॥ स्वास्थ्यरक्षणाय विज्ञानानुसंधानाय च समर्पितम् ॥

YOGITA DENTAL COLLEGE AND HOSPITAL, KHED

Centre Code: **2107**

Examination : IIIrd Internal Theory Examination

Class : 4th year BDS.

Subject : periodontology

Section : B + C Paper : --- Serial No : ---

Language of Answer : English. Sub. Code : ---

Date : 12 10 2023 Roll No : 14 (in Figure)

Roll No : one four. (in Words)

PLEDGE : I hereby declare that I have gone through the "Special Instruction to Candidate" printed on page number two and my roll no., PRN, Subject printed / written on page no. one of the Answer Booklet. I also know that no supplement will be provided to me.

Signature of the **CANDIDATE**

Signature of the **SUPERVISOR**

Section A - 13/20

Name of Examination : --- Class : ---

Subject : --- Section : A + B + C

Subject Code : --- Paper : ---

QUE	A	B	C	D	E	F	G	H	I	J	Total
1											
2	1	2	1½	2	1	½	NA	2	½	2	12.
3	2½	0									07½
4											
5											
6											

Marks allotted by Examiner

Name : ---

Signature : ---

TOTAL → 19.5

seen no complaints

Page No.
Date / /

Section - A

MCQ's

1) b ✓
2) d ✓
3) b ✓
4) b ✗
5) d ✓
6) a ✓
7) b ✗
8) d ✗
9) C ✗
10) b ✓
11) b ✗
12) a ✗
13) C ✓
14) a ✓
15) b ✓
16) a ✗
17) C ✓
18) a ✓
19) d ✓
20) d ✓

13/20

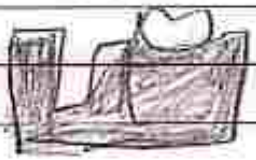
Q:

① Types of infrabony osseous defects.

→ Types

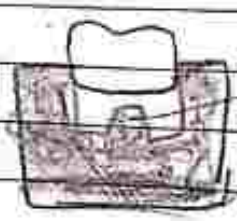
1) one wall defect -

2) Two wall defect.



3) Three wall defect.

(a) Fenestration defect (b) furcation defect.



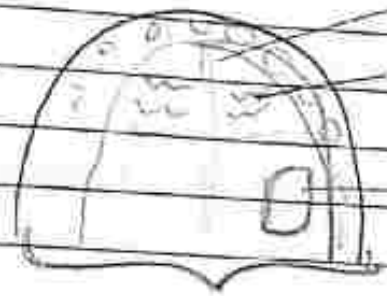
1

Page No.
Date

(5) periodontal pack and their Uses.

→ * periodontal pack:- periodontal pack is the pack of which avoids (or) prevents the infection and gives trauma to the Donar site. avoid

* Diagram

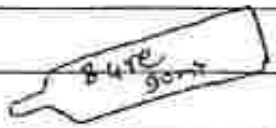


* Types of periodontal pack
  - Coe pack
  - perio pack
  - perio care.

1) zinc oxide eugenol pack.

2) zinc oxide Non-eugenol pack
   Ex. Coe-pack

* Availability



Coe pack.

Base Catalyst.

Functions of periodontal pack:

1) To avoids the infection.

2) To avoids the Trauma at the time of Mastication.

3) Good Bleeding control.

4) Hemostasis achieved.

5) To increase the Healing Rate (↑)

(N)

Date: / /

(c) Free gingival graft in root coverage procedure:-

→ Free gingival graft are defined as partial thickness when they consist of epithelium & varying amount of lamina propria (or) full thickness flap. when all the lamina propria but not granular tissue..

* Indication

1) ~~Gingival~~

1) Single tooth gingival Recession.

2) If patient having sensitivity.

* procedure:-

(1) give the vertical incision.

Grade-II gingival recession

↓

(2)  suturing.

(3)

Scanned with OKEN Scanner

(D) write phase of treatment plan:-

* Definition - It is the blue print for case Managment.

* Treatment plan

* Emergency phase.

Phase -I (Etiopic phase)

Phase -II Surgical phase.

phase III Restorative phase

phase IV Maintenance phase.

— x —

● Sequency of periodontal Therapy

Emergency phase

↓

Etiopathic phase

↓

Maintainance phase

(IV) Surgical phase → Restorative phase

(E) Steps in Perio

→ steps

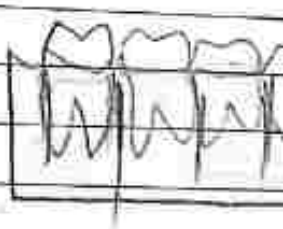
1) vertical groo

2) Radicular

3) flattening

4) Gradualiz

1) Vertical grooving



vertical

2) Radicular Blend

(E) Steps in Resective Osseous Surgery:

Steps

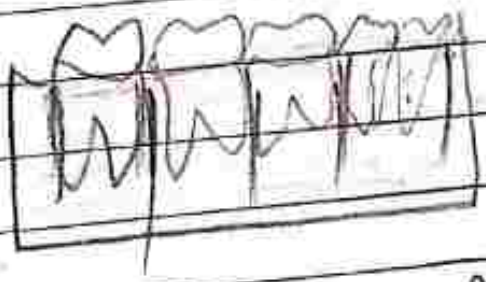
1) Vertical grooving.

2) Radicular Blending.

3) flattening of interproximal Bone.

4) Gradualizing the marginal Bone.

1) Vertical grooving:



vertical grooving of the Bone.

2) Radicular Blending:

(F) 'Bone Graft' in periodontal Regeneration.

→ * Types of Graft:

1) Auto graft.
2) Allograft.
3) Xenograft.
~~4) Alloplast.~~

M/U

Techniques of Bone graft:

(H) Enumerate in detail steps of modified widman flap.

→

Step (1) Local anesthesia.

↓

Step (2) check subjective & objective sign.

↓

Step (3) Give alveolar Bare incision just below the CJ to 1mm of the free gingiva. # 15 no. Blade

↓

Step (4) Give palatal incision. # 15 no. Blade.

↓

Step (5) Remove Remaining soft tissue.

↓

Step (6) Elevate flap with the help of periosteal elevator.

↓

Step (7). Remove the debris with the help of curretage.

↓

(N) Step (8) Root planing

↓

Step (9) Suturing.

↓

Step (10) Recall after 7 days for Suture removal

1) management of hypertensive patient during gynecological therapy

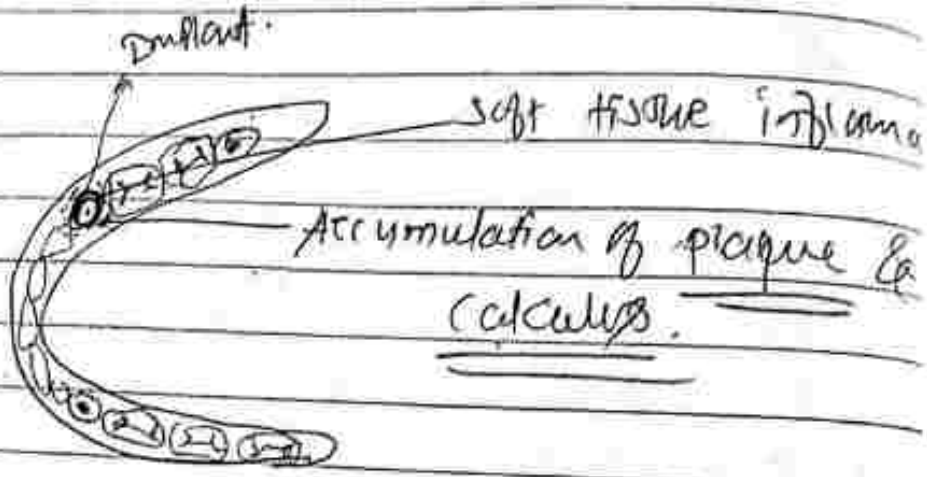
1) detail case history will be taken.

2) Do a test of Blood sugar test

3) /4

(1) peri - Implantitis :-

→ peri implantitis is defined as the inflamation of the soft tissue at the periphery of the implant.



[Mandibular Ridge]
Implant.

* Clinical features :-
  - Supra Calculus present at the periphery of the implant.
  - Soft tissue swelling.
  - Gingivitis.
  - Bleeding on probing.

* Treatment :-
  - Scaling
  - To advised use of dental floss.
  - Oral hygiene maintain
  - Chlorhexidine mouth wash

(2)

3) Define furcation and furcation involvement. Discuss classification and management of furcation defects.

→ * Furcation - furcation is an area of complex anatomic morphology. They may be difficult or impossible to detect by routine periodontal instrumentation.

* Furcation involvement:
The term of furcation involvement refers to the invasion of the bifurcation & trifurcation of multirooted teeth by periodontal disease.

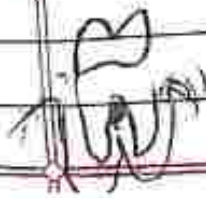
* Classification

1) Based on anatomical (Glickman's Classification)

Grade - I - Incipient Bone loss.
- Soft tissue damage / involvement.
- No interdental bone loss
- No Radiographic radiolucency.

No bone loss.

Grade - II - Slight Bone loss.
- Cul-de sac Appearance.
- Slight interdental Bone.
- No Radiographic changes.
- Soft tissue involvement.



Grade - III - Graducated probe i.e Nabers probe partially inserted into the furcation area.

- Loss of interdental Bone.
- Radiolurency seen in furcation

Grade - IV - Graduated probe (Nabers probe full goes inside the furcation area.

- Through and Through Bone loss.

- Clinically seen Bone loss

2) Based on fineness & Tarno.

Sub group - A - 1/3rd Bone loss i.e. Bone loss.

Sub group - B - ~~Middle third~~ 2/3rd Bone loss.

- more than 3-4mm bone loss

Sub group - C - Apical 3rd Bone.

- more the 7 mm bone loss

Horizontal Bone loss furcation involvement.

4) Vertical Bone loss involvement.

* Mangent of furcation involvement:-

① Traditional treatment.

- Grade - I = Scaling &
  - Root planing.
  - ROOT Curretage.

- Grade - II - Osteoplasty.
  - odontoplasty.
  - osteotomy

- Grade - III & IV
  - ROOT Resection.
  - Hemisection
  - Bicuspidization
  - Tunnel preparation.

② Reconstructive treatment.

Grade - I - Scaling & Root planing & curretage.

Grade - II & III - Autogenous Bone graft
- Allograft.
- Alloplast.
- citric acid root cdly.
- Guided tissue regeneration (GTR)
- Combination therapy

(A) Define prognosis. Discuss the factors influencing the prognosis of individual tooth.

* prognosis :- Defination

-It is prediction of probable course, duration, outcome of a disease based on g.k. of pathways of disease & presence of RISK factors.

* factors influencing prognosis of individual :-

1) over all clinical feature :-
   - patient age
   - Disease
   - Severity of the disease.
   - Biofilm control.

2) systemic disease & Environmental factors

   - Smoking
   - systemic Disease like Diabetes mellitus.
   - Genetic factors.

* Individual prognosis :-

* Local factors

- Biofilm
- Calculus
- Subgingival restoration

* Anatomic factors

- Mobility of tooth.
- Carious tooth.
- Enamel pearl
- Root Resorption
- Short Root
- Tapered Root.

* Therapeutic prognosis :-

- Prosthetic Restoration
- Prosthetic Abutment selection.

Date / /

* Classification of prognosis:-

1) Overall prognosis

2) Individual prognosis

3) Therapeutic prognosis

* Types of prognosis:-

1) Good prognosis = Adequate attachment of gingiva.

2) Fair prognosis = 25% Attachment loss
= Grade I furcation involvement

3) Poor prognosis = 50% Attachment loss.
= Grade - I & Grade - II
furcation involvement.

4) Questionable prognosis
= 50% Attachment loss more than.

5) Hopeless prognosis - Inadequate.

॥ स्वास्थ्यरक्षणाय विज्ञानानुसंधानाय च समर्पितम् ॥

YOGITA DENTAL COLLEGE AND HOSPITAL, KHED

Centre Code: 2107

Examination : 3rd Internal examination

Class : 4th BDS

Subject : Periodontology

Section : B + C

Paper : ---

Serial No. : ---

Language of Answer : English

Sub. Code : ---

Date : 12 | 10 | 2023

Roll No. : 05 (in Figure)

Roll No. : Five (in Words)

PLEDGE : I hereby declare that I have gone through the "Special Instruction to Candidate" printed on page number two and my roll no., PRN, Subject printed / written on page no. one of the Answer Booklet. I also know that no supplement will be provided to me.

Signature of the **CANDIDATE**

Signature of the **SUPERVISOR**

Section A = 07/20

Name of Examination : _____ Class : _____

Subject : _____ Section : A+B+C

Subject Code : --- Paper : ---

QUE	A	B	C	D	E	F	G	H	I	J	Total
1											
2	NA	NA	NA	00	1	1	1/2	1 1/2	1	1	06
3	3 1/2	05									05 1/2
4											
5											
6											

Marks allotted by Examiner

Name : _____

Signature : _____

TOTAL → 14.5

Seen Discussed

Page No.:
Date: / /

MCQ

07/20

1. (a) ✗ b
2. (a) ✗ d
3. (d) ✗ b
4. (a) ✓
5. (d) ✓
6. (d) ✗ a
7. (a) ✗ d
8. (b) ✗ a
9. (c) ✗ b
10. (b) ✓
11. (c) ✗ a
12. (d) ✗ c
13. (b) ✗ c
14. (d) ✗ a
15. (b) ✓
16. (a) ✗ c
17. (c) ✓
18. (a) ✓
19. (c) ✗ d
20. (d) ✓

Q.3.

- Definition

Prognosis

Prognosis defined as the prediction of probable course or duration and outcome of disease based on knowledge of the pathogenesis of disease present at risk of or the disease.

Factors influencing prognosis :-

local factors

1. plaque
2. sub gingival restoration
3. anatomic factors
4. short tapered roots
5. enamel projection
6. enamel pearl
7. Bifurcation.
8. Root Concavity

9. Developmental grave

10. root proximity

11. furcation involvement

12. tooth mobility

- prosthetic restored factors

1. Anatomic Factors

2. Caries

3. non-vital tooth

4. Root Resorption

- Overall clinical Factors

1. pt age

2. disease severity

3. plaque control

4. pt compliance

- Systemic and environmental factors
  - Smoking
  - Systemic disease
  - genetic factor
  - stress

- Individual progress

- Tooth morphology :-
  - Anatomic factors may predispose the disease and affect progress

  - clinician consider root proximity location and anatomy of tooth

  - presence of enamel projection and developmental grooves

- Tooth mobility :-

  - mobility result from loss of alveolar Bone

The stabilization of tooth mobility through beneficial impact on overall progression

- gingival inflammation

- prognosis is much better in patient with greater degree of inflammation

- Bone loss

decrease Bone loss patient have greater degree of disease

- location of periodontal pocket

easier procedures under periodontal pocket depth

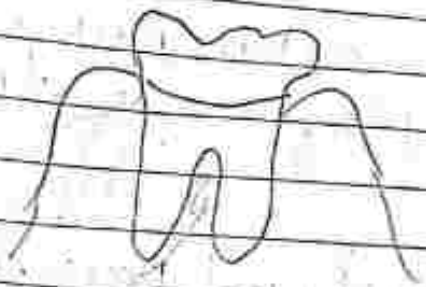
B.

Definition:

Furcation:-

Furcation is the anatomical area of root in which and area of root.

Furcation is the anatomical area of multirooted tooth where the root diverges.



Furcation in multirooted teeth

etiology.

The extent of attachment loss required to produce furcation defect is variable and related to local anatomical factors related to tooth configuration

presence of sufficient attached keratinized gingival tissue and adequate vestibular depth with gingival margin of furcation area

Bone :-

shape in the exposed furcation area of horizontal component that determine the grade

vertical component appears as vertical or loss ~~of~~ towards the one's root.

tooth related

root trunk length :-

It is the portion of root between the junction and separation of root

- when root trunk is short furcation will involved early

- when root trunk is long furcation involved is late

Classification :-

* Glickman's Classification of Furcation :-

Class - I - Incipient or early lesion

Class - II - Cul-de-sac lesion

Class - III - Through and through furcation

Class - IV - Inter-radicular Bone is completely loss

* According to goldman and cohen

Degree - I - Incipient lesion

Degree - II - Cul-de-sac.

Degree - III - Through and Through furcation

* Hamp and Cavanor classification :-

degree - I - Horizontal Bone loss less than 3 mm.

degree - II - Horizontal Bone loss more than 3mm

degree - III - through and through Bone loss

* Tarnow and Fletcher classification :-

subgroup A - vertical destruction of Bone upto 1/3rd length of inter proximal tooth

subgroup B - Vertical destruction of Bone upto 2/3rd length of inter proximal tooth

subgroup C - vertical destruction beyond the apical third.

III 3rd Int

Management:

proper clinical and Radiographic exam of furcation defect along with local anatomical defect

- management of grade I Furcation

- non surgical therapy
- conservative periodontal therapy
- oral hygiene, Scaling and root planning are effective
- any overhanging margin of restoration, Facial groove

- Recontouring and Replacement

- surgical therapy
- If there is no destruction of tissue it is not necessary to enter furcation during treatment
- If Fecial groove is prominent odontoplasty done to reduced

management o
non surgical
↓
shallow hori
Inadequate
without sig
vertical bo

Isolated
II Furc
odontop

- manage
- non s

- surg
-
-
-
-

• Management of grade II

non surgical	surgical
↓	↓
- shallow horizontal involvement without significant vertical bone loss	- osseous graft - GTR

- Isolate deep grade II furcation odontoplasty.

• Management of grade III

- non surgical is ineffective

- surgical
  - surgical exposure of entire furcation
  - Bicuspidization
  - root resection

Date / /

management of grade IV

- non-surgical.

- non-surgical method is ineffective.
- periodontal and deep vertical component may not improve.

2

i) peri-Imp

peri-Implan
& peri-
soft tis
surrou

CIP:-

Bleeding

Horizontal

suppurativ

depressi

Crater for

(1)

J.) peri-Implantitis :

peri-Implantitis is destructive progression of peri-Implant Bone with including soft tissues and inflammation or Suppuration.

Clf:

Bleeding on Probing

Horizontal bone loss

Suppuration

Presence of Pocket or Bone

Crater formation

(1)

I.

→

- pt with BP less than 180/110 can recieve any dental treatment (but is pt with BP should monitered during treatment after 1 hour if BP > 180/100

- pt with uncontrolled BP 180/110 or more can not be treated

- chair position avoid rapid position change

- Avoid use of Retraction cord and topical hemostatic agent containing epinephrine, instead use tetrahydrozoline or oxymetazoline

(1)

4.

steps of

- advantage
When
it is

- It is
Bony
Bony

- Advan

1. Root
inci

2 pro

3 he

- Steps

1) In

2)
zem

3) all
tis

11.

Steps of modified widman flap

- advantage of this flap technique when compared to other necessary it is less discomfort

- It is the reestablishment of bony contour with angular bony defect

- Advantages :-

1. Root cleaning with direct incision
2. protection of tissue repair
3. healing by primary intension

- Steps :-

1) Interdental incision is made
2) triangle wedge of tissue is removed with curette
3) all tissue tag and granulation tissue removed. 1½

G.

1) metronidazole is a particular effective as antimicrobial because of its selective efficacy against obligate anaerobes

2) Both the systemic and local application as effective against periodontal pathogens.

3) Local application is most preferable

4) In recent metronidazole has been incorporated as collagen Sponges, dialysis tubing etc

F.

Bone graft

1) Autograft
2) Allograft
3) Xenograft

1) Bone graft material evaluated Based on osteogenic, osteoinductive, osteoconductive agent

2) Osteogenesis:- formation or development of new Bone

2) Osteoinductive: chemical procedure in which Bone graft induced

3) Osteoconductive:- physical method by which matrix of graft

E. steps
Reverse osseous surgery

1) Gradually marginal Bone

In which margin of Bone were made and Removing the granulation tissue

2) vertical grooving

In vertical grooving grooves made through the Bone

3) Flapping & Interproximal Bone
Through and Flapping of Bone.

4) Radicular Blending of the Bleeding of Radicular Bone followed by

5) suturing replacement of the flap.

D. phases of

phase I

phase I

phase

pho

D. phases of treatment plan

phase I emergency phase and systemic stress and energy needed.

phase II Response phase any response in the phase of treatment

phase III surgical phase and surgical treatment done in this phase

phase IV maintenance phase and prevention

VOOPT A DENTAL COLLEGE AND HOSPITAL, KHUN

Course Code: 2107

Examination: Internal examination

Class: 4th year oddbaks

Subject: Periodontology

Paper:

Language of Answer: English

Date: 1 2 / 0 2 / 2 3

Roll No: 06

Centre:

PLEDGE: I hereby declare that I have gone through the "General Instructions to Candidates" printed on the cover page and my roll no. PBX, Subject printed written on page no. one of the answer book and I also know that no supplementary will be provided to me.

Signature of the CANDIDATE

Signature of the SUPERVISOR

Section A 15/20

Name of Examination:

Class:

Subject:

Section: A, B, C, D, E

Subject Code:

Paper:

QUE	A	B	C	D	E	F	G	H	I	J	Total
1											
2	1/2	1/2	NA	1 1/2	2	1/4	1/4	2	1 1/2	NA	08 1/2
3	2 1/2 - 04										04
4											
5											
6											

Marks allotted by Examiner

Name:

TOTAL → 15

Signature

Page No:
Date: / /

07/20

MCQs

Section (A)

1) a ✗ b.
2) d ✓
3) a ✗ b.
4) a ✓
5) b ✗ d
6) b ✗ a
7) a ✗ d
8) b ✗ a
9) c ✗ b
10) b ✓
11) d ✗ a
12) d ✗ c
13) b ✗ c
14) a ✓
15) b ✓
16) c ✓
17) a ✗ c
18) c ✗ a
19) b ✗ d
20) d ✓

Page No:
Date: / /

Q2

A) Types of infra-bony osseous defects -

→

- Bone resorption seen on one side of the tooth socket.
- Bone resorption seen on both side of tooth socket
- Vertical bone loss.
- Horizontal bone loss.

½

B) Periodontal packs

- The Periodontal packs are used after any surgical procedure done.
- These pack are placed on the site of surgical procedure.
- They help in healing of the site of procedure.
- They protect site of incision of procedure from any trauma.

1/2

D) Phases of treatment plan-

→

- During any treatment a sequence is done according to the severity need the treatments are done.

- like most needed to less needed step treatment.

- Emergency phase -
In this if there is any infection which is painful it is 1st treated.

- Surgical phase
In this phase any surgical procedure like extraction, and all are treated.
- In this surgical procedures like root coverage, root resection, gingivectomy, gingivoplast, etc are done.

Non-surgical.
- Oral prophylaxis
- In this phase oral prophylaxis is done.
- Scaling and root planning is done in this stage.

Specific protection -
In this any specific protection are given done as per the patients requirement.

Rehabilitation - In this if any tooth is missing it is replaced by a prosthesis.

Recall - follow up should be given to the patient.

1½

Page No.
Date: / /

6) steps of Resective osseous surgery.

→ When there is any osseous defect resective osseous surg. are done.

There are the steps in are Resective osseous surgery.

1) Vertical grooving
2) Radicular blending
3) Gradualising marginal bone
4) Flattening of interproximal bone.

1) Vertical Grooving.
- In this the
- At the site of procedure is cleared.
- Then L.A is given on the site of procedure.
- Incision is made to expose the bone.
- Gingival retracting
- Tissue are retracted to expose the bone.

1) Vertical Groo
- In After the
with the
like diamond
bone is done

- Vertical groo
the bone w

2)
2) Radicular
- In After
done ma

- The blend
on the ro
the bone.

Radicul

3) Gradualis
In this
cut with
bur.

1) Vertical Grooving -
- In After the bone is exposed with the help of rotating instrument like diamond bur cutting of bone is done.

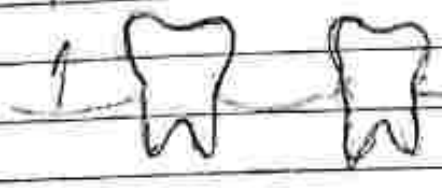
- Vertical grooves are placed on the bone with the help of bur.

vertical grooves.

2)
2) Radicular blending -
- In After vertical grooving is done radicully the bone is cutted.

- The blending of bone is done on the radicular surface of the bone.

Radicular blending



3) Gradualising marginal bone.
In this the marginal bone is cut with the help of diamond bur.

Page No.:
Date: / /

4) Flattening of interproximal bone.

- The interproximal bone is then made flat with the bur.

- The bone surface should be uniform.

- The bone surface should not be irregular in nature.

After this the flap is closed and sutures are place.

- Periodontal pack is placed on the surgical site.

Q)

Page No.
Date: / /

B) 'Bone Graft' in Periodontal Regeneration,

- Bone Graft are used in periodontal surgery where are are osseous defects.

- When there is bone loss bone grafts are placed at that site.

- Types of Bone grafts

Q) Metronidazole

→ This Metronidazole is an host modulatory agent.

- Host modulatory agents are used to improve patient's oral health.

- These agents help in solving the problems of the patient.

- Metronidazole is one of there agent which improves the health of patient.

1/2

4) Modified Widman flap

Steps in Modified Widman flap

1) Intrasulcular bevel incision
- 1st the line of incision is designed
- Then the LA is given to the patient.

2) Internal bevel incision.
- This is the 1st incision given.
- It is 1mm away from the marginal gingiva.
- It is given till the alveolar bone crest.

Gingivectomy incision
Then the gingivae is separated

2 (Oblique) incision.
- This incision is given after the 1st one.

- It is given at site of crevicular

After that inter dental incision is given.

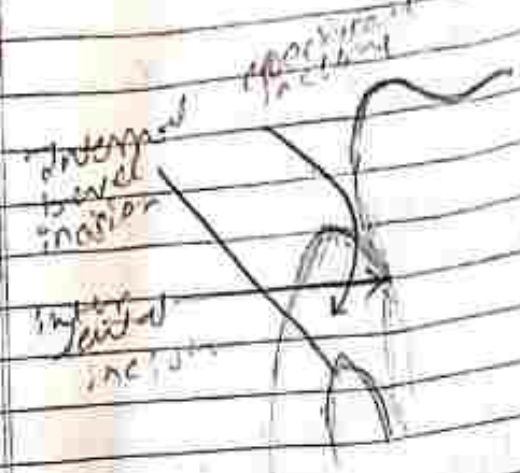
- This incision is same the 3rd incision in the modified Widman flap. and the final incision.

- This is given in gingival dental space.

Roll no-

Scanned with OKEN Scanner

Roll no- 4



- After this incision tissue tag or any granulation tissues are removed.
- After the procedure sutures are placed after flap is placed again on its position.
- Then the periodontal pack is placed on the site of surgical procedure.
- This is Modified Widman flap.

2

=> Management of hypertension during Periodontal therapy.

- Get the blood pressure should be taken prior to the patient.

- If the patient is known hypertensive then medication should be done from the patient

- If patient is aged above then and he/she do not know if they have any hypertension then before the checked. Blood pressure should

- If the Blood pressure is not in normal limit then patient should asked but to get relax a bit which may lower the pressure,

- some times due to fear of dentist the blood pressure may get high. due to anxiety.

- If pressure blood pressure not coming down after relaxation then dentist should consult the general physician.

- During any periodontal therapy Blood pressure should be measure.

- Hypertension may causes excessive bleeding during the surgical procedure.

- If bleeding is not stopping by gauze pack firmly at the bleeding site.

Question 1

A) Prognosis -

Prognosis means to predicting the health of the tooth or disease

Factors influencing Prognosis of individual tooth.

- Age of the patient is one of the biggest different factors influencing the prognosis of individual tooth. If the age of the patient is more the prognosis is most unfavourable as the healing is affected in older people.

- Sex - Any male patient has habits which can lead to the poor prognosis of the disease.

- Chronic illness Patient with chronic illness has poor prognosis.

- Systemic diseases - patient with systemic disease can have poor prognosis as it may some disease lead to oral diseases.

- Drugs - some drugs induced gingival disease which can influence the prognosis of the tooth.

Rollno-4

- Habit - if patient has habit of tobacco, smoking, gutka it will also affect prognosis of the tooth.

- Gingival diseases- It can also affect the prognosis of the tooth

- Bone resorption-
- Bone defect- In Bone resorption is seen it may lead to mobility of the tooth. If the mobility grade increases the prognosis of the tooth decreases.

- furcation involvement -
when there is involvement of furcation area and the grade of furcation involvement is more then there is no surgical treatment to correct it so that the prognosis of that tooth becomes poor.

- Periodontal diseases -
- when there is altered periodontal area distruction of PDL is more it leads to gingival recession & bone resorption which leads to poor progonosis of the tooth.

- formation of secondary infec
which can also affect pr
- Not proper treatment is do
in the past can also lead
poor prognosis of the tooth.

Ranking
Scores of prognosis
Excellent
Good
Fair
Poor.

- Trauma to the tooth orofacial tis
can also affect the prognosis
of individual tooth. Some times du
to the trauma to tooth, it results
in mobility and when pert is gre
III mobility it cannot be restore
in the oral cavity for longer period
of time.

- Infected Tooth.

Page No.
Date / /

(3) furcation

furcation- furcation is the area of the tooth where the roots are seperated into two are three roots.

furcation involvement-
Furcation involvement is seen when the area of furcation can be seen in the oral cavity that is called as furcation involvement.

classification-

Grade 1-
In grade 1 only upper most part of furcation is seen. There is no bone resorption seen in the grade 1 furcation involvement.

This is the starting of the furcation involvement.

Grade I -
In Grade II furcation involvement the recession is more furcation area is visible
Bone destruction can be seen in this stage.

Grade III -
In Grade III furcation involvement furcation area is more visible
Bone distruction is seen more in Grade III furcation involvement.
One side of the bone is distructed in this stage.
Through and Through is not seen in this stage.

Grade IV -
In Grade IV furcation involvement Through and Through furcation involvement can be seen.
There is bone resorption on labial buccal as well as on lingual surface of the bone.

Return -
Mangement of
Grade I -
In Grade I
Most are
non-surgical -
In non surgica
planning is do
Patient is ad
oral health.
oral hyg
to
oral hyg
surgical -
In surgi
procedure
involve
Grade II
Non-su
In
in
Pa
or
or
o

Rollno-4

Mangement of furcation defect.

Grade I -

- In Grade I furcation involvement treatment are.

Non-surgical -

- In non surgical scaling and root planning is done.
- Patient is advised to improve their oral health.
- oral hygine instructions are given to the patient to improve the oral hygine.

surgical -

- No surgery. There is no need for surgical procedure in Grade I furcation involvement.

Grade II -

Non-surgical -

- In non surgical scaling & root planning is done.
- Patients advised to improve their oral health.
- oral hygiene instructions are given to the patient.

Surgical-
- Root coverage procedures are done at the recession area.
- Graft grafts are placed at the site of involvement.
- Bone grafts are placed at the site of furcation involvement.

Grade III-
Non surgical-
- Scaling and root planning is done in Grade III furcation involvement.
- Instruction on oral hygiene is given.
- Patients overall oral health should be improved.

Surgical-
- Root coverage procedures are done at the furcation involved area.
- Grafts are placed at furcation area to cover it.
- Bone grafts can be also placed at the bone resorption site.

Grade IV -

- In Grade IV furcation involvement the prognosis is very poor so only maintenance of the tooth can be done.
- There is no surgical procedure indicated indicated in Grade IV furcation involvement. as it is through & through
- We can not place any graft at that place as it is through and through bone bone bone bone.

Anushka Nanankar (3rd yr)

CHEMICAL PLAQUE BIOFILM CONTROL WITH ORAL RINSES

Introduction

- Plaque control is the key to prevention of periodontal diseases
- Chemical plaque control should be regarded as an adjunct to mechanical plaque control
- Mouthwash, mouthrinse, oral rinse which is held in the mouth passively or swirled around the mouth by contraction of the perioral muscles and/or movement of head, and gargled

Ideal properties

1) Substantivity
Ability of agent to bind to tissue surfaces and be released over time
2) Penetrability
Ability to penetrate deeply into the biofilm
3) Selectivity
Ability to affect specific bacteria in a mixed population

Classification of chemical Plaque control agents

1) First Generation

a) Phenolic compounds
Phenol
Thymol
Triclosan
Listerine
Hexylresorcinol

b) Quaternary ammonium compounds

Cetylpridinium chloride
Benzethonium chloride

c] Antibiotics
Vancomycin
Nidda mycin
Kana mycin

d] Halogens
Iodine
Fluorides

e] Metallic ions
Zinc
Copper
Tin

f] Herbal extracts
Sanguanaria extract

g] Antiplaque enzymes
Mucinase
Mutanase
Dextranase

h] Oxidizing agent
Peroxides

2) Second Generation

a) Bisbiguanides
chlorhexidine
Hexidine

b) Bispyridines
octenidine hydrochloride

3) Third Generation
Delmopinol

Some antimicrobial agents

1) Nonprescription essential oil rinse
- one of the most extensively used and researched
- listerine

combination of phenol related essential ions, thymol and eucalyptol mixed with methanol and methyl salicylate in hydro alcoholic base
- antiinflammatory
- supresses odorigenic bacteria
- nonionized molecules → inactivation of essential enzymes at lower concentrations
→ Disruption of cell proteins at higher concentration.

2) Heavy metal ions
- Divalent metal ions possess antiplaque potential as they have ability to bind plaque components
- Hence they alter the surface charge and adherence potential of bacteria
- Displace calcium ions from pellicle and bacterial surfaces

- anuglycolytic effect
- Reduce pathogenecity by suppressing plaque acidogenecity

3) Quternary ammonium compounds
- Cationic antiseptics interact with plaque similar to that of chlorhexidine
- less effective due to the rapid clearance from oral cavity

4) Sanguinarine
- A mixture of bezophenanthridine alkaloids
- Extract of the bloodroot plant Sanguinaria canadensis
- Effective against Gram positive and Gram negative bacteria
- Interferes with bacterial cell wall synthesis

5) Hexidine
- A synthetic hexahydropyridine
- Little antiplaque effect at clinically acceptable concentrations
- Higher concentrations → increase in the frequency of desquamative lesions

6) Enzymes
- Peroxidases added to mouthrinses and dentifrices
- They ensure sufficient hydrogen peroxide to control proliferation of plaque bacteria

7) Triclosan
- Non-ionic
- Broad spectrum antimicrobial agent
- High retentivity in the oral cavity
- positive linear dose response antiplaque and antigingivitis

effect

- It has anti-inflammatory effect which has ability to inhibit cyclo-oxygenase and lipo-oxygenase thereby retarding prostaglandin and leukotriene production
- Total - 1st dentifrice sold in USA to receive ADA's seal of acceptance for reduction of plaque and gingivitis

5) Delmopinol

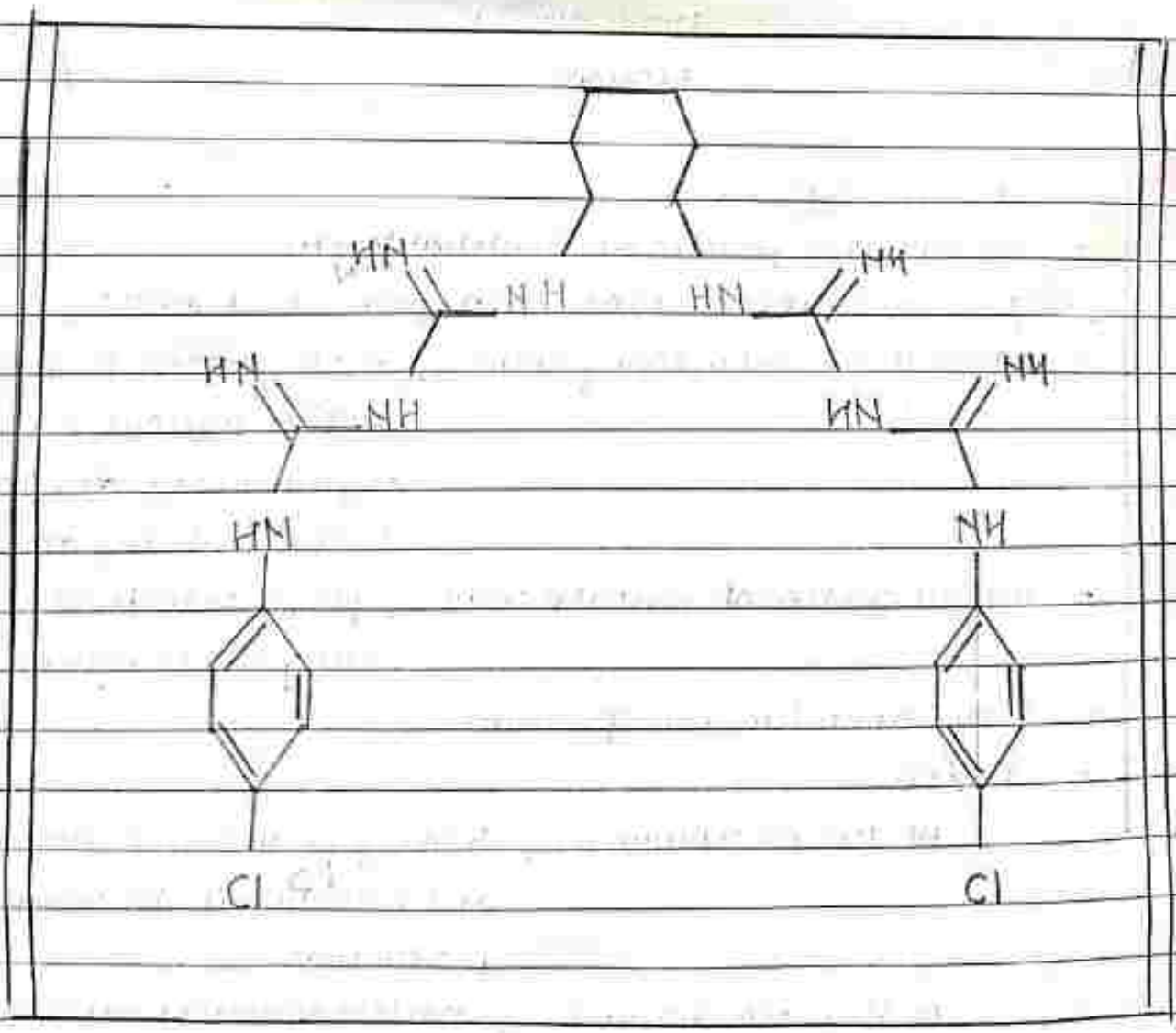
- A substituted amino-alcohol
- This disrupts bacterial matrix formation thereby interfering with bacterial attachment
- Side effects → Transient anesthesia of dorsum of tongue
  mucosal soreness
  taste disturbances
  Erosions

6) Chlorhexidine Rinse

- Shown most positive antibacterial results
- It is digluconidohexane with pronounced antiseptic properties
- Several clinical investigations → 2 daily rinses with 10ml of 0.2% aqueous solution completely inhibited development of plaque, calculus and gingivitis
- Clinical studies of several months → plaque reductions of 45-61%, Gingivitis reductions of 24-67%
- Broad antimicrobial spectrum
- Action
  At low concentration → leakage of intracellular potassium and reduction in bacterial acid production
  At High concentration → induces bacterial cell wall disruption

and coagulation of cytoplasmic constituents

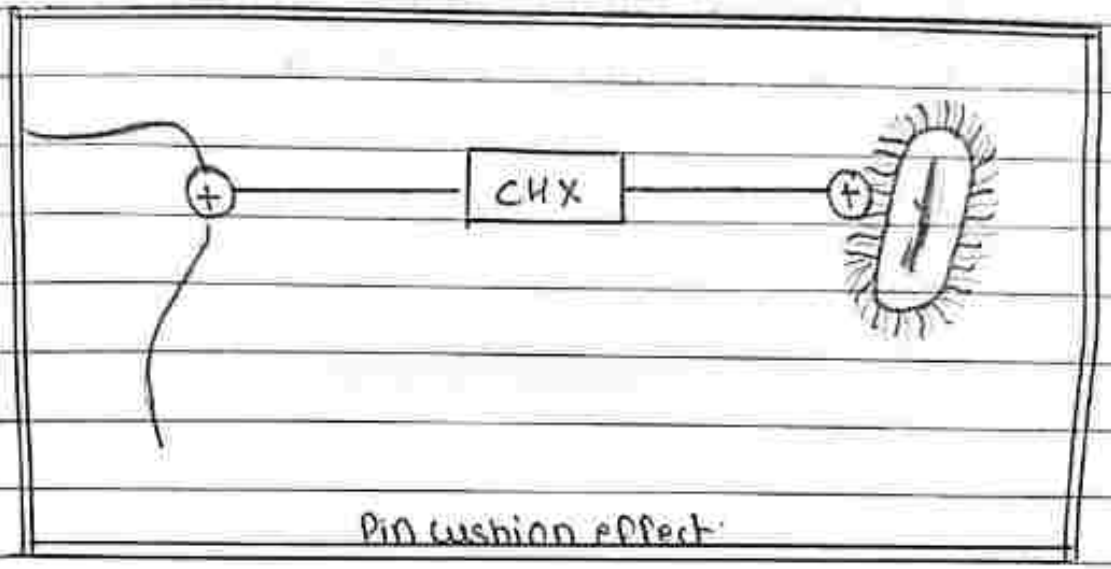
- Inhibits enzymes involved in bacterial adhesion, bacterial growth and metabolism
- 30% chlorhexidine retained in oral cavity → reservoir of slow release
- Side effects (localized reversible)
  - → Brown staining of teeth, tongue, silicate and resin restoration
  - → Transient impairment of taste perception
- Very low systemic toxicity
- No association with teratogenic alterations



Pin cushion Effect

one charged end of chlorhexidine molecule binding to the tooth surface and other remaining available to interact with bacterial membrane as microorganism approaches the tooth surface a pin cushion effect

- This explains the lack of effectiveness of other antimicrobials in terms of them lacking a large rigid molecule with two charged interactive ends



Pin cushion effect

Substantivity

- The efficacy of chlorhexidine stems from its ability to bind to oral tissues and slow release into the cavity
- This characteristic is known as substantivity, provide a continued inhibitory effect on plaque formation for 12 - 14 hours (Addy and Kalmman)
- The kinetic mechanism of chlorhexidine adsorption from mouthwashes and its slow release into the saliva have been tested with radioactively labeled chlorhexidine (Gjermo 1974, Bonesvoll, Lokken and Rolla 1974)

Use

- As an adjunt to oral hygiene and professional prophylaxis
- Chlorhexidine provides adequate plaque control following professional prophylaxis which is essential for sucessful treatment and prevention of recurrance.
- Loe and Schiott showed that rinsing with 10ml of 0.2% w/v chlorhexidine gluconate mouthwash for one minute twice daily
- It should be used ~~after~~ 30-30 minutes after brushing
- Rinse the mouthwash for about 1 minute
- Avoid food for 30 minutes after the mouthwash

* Roll No: 72
* Sub:- OMPR Assignment
* 3rd - BDS

GoodLuck | Page No.
Date 17 | 10 | 23

* X-ray Tube :-

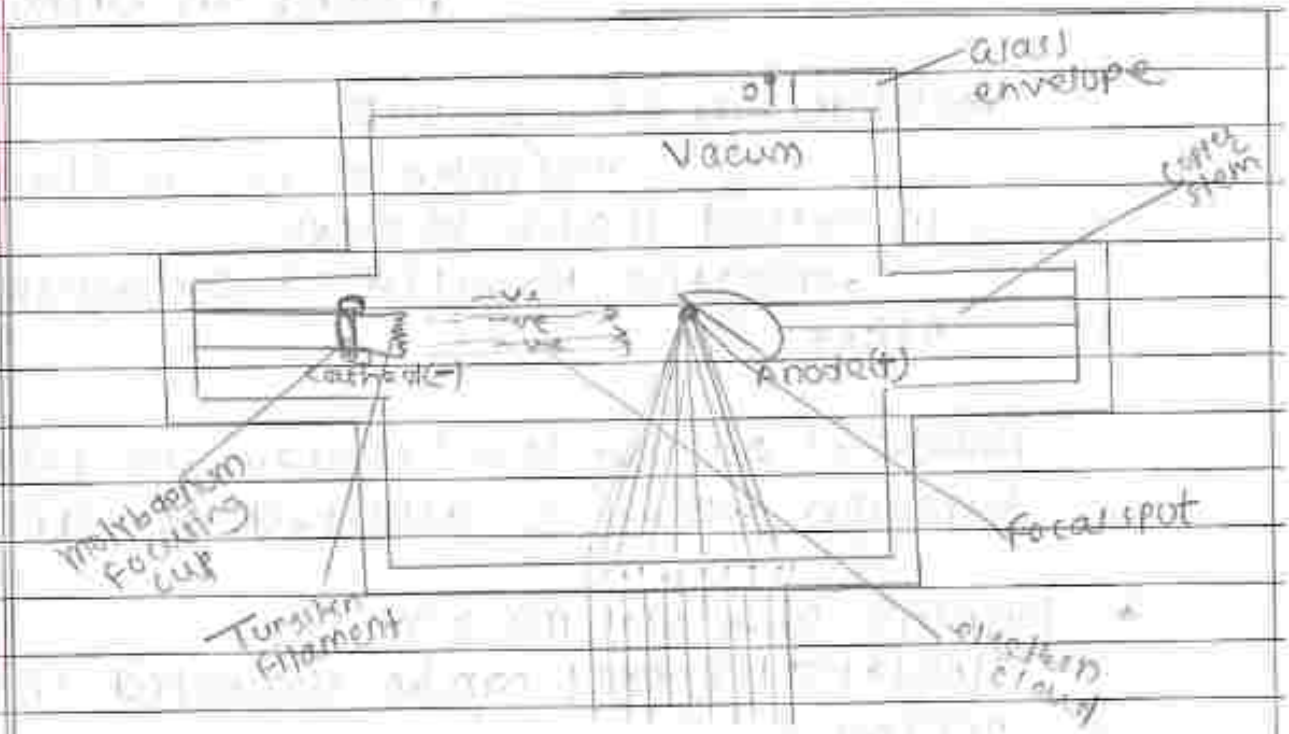


fig - X-ray Tube

* X-ray tube consist of :-

- Glass envelope
- Inside glass envelope there is vaccume
- copper stem
- molybdenum focusing cup
- Tungsten Filament
- Focal spot
- Cathode (-ve)
- Anode (+ve)

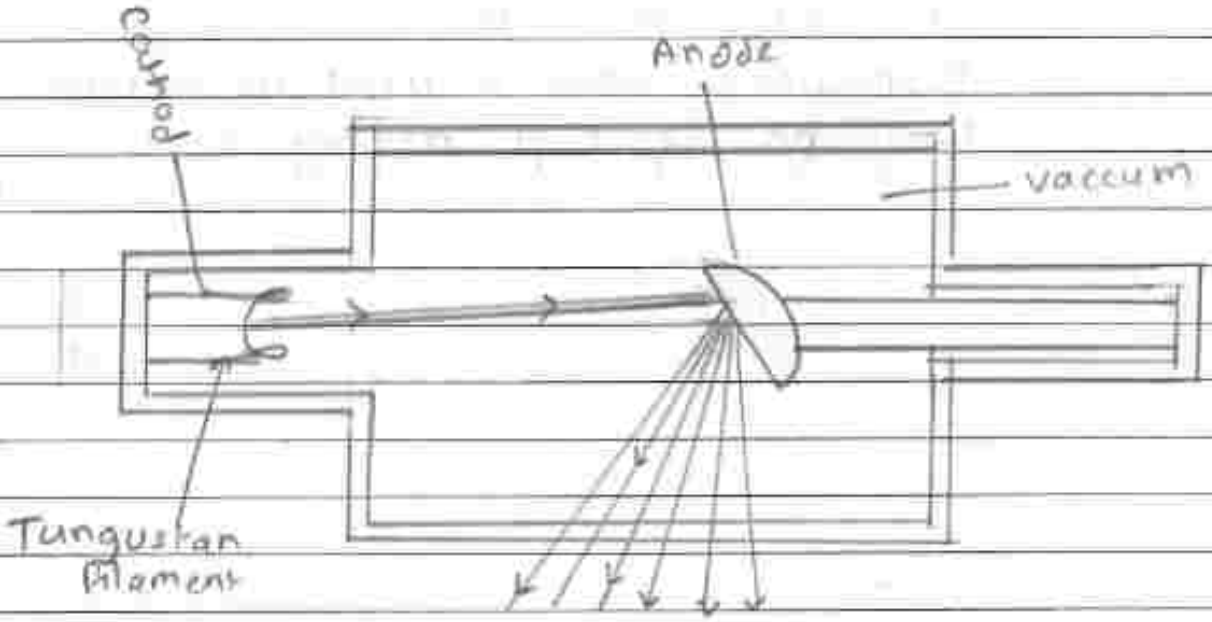
Tungsten is used because of
i) High Atomic number
ii) High melting point (3380°C)
iii) Low vapour pressure

Roll No - 19

GoodLuck | Page No.
Date / /

X-ray Tube :-

- X-ray Tube which is cylendrical in shape. Where the discharge or exit a x-ray from Tube.
- In X-ray tube there is cathod and Anode is present.
- At there the X-ray will be produced at cathod and Anode reaction.
- At electric current passes then discharge e^- on the x-ray tube.
- Tungustran ~~fibre~~ Filament is used in X-ray tube.



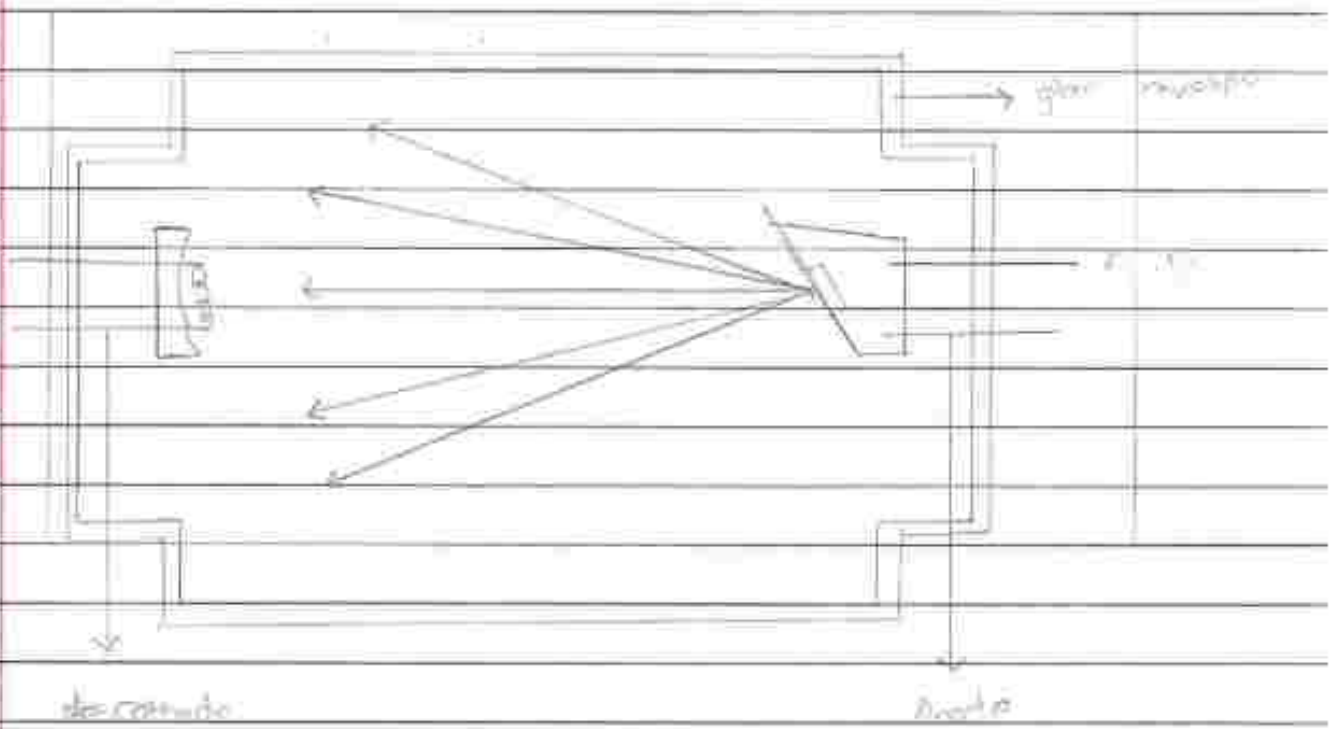
When the electric gradient is passes through the anode and cathod there is ~~Spring~~. Valence electron get mobile.
That Valence electron is at there optimal velocity in outermost shell of orbit.
And this electron is passes through the exist discharge Tube.
The & X-ray Tube linner Layer is consist of Lead.

Roll No: 56

DMDR Assignment

X-ray Tube :

- X-rays tube consists of cathode and anode.
- X-ray tube shows the function of creating x-ray photons from electric energy supplied by the x-ray energy.
- Cathod and anode assemblise the tube envelope, the rotor & the tube housing.



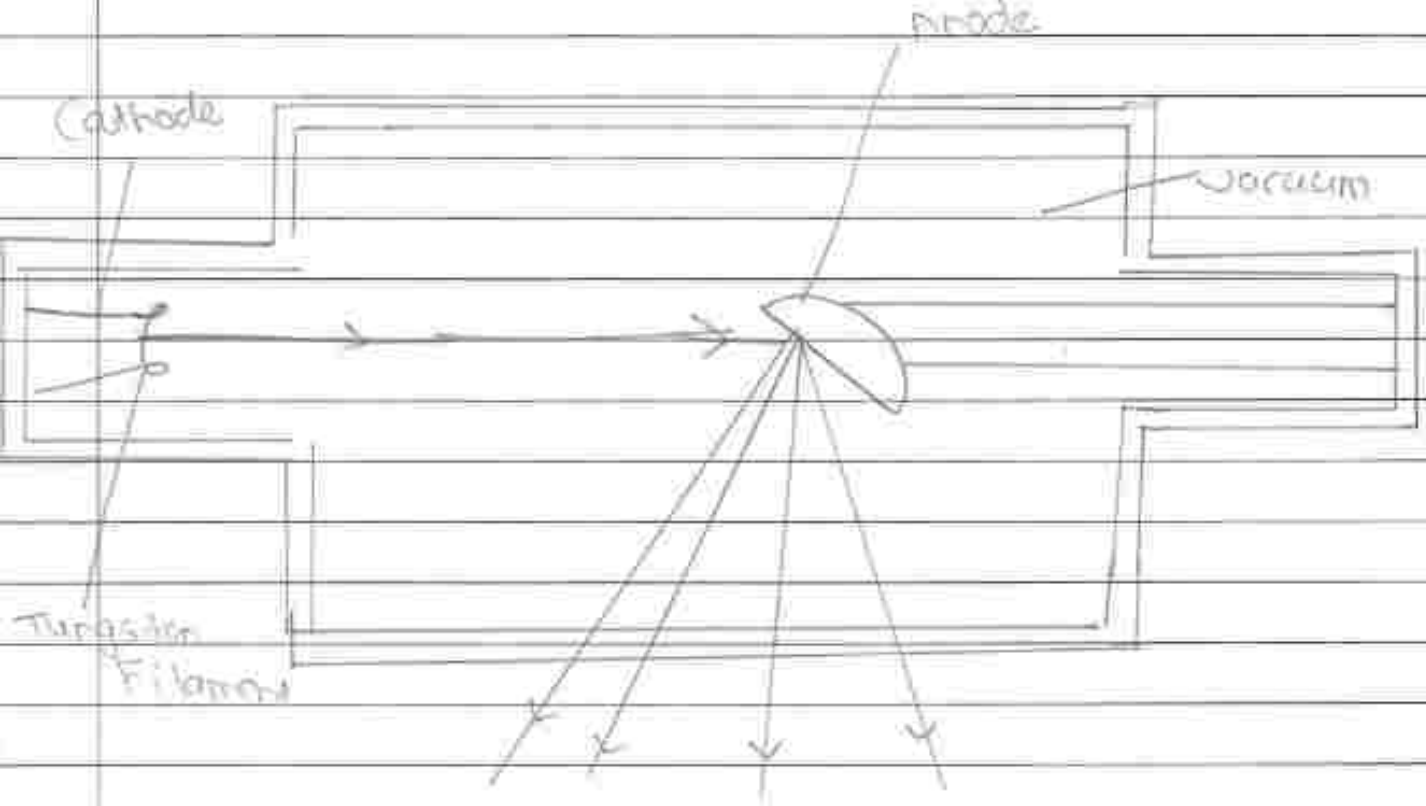
Dept. of OMDR
Roll NO. 16
odd batch

PAGE NO.:
DATE: / /

X-ray tube

- It is cylindrical tube which is cylindrical tube containing two rods cathode and anode.

In X-ray tube cathode and anode two rods present.
Cation which is positively charged ion moves towards cathode which ~~moves toward~~ is negatively charged.
Anion ~~positively charged~~ negatively charged moves toward positive anode.



17/10/23

Roll no: 26.

OMOR assignment.

8] X-ray tube.

1] An X-ray tube is a device that aids as a diagnostic tool for the purpose of investigation of a clinical condition.

2] In an X-ray tube, X-rays are concentrated on to a film to obtain an image of the concerned region on a film.

3] It comprises of anode and cathode segments which help in concentrating and directing the X-rays to the desired region.

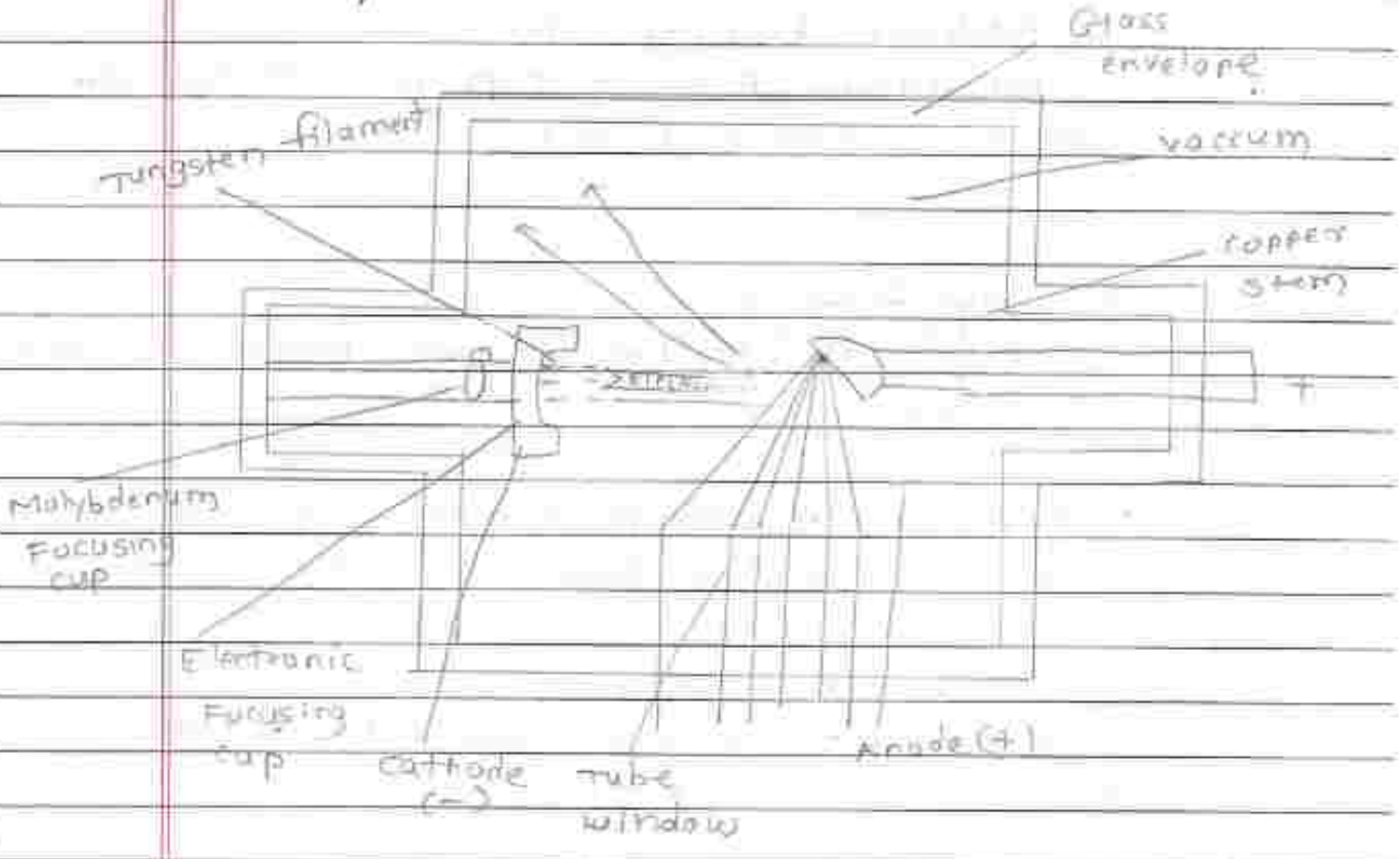
4] Tungsten is the metal of choice to be used in an X-ray tube, due to it's high melting point and ease of availability. It is lined with a molybdenum cup

Roll No. - 22
3rd BDS

GoodLuck | Page No.
Date

OMDR Assignment

X-ray Tube :



X-ray tube consists of:

- Glass envelope
- Copper stem
- Inside Glass envelope vaccum
- Tube window
- Electronic Focusing cup
- Molybdenum Focusing cup
- Tungsten filament.
- Focusing spot / Focal spot.
- Anode (+) / Cathode (-)

Tungsten used in x-ray tube because of:

1. High Atomic number.
2. High Melting point.
3. Low vapours presure

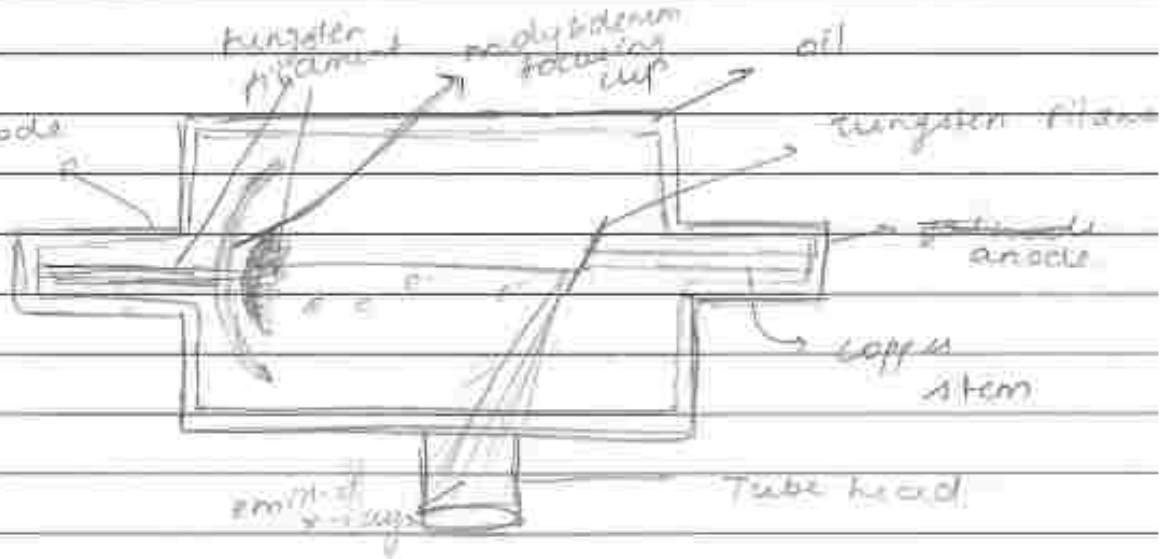
Roll No - 71

17/10/23

OMDR Assignment

X-ray Tube

X-ray tube



It has 3 parts - cathode part
anode arm
Tube head.

- cathode consists of tungsten filament as tungsten has high melting point & low vapour pressure

- The whole tube is filled with vacuum and overlying it is oil.

vacuum is created in extension arm which helps tungsten (cathode) to emit electrons.

Anode has angle of transition which helps to deflect energy emitted in tube head.

OMDR Assignment

Roll no 21

GoodLuck | Page No.
Date 17 : 10 : 23

0 X-ray tube machine

- It's a device which use to take a radiograph.
- Parts of x-ray tube
  1] extension arm
  2] Control panel
  3] Tube head

There are three major elements of x-ray tube machine

1. Vacuume Tube

- It is made up of pyrex glass or borosilicate glass.
- Tungsten anode is enclosed along with cathode.
- Cathod or emitter is used.
- Cathod means cation C^{+} & anode means anion A^{-}

2. X-ray tube

- It accelerate the cathode electron & lead them to anode
- only a small proton or electron is converted into an x-ray
- where 99 % is converted into heat & only 1 % is converted into x-rays
- The main source of electron is tungsten coil which is of 2 mm
- Tungsten is used because of following reason
  1) it has high atomic number
  2) Low vapour pressure
  3) High thermal conductivity

Roll No:-10

GoodLuck | Page No.
Date

Assignment

- X-ray Machine :-
- it has 3 parts :-
  - Control panel
  - extension arm.
  - Tube Head.
- Made of anode (Molydenum) +
  cathode (Copper) -
- Made up of borosilicate glass.
- Tungsten filament coil. - ~~three~~

  20° angle of bevel.
- Tungsten :-
  - High Atomic Number.
  - high melting point.
  - High thermal Conductivity.
  - High vapour pressure.

Anode - stationary
Retaining.

- vacumm is present to prevent oxidation of filament to prevent blast.
- Aluminium Coating at end helps to remove unwanted radiation.

OMDR Assignment

Date :- 17/10/2025.

Roll No. 44

1) X-ray tube machine.

Ans

X-ray machine is mainly composed of 3 parts:-

1) Extension arm.
2) control panel.
3) Tube head.

1) Vacuum tube:-

- It is made up of pyrex glass or borosilicate glass
- Tungsten anode is enclosed along with cathode.
- cathode or emitter is used.

X-ray tube:-

- cathode accelerates electrons & leads them to anode.
- only a small portion of electron is converted into x-ray.
- where 99% is converted into heat & only 1% is converted into X-rays.
- The main source of electron is tungsten coil of 2 mm.

- Tungsten is used because of the following:-
  1) High atomic number.
  2) High melting point.
  3) Low vapour pressure.
  4) High thermal conductivity.

Name - Yash Charade
Roll no - 08

PAGE NO.:
DATE: 8/8/23.

Q.1)

→ Maxillary anterior landmarks.

i) Nasal fossae → They are nasal openings located above maxillary anterior teeth.

ii) Nasal septum → It is bony vertical band like midline structure that divides nasal cavity into right and left chambers. It is generally visible on maxillary CT periapical images.

iii) Incisive foramen: It is located in midline on lingual aspect of hard palate above CT teeth crown.

iv) Lateral fossa: It is slight dip or depression in bone on labial aspect of maxilla near and around the lateral incisor teeth.

v) Inverted Y: It is a radiographic landmark that deep where nasal fossa former maxillary sinus.

vi) Nasal soft tissue: Soft tissue of nose, including tip and ala can be seen superimposed ove root of teeth on anterior periapical images. It appears radiopaque.

vii) · maxillary posterior landmark.

a) maxillary sinus - It is prominent radiolucent air filled cavity is located above posterior teeth on right and left side of maxilla.

Date 08/09/23
Page 1

Name :- Samidha B. More Roll No:- 51.

Assignment

① Enumerate and Describe Radiographic Landmark present in Maxilla and Mandible

→

Anatomic Landmarks of the Maxilla.

(A) Radiolucent Landmarks

1) Nasal Cavity and the Nasal Fossa.
2) Mid palatine Suture
3) Incisive foramen
4) Nostril Spots
5) Maxillary Antrum
6) Orbital Opening of the Naso-lacrimal duct
7) Nutrient Canals - Seen as groove in the maxillary sinus.
8) Lateral fossa.

(B) Radiopaque landmarks.

1) Nasal Septum
2) Floor of the Nasal Cavity
3) Anterior Nasal spine
4) Inferior Nasal Concha
5) Floor of the Maxillary Sinus
6) Inverted Y line of Ennis
7) Malar process of the Maxilla
8) Nasolabial fold
9) Maxillary tuberosity
10) Coronoid process
11) Pterygoid plates
12) Hamular process
13) Septum in the Sinus

Anatomic landmarks of Mandible.

(A) Radiolucent Landmarks.

1) Lingual foramen
2) Mental foramen
3) Mandibular foramen
4) Mandibular Canal
5) Submandibular gland fossa
6) Vascular Channels
7) Pharyngeal Air Space
8) Bone Marrow Space.