- 06.11.2012  
#17, 16 Splinted crown
- 06.11.2012  
#25, 26, 27 Splinted crown
- 06.11.2012  
#47 Crown

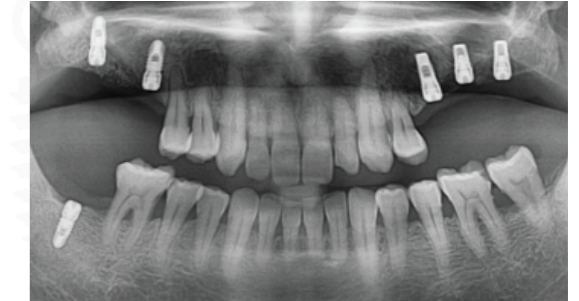
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 7 months and 17 months and 31 months after loading shows 0 mm marginal bone loss in 6 implants.

#### 1. Pre-operation



#### 2. #17 socket bone graft with implant placement #16, 25, 26, 27, 47 implant placement (06.21.2011)



#### 3. #17, 16 Splinted crown #25, 26, 27 Splinted crown #47 Crown (06.11.2012)



#### 4. 31months follow up check



## Clinical Case 27

### Clinical Case 27 \_ Patient info

Gender	F	
Age	59	
Date of surgery (MM.DD.YY)	06.01.2011	
Defect site	7 7 6 5	7 4 5 6 7

#### A. Diagnosis and treatment plan

Maxillary edentulous ridge  
 #37, 36, 35, 34, 31, 41, 45, 46, 47 edentulous ridge  
 #48, 33, 32, 44 Periodontitis  
 Right and left sinus bone graft and Implantation in maxillary ridge  
 Vertical bone augmentation in posterior mandible ridge and  
 Staged implant placement  
 #33, 32, 44 Extraction and Immediate implant placement

#### B. Surgery

1. 06.01.2011  
 #13, 21, 11, 22, 23 Implant placement and immediate loading  
 Left and right sinus bone augmentation  
 # 17, 16, 14, 24, 27, 26 Implant placement  
 2. 02.13.2012  
 Maxillary full anchored bridge  
 3. 02.17.2013  
 #48, 33, 32, 44 Extraction and vertical bone augmentation  
 #37, 36, 35, 34, 33, 31, 44, 45, 46, 47 Implantation  
 4. 07.03. 2013  
 #47, 46, 45, 44 splinted crown  
 #41, 32, 33, 34, 35, 37 Bridge

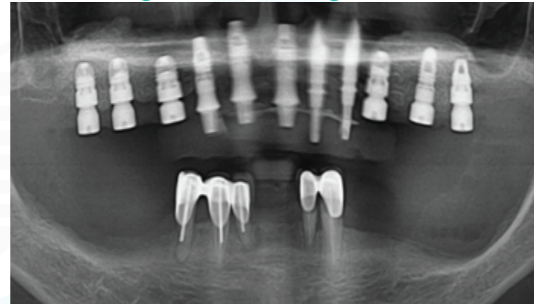
#### C. Pre-post differences of operation

1. Left and right sinus and mandible posterior vertical bone augmentation were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 6 months, 20 months, 25 months and 42 month after loading shows 0 mm marginal bone loss in 9 implants.

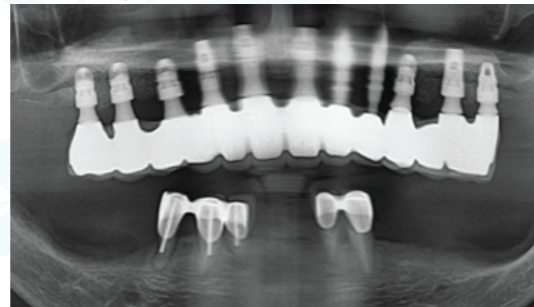
#### 1. Pre-operation



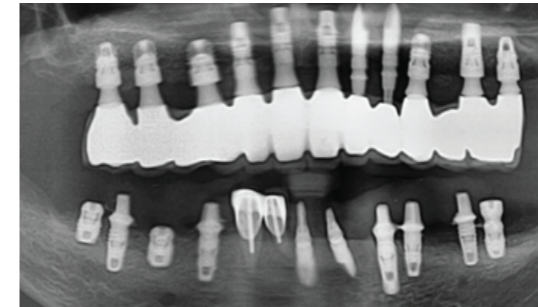
#### 2. #17, 16, 14, 13, 11, 21, 22, 23, 24, 26, 27 Implant placement Left and right sinus bone augmentation (06.01.2011)



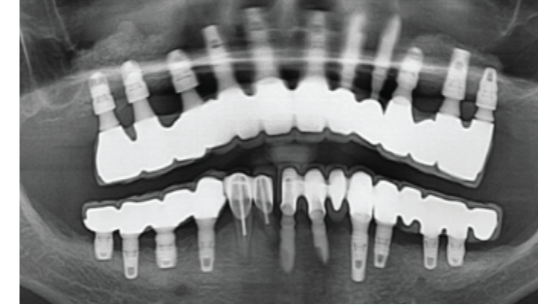
#### 3. Maxillary full anchored bridge (02.13.2012)



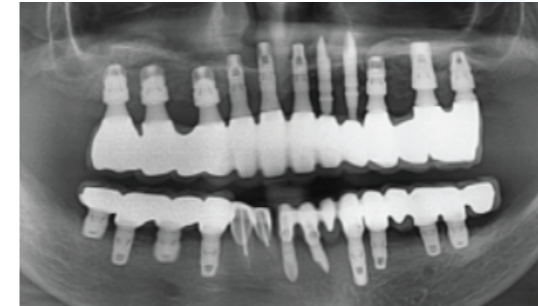
#### 4. #37, 36, 35, 34, 33, 31, 44, 45, 46, 47 Implantation #48, 33, 32, 44 Extraction and vertical bone augmentation (02.17.2013)



#### 5. #47, 46, 45, 44 splinted crown #41, 32, 33, 34, 35, 37 Bridge (07.03. 2013)



#### 6. 25months follow up check



## Clinical Case 28

### Clinical Case 28 \_ Patient info

<b>Gender</b>	M	
<b>Age</b>	62	
<b>Date of surgery (MM.DD.YY)</b>	06.22.2009	
<b>Defect site</b>	7 6 5 4	6 7
	7 6	7

#### A. Diagnosis and treatment plan

- #17, 16, 37, 46 edentulous site
- #15, 14, 26, 47 Periodontitis
- #15, 14, 26, Extraction and implant placement with socket bone graft
- #17, 16, 37, 46 Implant placement
- #47 Extraction and socket bone graft with staged implant placement

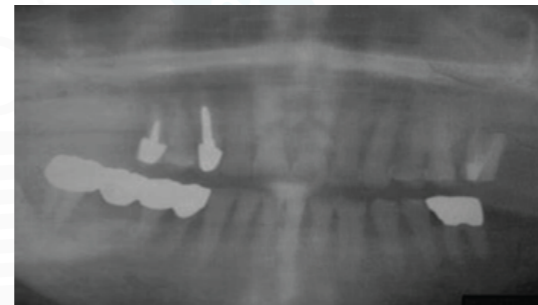
#### B. Surgery

1. 06.22.2009
  - #14, 26, Extraction and implant placement with socket bone graft
  - #17, 16, 27, 37 Implant placement
  - #37 Extraction and socket bone graft with staged implant placement
2. 10.12.2009
  - #17, 16, 15, 14 Bridge restoration
  - #26, 27 Splinted crown
  - #46 implant placement and immediate loading
3. 08.04.2010
  - #47 implant placement
4. 09.14.2012
  - #47, 46 Splinted crown restoration
5. 02.14.2013
  - #23 Socket bone graft with tenting screw
6. 06.03.2013
  - #23 implant placement
7. 12.23.2014
  - #23 crown

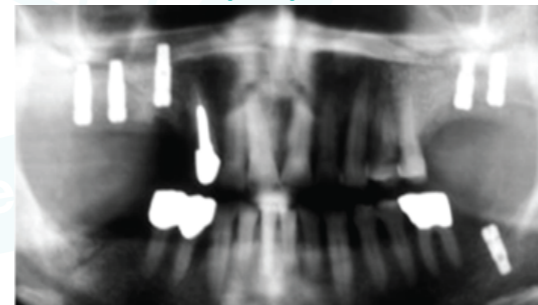
#### C. Pre-post differences of operation

1. Socket bone graft were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 5 months, 10 months and 50 months after loading shows 0 mm marginal bone loss in 8 implants.

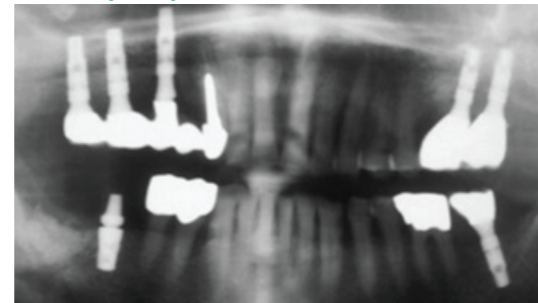
#### 1. Pre-operation



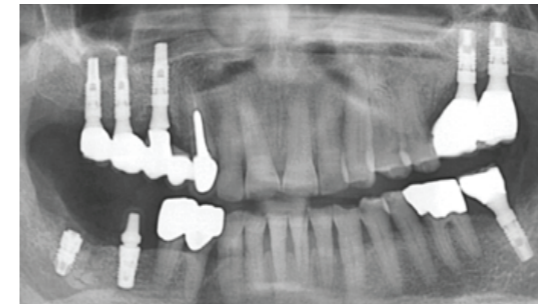
#### 2. #37 socket bone graft with staged implant placement #14, 26 implant placement with socket bone graft #17, 16, 27, 37 Implant placement (06.22.2009)



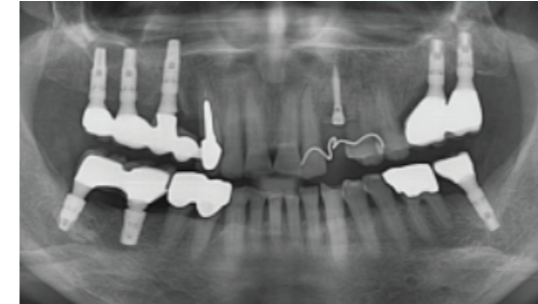
#### 3. #17, 16, 15, 14 Bridge restoration #26, 27 Splinted crown #46 implant placement (10.12.2009)



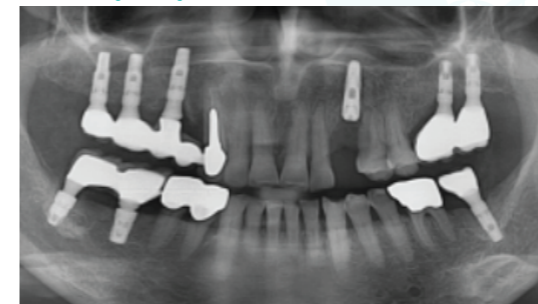
#### 4. #47 implant placement (08.04.2010)



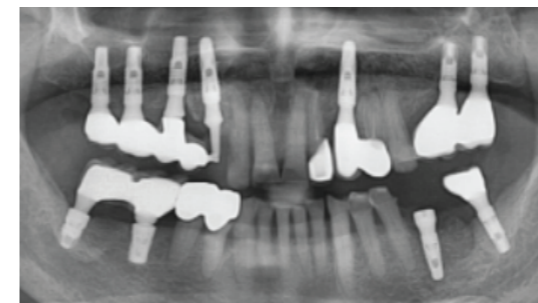
#### 5. #23 Socket bone graft (02.14.2013)



#### 6. #23 implant placement (06.03.2013)



#### 7. #23 crown (12.23.2014)



## Clinical Case 29

### Clinical Case 29 \_ Patient info

Gender	M				
Age	78				
Date of surgery (MM.DD.YY)	04.03.2010				
Defect site	<table border="1"> <tr> <td>7</td> <td>7</td> </tr> <tr> <td>7</td> <td>7</td> </tr> </table>	7	7	7	7
7	7				
7	7				

#### A. Diagnosis and treatment plan

#12, 11, 21, 22, 23, 36, 35, 33, 32, 31, 41, 42, 43, 45 periodontitis  
 #The others : edentulous ridge  
 #12, 11, 21, 22, 23, 36, 35, 33, 32, 31, 41, 42, 43, 45 Extraction  
 #maxillary and mandible full anchorage bridge supported with implants

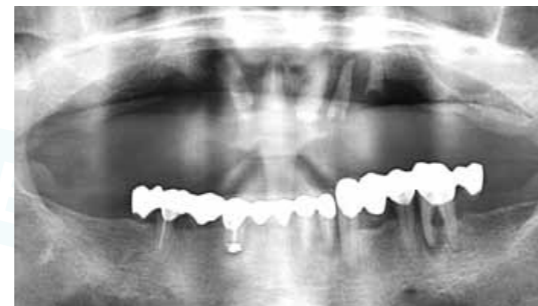
#### B. Surgery

1. 04.03.2010  
 #12, 11, 21, 22, 23, Extraction and socket bone graft  
 #13, 12, 11, 21, 23, 24 Immediate loading  
 12 implants placement in maxillary arch  
 2. 05.13.2010  
 #36, 35, 33, 32, 31, 41, 42, 43, 45 Extraction  
 12 implants placement in mandible arch and Immediate loading  
 except to #37 and #47  
 3. 01.07.2011  
 #Maxillary and mandible full anchored bridges

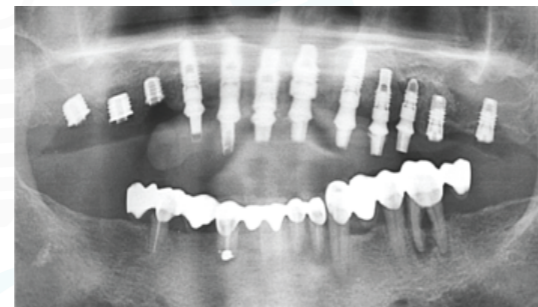
#### C. Pre-post differences of operation

1. Socket and sinus bone graft were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 12 months, 24 months, 36 months and 48 months after loading show 0 mm marginal bone loss in 24 implants.

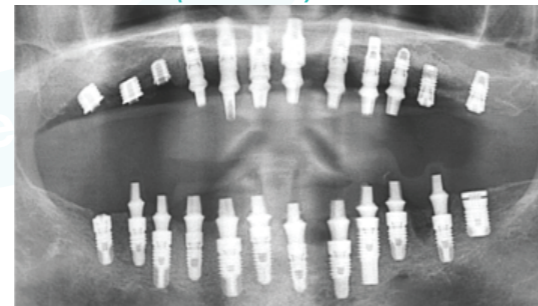
#### 1. Pre-operation



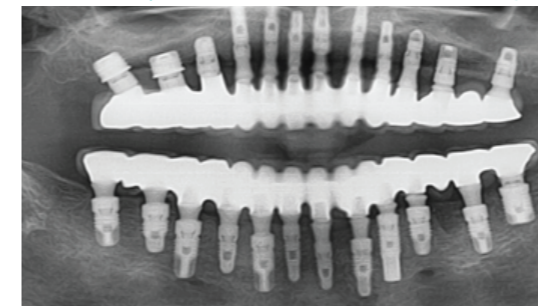
#### 2. #12, 11, 21, 22, 23 socket bone graft #13, 12, 11, 21, 23, 24 Immediate loading 12 implants placement in maxillary arch (04.03.2010)



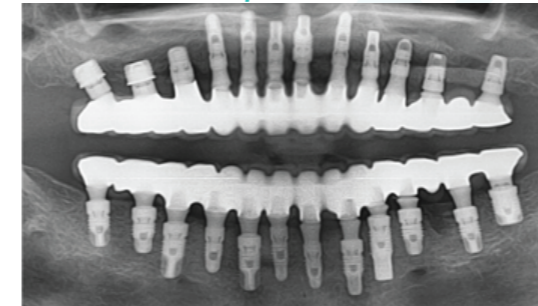
#### 3. 12 implants placement in mandible arch except to #37 and #47.(05.13.2010)



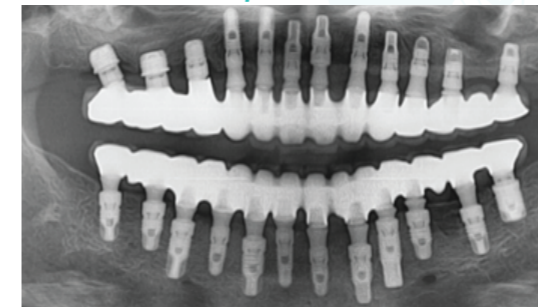
#### 4. #Maxillary and mandible full anchored bridges (01.07.2011)



#### 5. 12months follow up check



#### 6. 12months follow up check



## Clinical Case 30

### Clinical Case 30 \_ Patient info

Gender	M
Age	91
Date of surgery (MM.DD.YY)	07.04.2010
Defect site	5 67

#### A. Diagnosis and treatment plan

- #25, 36, 37 root fracture
- #25, extraction and socket bone graft and immediate implant placement
- #36, 37 extraction and socket bone graft and immediate implant placement with immediate loading

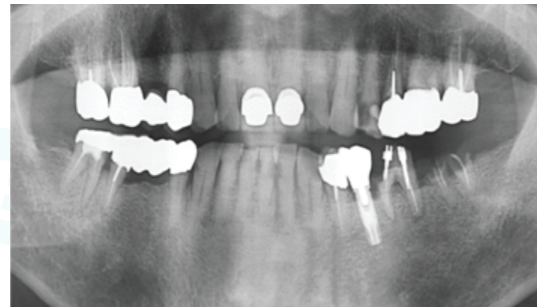
#### B. Surgery

- 07.04.2010  
#25, extraction and socket bone graft and immediate implant placement  
#36, 37 extraction and socket bone graft and immediate implant placement with immediate loading
- 11.10.2010  
#25 healing abutment connection  
#36, 37 Splinted crown
- 04.09.2013  
#25 crown restoration

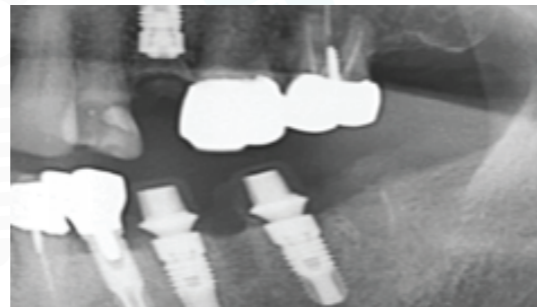
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 31 months and 45 months after loading shows 0 mm marginal bone loss in 3 implants.

#### 1. Pre-operation



#### 2. #25, 36, 37 socket bone graft and implant placement (07.04.2010)



#### 3. 31months follow up check



#### 4. 45months follow up check



## Clinical Case 31

### Clinical Case 31 \_ Patient info

Gender	M
Age	72
Date of surgery (MM.DD.YY)	08.11.2010
Defect site	7 7

#### A. Diagnosis and treatment plan

- #17, 16, 15, 14, 21, 23, 24, 25, 26, 27 edentulous site
- #13, 12, 11, 22 Periodontitis
- Left and Right sinus bone graft
- #13, 12, 11, 22 Extraction and Immediate implant placement
- #17, 16, 15, 14, 21, 23, 24, 25, 26, 27 implant placement

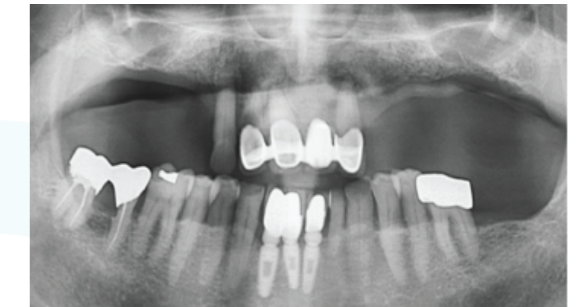
#### B. Surgery

- 08.11.2010  
#12, 11, 22, Extraction and Immediate implant placement  
#15, 14, 23, 24, 25, 26, implant placement  
All implants except to 12 : immediate loading  
Left and Right sinus bone graft
- 01.12.2011  
#17, 16 implant placement
- 08.04.2011  
Maxillary full anchored bridge

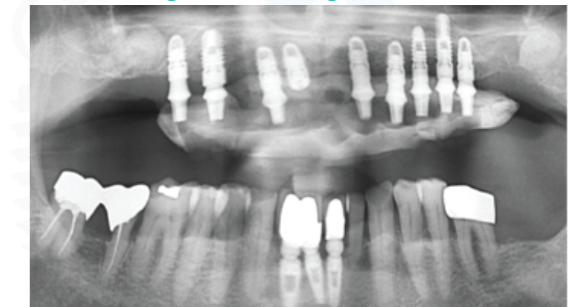
#### C. Pre-post differences of operation

- Sinus bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 17 months, 29 months and 47 months after loading show 0 mm marginal bone loss in 12 implants.

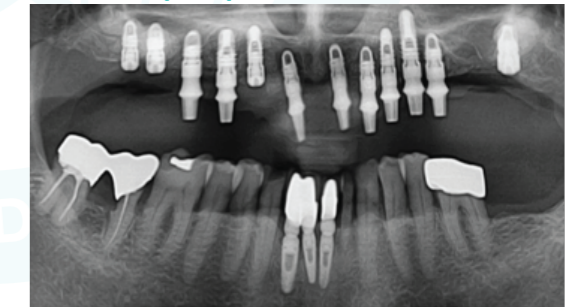
#### 1. Pre-operation



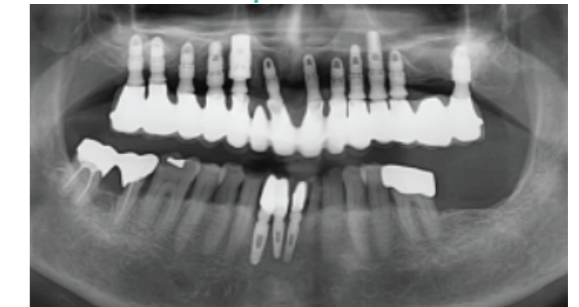
#### 2. #15, 14, 12, 11, 22, 23, 24, 25, 26 implant placement Left and Right sinus bone graft (08.11.2010)



#### 3. #17, 16 implant placement (01.12.2011)



#### 4. 47months follow up check





## Clinical Case 32

### Clinical Case 32 \_ Patient info

Gender	M	
Age	71	
Date of surgery (MM.DD.YY)	11.29.2010	
Defect site	2 1	2 6 7

#### A. Diagnosis and treatment plan

- #17, 27 edentulous site
- #16, 14, 12, 21, 26 periodontitis
- #16, 14, 12, 21, 26 Extraction and socket bone graft and staged implant placement
- #17, 27 implant placement

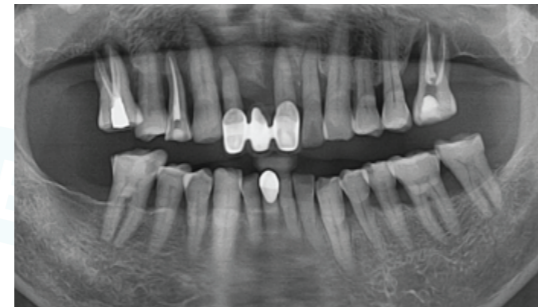
#### B. Surgery

- 11.29.2010  
#16, 14, 12, 21, 26 Extraction and socket bone graft
- 03.10.2011  
#17, 16, 14 implant placement  
#12, 11, 22 implant placement and immediate loading  
#26, 27 implant placement
- 04.18.2012  
#16, 14 crown  
#12, 11, 22 Bridge restoration  
#26, 27 splinted crown

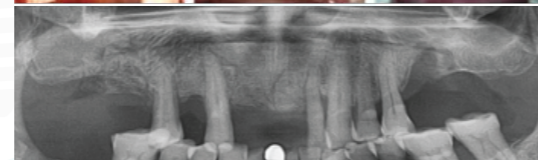
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 35 months after loading shows 0 mm marginal bone loss in 5 implants.

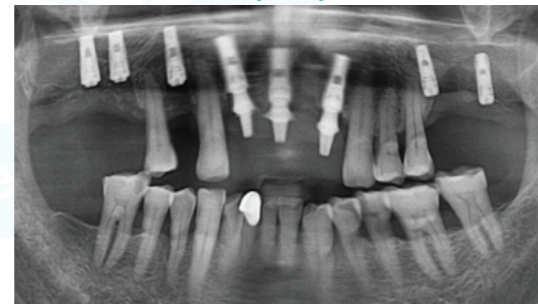
#### 1. Pre-operation



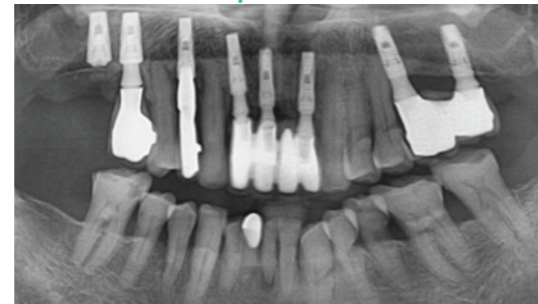
#### 2. #16, 14, 12, 21, 26 Extraction and socket bone graft (11.29.2010)



#### 3. #12, 11, 22 implant placement and immediate loading #17, 16, 14, 26, 27 implant placement (03.10.2011)



#### 4. 35months follow up check



## Clinical Case 33

### Clinical Case 33 \_ Patient info

Gender	M	
Age	62	
Date of surgery (MM.DD.YY)	12.21.2010	
Defect site	1 1	6 7

#### A. Diagnosis and treatment plan

- #11, 21, 22, 36 Edentulous site
- #37, 47 Periodontitis
- #23 Root caries
- #11, 21, 36, 37, 46, 47 Implant placement

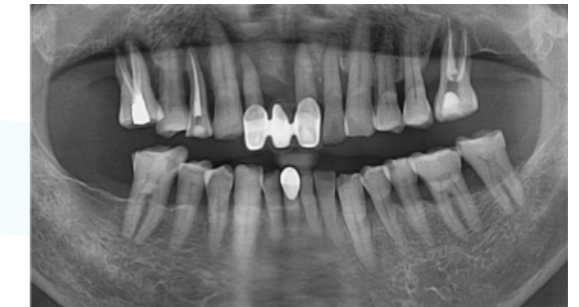
#### B. Surgery

- 12.21.2010  
#11, 21 Implant placement and immediate loading and lateral bone augmentation  
#46, 47 Implant placement
- 04.11.2011  
#11, 21 Bridge splinted with natural teeth  
#46, 47 Splinted crown  
#37 extraction and immediate implant placement  
#36 implant placement
- 07.17.2012  
#36, 37 Splinted crown

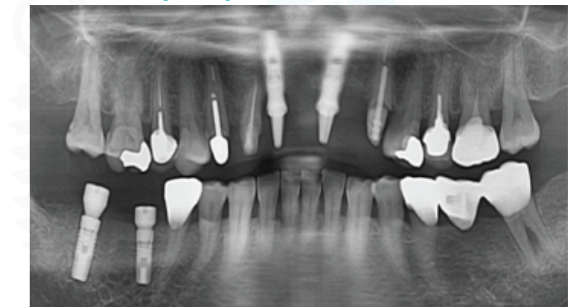
#### C. Pre-post differences of operation

- #11, 21 Lateral bone augmentation were maintained in functional loading of implant prosthesis.  
#47, 37 socket bone graft was maintained in functional loading of implant.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 5 months, 19 months and 35 month after loading shows 0 mm marginal bone loss in 6 implants.

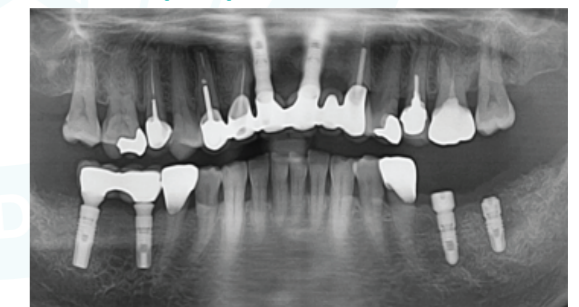
#### 1. Pre-operation



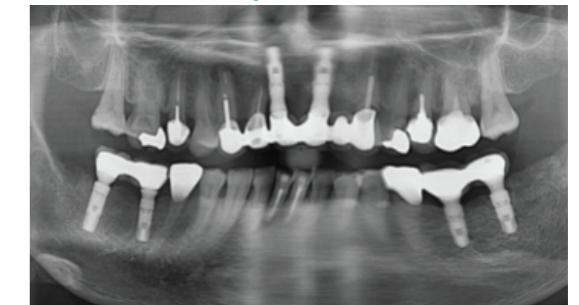
#### 2. #11, 21 Implant placement with lateral bone augmentation #46, 47 Implant placement (12.21.2010)



#### 3. #36, 67 implant placement (04.11.2011)



#### 4. 35months follow up check



## Clinical Case 34

### Clinical Case 34 \_ Patient info

Gender	F	
Age	56	
Date of surgery (MM.DD.YY)	06.21.2011	
Defect site	7 6	4 5 6
	7 6	5 6 7

#### A. Diagnosis and treatment plan

- #16, 17, 35, 36, 38 Periodontitis
- #24, 25, 26, 27, 36, 46, 47 Edentulous site
- #16, 17, 35, 36, 38 Extraction
- #16, 17, 35, 36, Socket bone graft with immediate implant placement
- #24, 25, 26, 27, 36, 46, 47 Implant placement

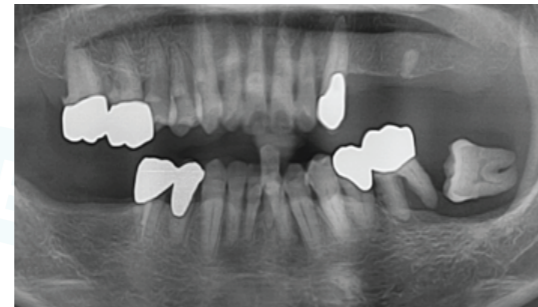
#### B. Surgery

- 06.21.2011
  - #16, 17, 35, 36, 38 Extraction
  - #16, 17, 35, 36 Socket bone graft with immediate implant placement
  - #24, 25, 26 soft bone : 5 Ncm
  - #37, 46, 47 Implant placement
- 02.04.2012
  - Retrial of implant placement of #24, 25, 26
  - #16, 17 PFM splinted crown
  - #35, 36, 37 PFM splinted crown
  - #46, 47 PFM splinted crown
- 06.16.2012
  - #24, 25, 26 PFM Splinted crown

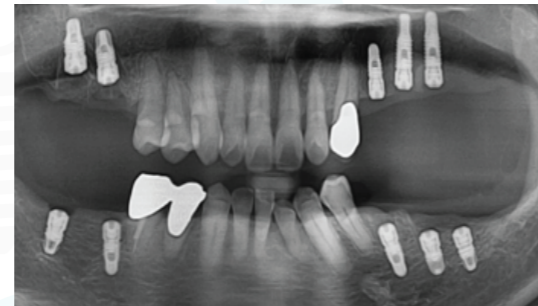
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants except to # 26 failure before functional loading.
- The follow-up check panoramic X-ray of 4 months, 22 months and 40 months after loading shows 0 mm marginal bone loss in 10 implants.

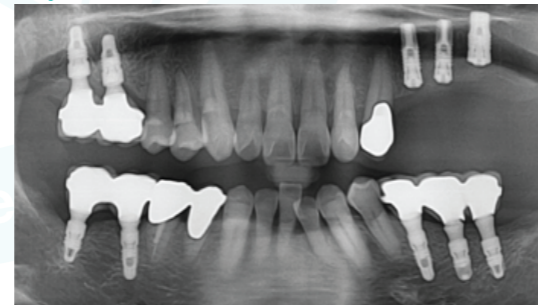
#### 1. Pre-operation



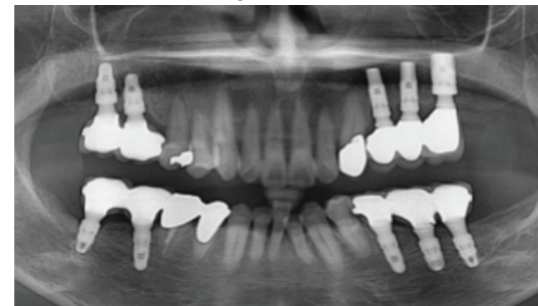
#### 2. #16, 17, 35, 36 Socket bone graft with implant placement #37, 46, 47 Implant placement (06.21.2011)



#### 3. splinted crown (02.04.2012)



#### 4. 40months follow up check



## Clinical Case 35

### Clinical Case 35 \_ Patient info

Gender	M	
Age	67	
Date of surgery (MM.DD.YY)	11.04.2011	
Defect site	7 6 5 4 3 2 1	1 2 6 7
		5 6 7

#### A. Diagnosis and treatment plan

- #14, 13, 27 Extraction and socket bone graft, Staged implant placement
- #17, 16, Sinus bone graft, Staged implant placement
- #12, 11, 21, 22 Lateral bone graft and Simultaneous implant placement
- #35, 37 Implant placement

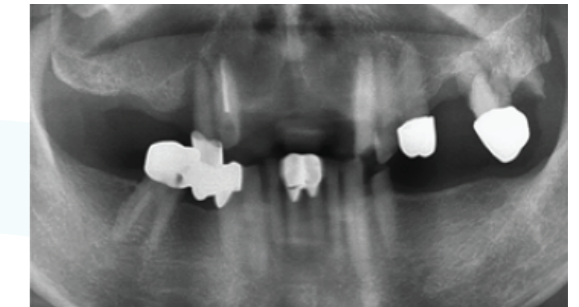
#### B. Surgery

- 03.15.2011
  - #14, 13, 27 Extraction and socket bone graft
  - #15, 12, 11, 21, 22, 35, 37 Implant placement
- 09.08.2011
  - 6 months healing period
  - #17, 16, 14 implant placement
  - #12, 21, 22, 35, 37 Abutment connection
- 03.29.2012
  - #17-22 Bridge restoration
  - #35-36 Bridge restoration
- 03.29.2012
  - #17-22 Bridge restoration
  - #35-36 Bridge restoration

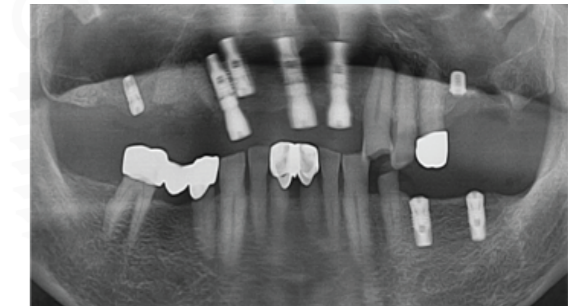
#### C. Pre-post differences of operation

- #14, 13, 27 socket and both sides of sinus bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 4 months and 25 months after loading shows 0 mm marginal bone loss in 10 implants.

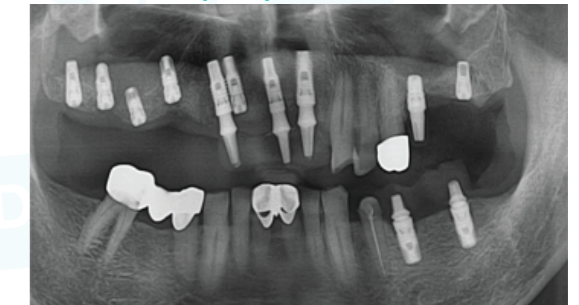
#### 1. Pre-operation



#### 2. #14, 13, 27 socket bone graft #15, 12, 11, 21, 22, 35, 37 Implant placement (03.15.2011)



#### 3. #17, 16, 14 implant placement (09.08.2011)



#### 4. 25months follow up check



## Clinical Case 36

### Clinical Case 36 \_ Patient info

Gender	M
Age	76
Date of surgery (MM.DD.YY)	06.15.2010
Defect site	3 2 1   1 2 6 7

#### A. Diagnosis and treatment plan

#43, 42, 41, 31, 32, 36, periodontitis  
 #37 edentulous ridge  
 #37 implant placement  
 #43, 42, 41, 31, 32, 36, extraction and implant placement and immediate loading

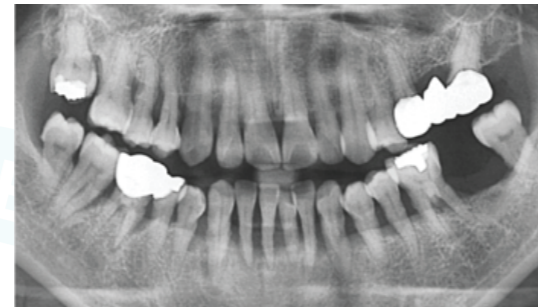
#### B. Surgery

1. 06.15.2010  
 #43, 42, 41, 31, 32, 36, Extraction and implant placement with immediate loading  
 #37 implant placement  
 2. 09.19.2010  
 #37 Abutment connection  
 3. 10.07.2010  
 #43, 42, 41, 31, 32 Splinted crown  
 #36, 37 Splinted crown

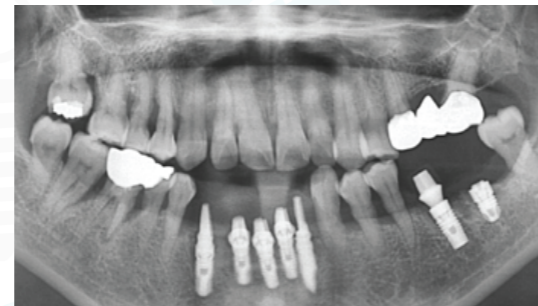
#### C. Pre-post differences of operation

1. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.  
 2. The follow-up check panoramic X-ray of 3 months, 4 months and 42 months after loading shows 0 mm marginal bone loss in 6 implants.

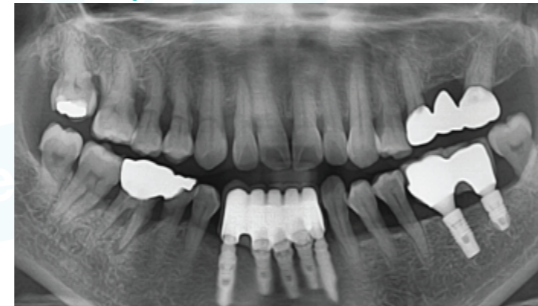
#### 1. Pre-operation



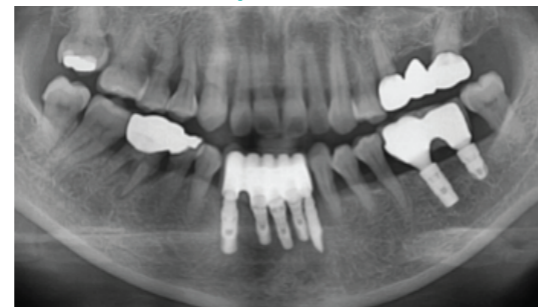
#### 2. #43, 42, 41, 31, 32, 36, 37 implant placement (06.15.2010)



#### 3. #43, 42, 41, 31, 32 Splinted crown #36, 37 Splinted crown (10.07.2010)



#### 4. 42months follow up check



## Clinical Case 37

### Clinical Case 37 \_ Patient info

Gender	M
Age	55
Date of surgery (MM.DD.YY)	03.04.2010
Defect site	6 7   7

#### A. Diagnosis and treatment plan

#26, 27 edentulous site  
 #37, 38 periodontitis  
 #26, 27 Implant placement  
 #37 Extraction and socket bone graft with staged implant placement

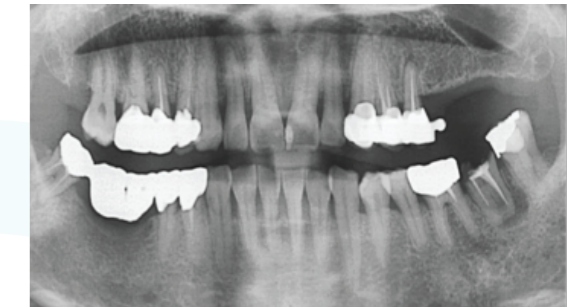
#### B. Surgery

1. 03.04.2010  
 #26, 27 Implant placement  
 #37 Extraction and socket bone graft  
 2. 07.08.2010  
 #37 staged implant placement  
 3. 10.26.2010  
 #26, 27, 37 healing abutment connection  
 4. 07.05.2011  
 #26, 27 splinted crown  
 #37 crown

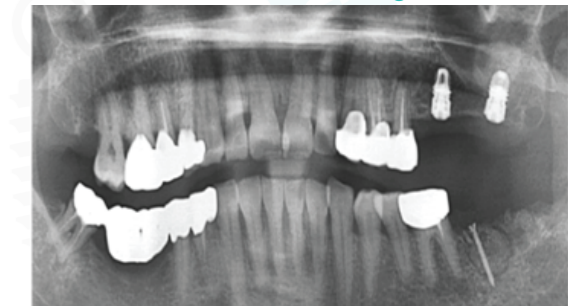
#### C. Pre-post differences of operation

1. Socket bone graft were maintained in functional loading of implant prosthesis.  
 2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.  
 3. The follow-up check panoramic X-ray of 39 months after loading shows 0.4 mm marginal bone loss in 3 implants.

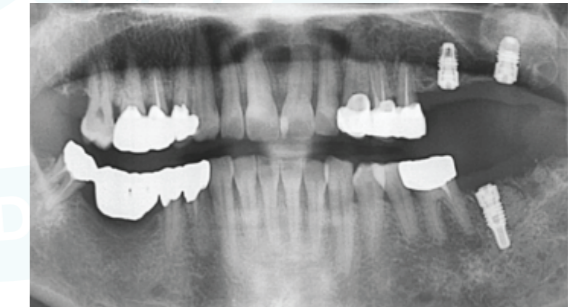
#### 1. Pre-operation



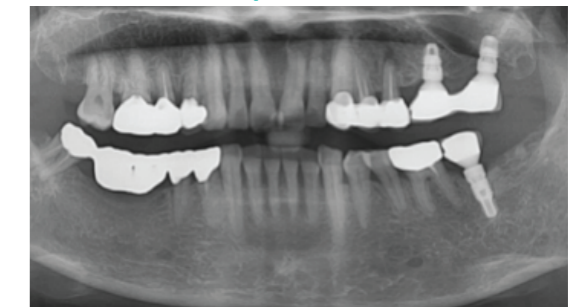
#### 2. #26, 27 Implant placement #37 Extraction and socket bone graft (03.04.2010)



#### 3. #37 staged implant placement (07.08.2010)



#### 4. 39months follow up check



## Clinical Case 38

### Clinical Case 38 \_ Patient info

Gender	M
Age	39
Date of surgery (MM.DD.YY)	10.12.2010
Defect site	6

#### A. Diagnosis and treatment plan

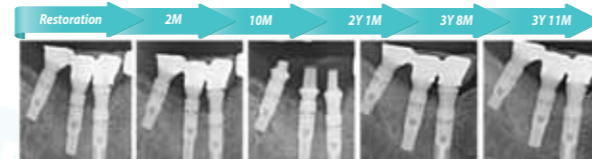
#46 edentulous site  
 #17, 16, 14, 26, 41, 43, 46, 47 Periodontitis  
 #17, 16, 14, 26, 41, 43, 46, 47 Extraction and socket bone graft with immediate implant placement  
 #46 implant placement

#### B. Surgery

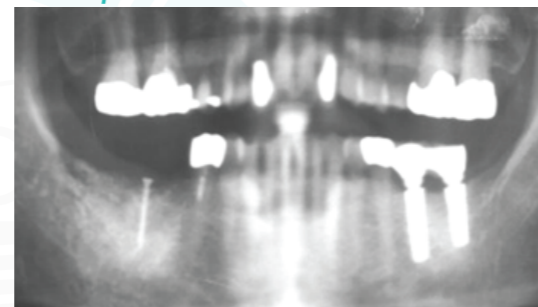
1.10.12.2010  
 #17, 16, 14, 26, 41, 46, 47 Extraction and socket bone graft with immediate implant placement  
 2. 05.30. 2011  
 #17, 16 splinted crown  
 #14, 41 crown  
 #46, 47 splinted crown  
 3.10.17.2011  
 #26 crown  
 #33(not included) extraction and socket bone graft with immediate implant placement

#### C. Pre-post differences of operation

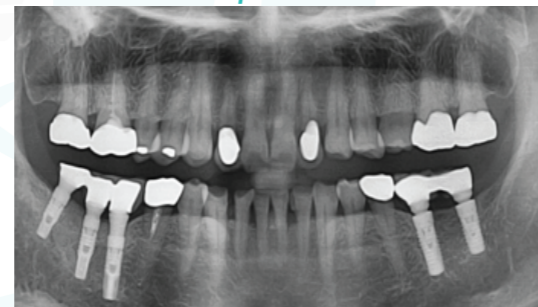
1. Socket bone graft site were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 6 months, 12 mounts, 17 months and 23 months after loading shows 0 mm marginal bone loss in 6 implants.



#### 1. Pre-operation



#### 2. 60months follow up check



## Clinical Case 39

### Clinical Case 39 \_ Patient info

Gender	M
Age	67
Date of surgery (MM.DD.YY)	11.04.2011
Defect site	6 5 4   4   6 7

#### A. Diagnosis and treatment plan

#24 Socket bone graft with Simultaneous implant placement  
 #37 Sinus bone graft with crystal approach, Simultaneous implant placement  
 #17, 16, 14, 36 implant placement

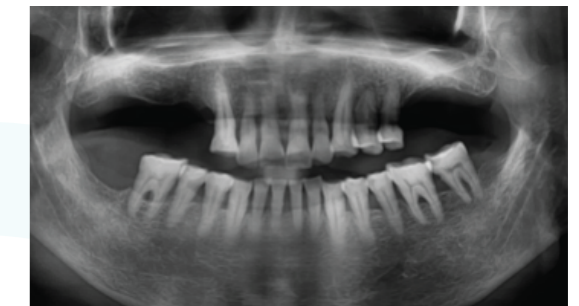
#### B. Surgery

1. 04.14. 2011  
 #24 Socket bone graft with Simultaneous implant placement  
 #27 Sinus bone graft with crystal approach, Simultaneous implant placement  
 #17, 16, 14, 26 implant placement  
 2. 09.04.2011  
 5 months healing period  
 #16, 15, 14 Abutment connection  
 #26 Abutment connection  
 #24 Abutment connection  
 #27 Healing Abutment connection  
 3. 05.21.2012  
 1 year healing period  
 #26, 27 Abutment connection

#### C. Pre-post differences of operation

1. #24 socket bone graft and #27 sinus bone graft were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 6 months and 12 months after loading shows 0 mm marginal bone loss in 6 implants.

#### 1. Pre-operation



#### 2. #24 Socket bone graft with implant placement #27 Sinus bone graft with implant placement #17, 16, 14, 26 implant placement (04.14. 2011)



#### 3. 6months follow up check



#### 4. 12months follow up check



## Clinical Case 40

### Clinical Case 40 \_ Patient info

Gender	M
Age	47
Date of surgery (MM.DD.YY)	09.06.2010
Defect site	7

#### A. Diagnosis and treatment plan

- #35, 36, 37 edentulous site
- #26, 27 periodontitis
- #26, 27 Extraction and socket bone graft with immediate implant placement
- #37, 36, 35 implant placement

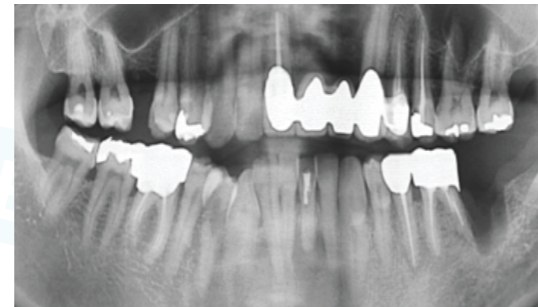
#### B. Surgery

- 1. 09.06.2010
- #37 socket bone graft with immediate implant placement
- 2. 02.11.2011
- #37 Crown restoration

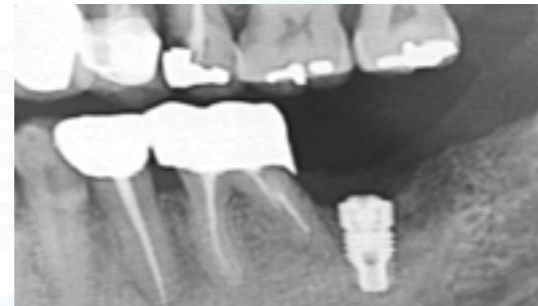
#### C. Pre-post differences of operation

- 1. Socket bone graft were maintained in functional loading of implant prosthesis.
- 2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- 3. The follow-up check panoramic X-ray of 3 months, 5 months, 14 months, 19 months and 26 months and 34 months after loading shows 0 mm marginal bone loss in 1 implant.

#### 1. Pre-operation



#### 2. #37 socket bone graft with implant placement (09.06.2010)



#### 3. #37 Crown restoration (02.11.2011)



#### 4. 34months follow up check



## Clinical Case 41

### Clinical Case 41 \_ Patient info

Gender	M
Age	65
Date of surgery (MM.DD.YY)	08.09.2009
Defect site	6

#### A. Diagnosis and treatment plan

- #26 Periodical lesion
- #26 Extraction, socket and sinus bone graft with immediate implant placement

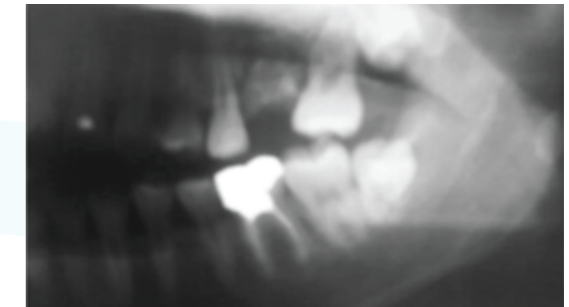
#### B. Surgery

- 1. 02.16.2009
- #26 Extraction, socket and sinus bone graft with immediate implant placement
- 2. 09.26.2009
- PFM crown

#### C. Pre-post differences of operation

- 1. Socket and sinus bone graft were maintained in functional loading of implant prosthesis.
- 2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- 3. The follow-up check panoramic X-ray of 14 months, 29 months and 45 months after loading shows 0 mm marginal bone loss in 1 implant.

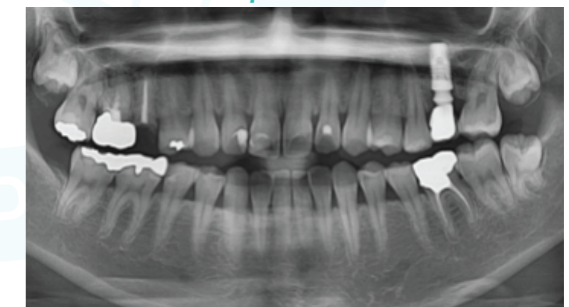
#### 1. Pre-operation



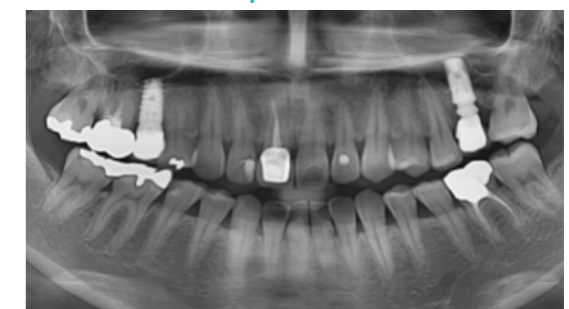
#### 2. #26 socket and sinus bone graft with implant placement (02.16.2009)



#### 3. 29months follow up check



#### 4. 45months follow up check



## Clinical Case 42

### Clinical Case 42 \_ Patient info

Gender	M	
Age	63	
Date of surgery (MM.DD.YY)	10.23.2010	
Defect site	6 5 4	4 5 6

#### A. Diagnosis and treatment plan

- #17, 16, 15, 14, 14, 15, 17 edentulous ridge
- #26 periodontitis
- #16, 15, 14 implant placement
- #24, 25, Implant placement and socket bone graft
- #26 extraction and immediate implant placement with socket bone graft

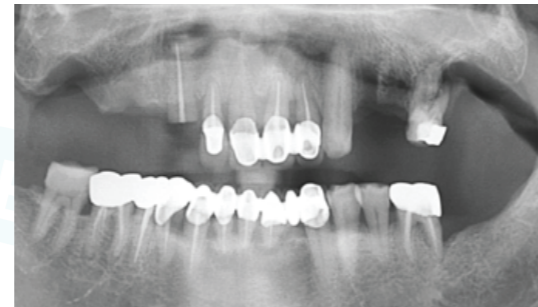
#### B. Surgery

- 10.23.2010
  - #16, 15, 14 implant placement
  - #24, 25, Implant placement and socket bone graft
  - #26 extraction and immediate implant placement with socket bone graft
- 12.10.2011
  - #16, 15, 14 splinted crown
  - #24, 25, 26 splinted crown

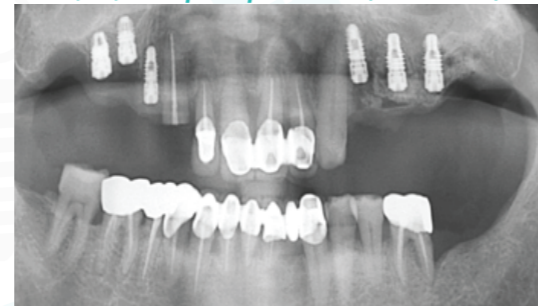
#### C. Pre-post differences of operation

- Socket bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 6 months, 20 months after loading shows 0 mm marginal bone loss in 6 implants.

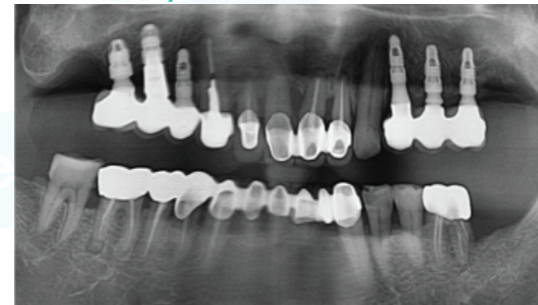
#### 1. Pre-operation



#### 2. #24, 25, 26 Implant placement and socket bone graft #16, 15, 14 implant placement (10.23.2010)



#### 3. #16, 15, 14 splinted crown #24, 25, 26 splinted crown(12.10.2011)



#### 4. 20months follow up check



## Clinical Case 43

### Clinical Case 43 \_ Patient info

Gender	M	
Age	56	
Date of surgery (MM.DD.YY)	05.21.2010	
Defect site	6	4

#### A. Diagnosis and treatment plan

- #16, 34, 37, 47 edentulous site
- #16, 34, 37, 47 Implant placement and immediate loading

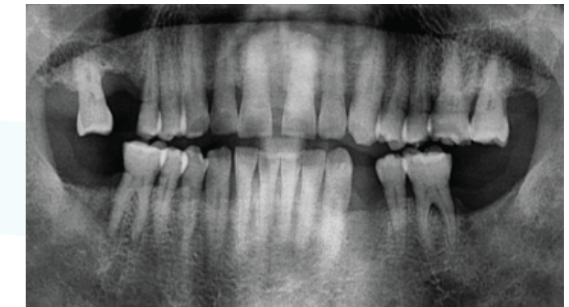
#### B. Surgery

- 05.21.2010
  - #16, 34, 37, 47 Implant placement and immediate loading
  - #16 Sinus bone graft
- 11.04.2010
  - #16, 34 Crown restoration

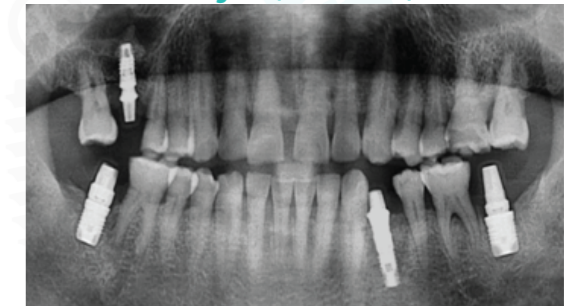
#### C. Pre-post differences of operation

- Sinus bone graft were maintained in functional loading of implant prosthesis.
- There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 6 months, 16 months and 40 months after loading shows 0 mm marginal bone loss in 2 implants.

#### 1. Pre-operation



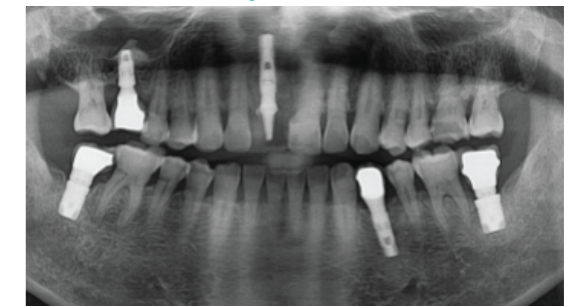
#### 2. #16, 34, 37, 47 Implant placement #16 Sinus bone graft (05.21.2010)



#### 3. #16, 34 Crown restoration (11.04.2010)



#### 4. 40months follow up check



## Clinical Case 44

### Clinical Case 44 \_ Patient info

Gender	M	
Age	57	
Date of surgery (MM.DD.YY)	03.25.2010	
Defect site	6 5 4 7 6	4 5 6

#### A. Diagnosis and treatment plan

- #15, 14, 24, 25, 26, 32, 31, 46, 47 edentulous site
- #18, 17, 42 periodontitis
- #42 Extraction and socket graft with immediate implant placement
- #32, 31 implant placement and immediate loading with #42
- #17, 16, 15, 14 Sinus bone graft and Simultaneous implant placement
- #25, 26, 27 Sinus bone graft and staged implant placement
- #46, 47 Implant placement and immediate loading

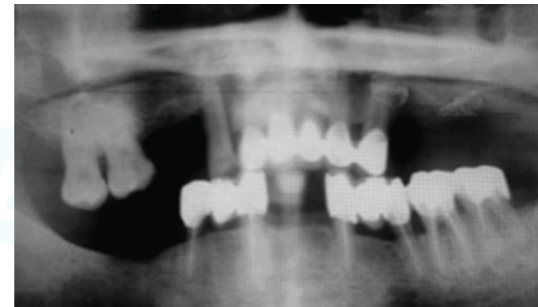
#### B. Surgery

1. 03.25.2010
  - #42 Extraction and socket bone graft
  - #32, 31, 42 resin splinted crown
  - #14, 16, 17 implant placement with sinus bone graft with window approach
  - #24, 25, 27 Implant placement
  - #46, 47 Implant placement and immediate loading and resin splinted crown
2. 08.17.2010
  - #46, 47 splinted crown
  - #32, 31, 42 splinted crown
3. 02.14.2011
  - #14, 16, 17 splinted crown
  - #24, 25, 27 Bridge restoration due to #25 implant Failure

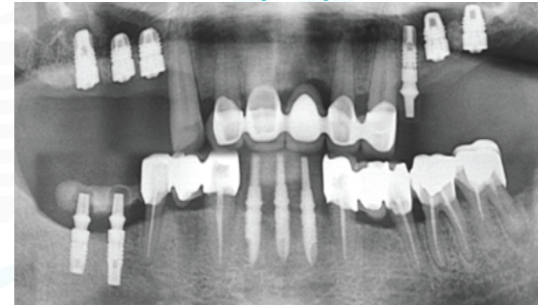
#### C. Pre-post differences of operation

1. Socket bone graft and sinus graft site were maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 1, 2, 3 and 48 months after loading shows 0 mm marginal bone loss in 8 implants.

#### 1. Pre-operation



#### 2. #42 Extraction and socket bone graft #14, 16, 17 implant placement with sinus bone graft #24, 25, 27, 46, 47 Implant placement (03.25.2010)



#### 3. #16, 34 Crown restoration (11.04.2010)



#### 4. 48months follow up check



## Clinical Case 45

### Clinical Case 45 \_ Patient info

Gender	F	
Age	76	
Date of surgery (MM.DD.YY)	10.11.2010	
Defect site		6

#### A. Diagnosis and treatment plan

- #36 Extraction socket
- #26 implant placement

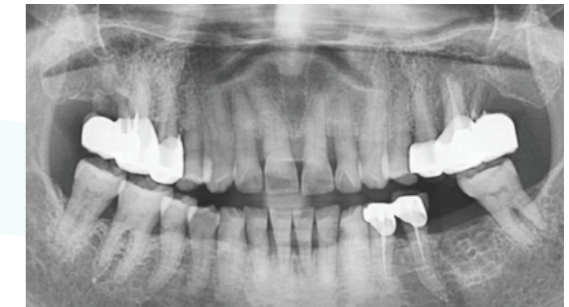
#### B. Surgery

1. 10.15.2010
  - #36 implant placement with socket bone graft and healing abutment connection
2. 01.19.2011
  - #36 crown

#### C. Pre-post differences of operation

1. Socket bone graft site was maintained in functional loading of implant prosthesis.
2. There was no pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
3. The follow-up check panoramic X-ray of 13 months after loading shows 0 mm marginal bone loss in 1 implants.

#### 1. Pre-operation



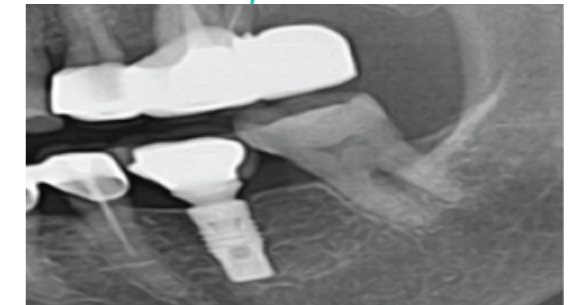
#### 2. #36 implant placement with socket bone graft (10.15.2010)



#### 3. #36 crown (01.19.2011)



#### 4. 40months follow up check



## Clinical Case 46

### Clinical Case 46 \_ Patient info

Gender	M	
Age	55	
Date of surgery (MM.DD.YY)	01.29.2010	
Defect site	6	4

#### A. Diagnosis and treatment plan

- #16, 24 edentulous site
- #16, 24 sinus bone graft, implant placement and immediate loading

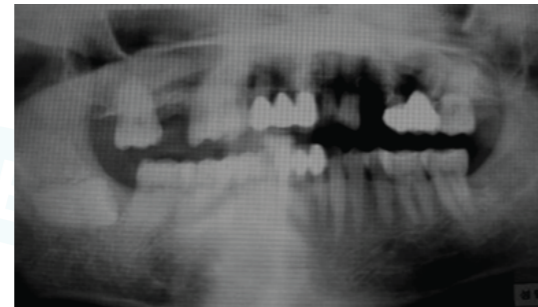
#### B. Surgery

- 01.29.2010  
#16, 24 Sinus bone graft and implant placement with immediate loading
- 02.21.2010  
#16, 24 Crown restoration

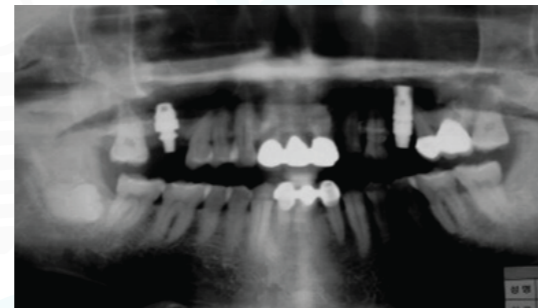
#### C. Pre-post differences of operation

- Sinus bone graft site was maintained in functional loading of implant prosthesis.
- There were not pain, mobility of implants, swelling of gingiva and failure of osseointegration of implants.
- The follow-up check panoramic X-ray of 1 year, 2 year and 37 months after loading shows 0 mm marginal bone loss in 2 implants.

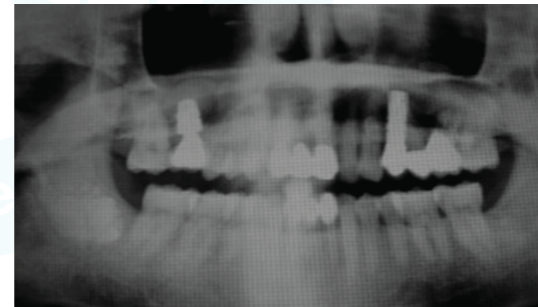
#### 1. Pre-operation



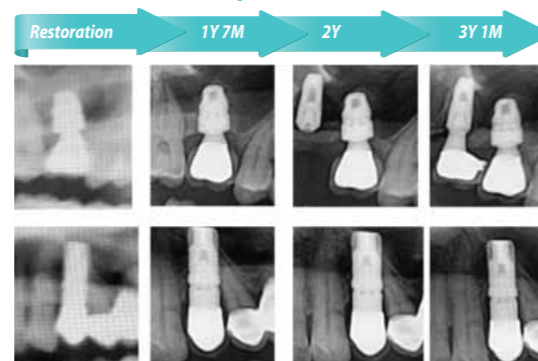
#### 2. #16, 24 Sinus bone graft and implant placement (01.29.2010)



#### 3. #16, 24 Crown restoration (02.21.2010)



#### 4. 40months follow up check



**Thank you!**  
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