TATYASAHEB KORE DENTAL COLLEGE AND RESEARCH CENTRE
NEW PARGAON – 416 113

Tal.: Hatkanangale Dist.:Kolhapur (Maharashtra State)

National Dental Commission

INFORMATION REGARDING INSTITUTIONAL COMPLIANCE

4. Clinical Compliance

4.2 Student clinical work registers are updated regularly.

'SERVICE IS RELIGION'

WARANA
HEALTH MOVEMENT
Est: 1992

TATYASHEB KORE DENTAL COLLEGE & RESEARCH CENTRE, NEW PARGAON

DEPARTMENT OF PEDODONTICS & PREVENTIVE DENTISTRY

Certified that this is a bonafide
Record of work done by

Mr/Miss Shreyas Devendra Mordekar

Roll No. 28

University No. 516793

During the year. 2024-25

Staff In-charge

HOD/ In-charge

HOD
Department of Pedodontics & Preventive Dentistry
Tatyasaheb Kore Dental College & Research Centre
New Pargaon

Examiners

1) Dr. Sujatha P

2) Dr. Ankur Kulkarni

TATYASAHEB KORE DENTAL COLLEGE & RESEARCH CENTRE
New Pargaon
Tal. Hatkanangale,
Dist. Kolhapur.
416137

Dr. Harish Kulkarni M.D.S.
Principal
T. K. D. C. & Research Centre,
New Pargaon, Tal. Hatkanangle
Dt. Kolhapur 416 137

Department Of Pedodontics & Preventive Dentistry

RULES AND REGULATIONS

1) Students should maintain strict descipine in the Department .

2) Students should report in time to the Department in Clean apron with Name plate and Record Book.

3) Dress Code is followed very strictly in the Department and students should not wear Jeans, T-Shirts, Sports Shoes and Sandles during College Hours.

4) Regulations laid down by MUHS Nashik will be followed regarding attendance.

5) Absence without permission will be considered seriously.

6) Assignments should be completed on time and signature of the incharge Staff Member obtained before the completion of the Clinical Posting .

7) Posting end Examinaion shall be conducted at the end of each posting (Both Clinical & Viva- Voce)

8) Students must complete the stipulated Quota of Clinical work Compulsorily, if not they will not be permitted to appear for University Examination.

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WORK SCHEDULE

For IInd Year

- Case History - Five
- Restorations
  (Silver Amalgam,GIC, Composite) - Twenty
- Extraction - Five
- Oral Prophylaxis - Ten
- Topical fluoride application - Five
- Clinical Discussion On
  1. Sterilization & Disinfection in the Dental Clinic
  2. Case- History
  3. Analgesics & Antibiotics
  4. Morphology & Histology of Deciduous & permanent Teeth
  5. Restorative Dentistry
  6. Local Anaesthesia & Techniques
  7. Extraction Techniques

For IVth Year

- Case History - Ten
- Restorations - Twenty Five
- Extraction - Twenty
- Oral Prophylaxis - Ten
- Topical fluoride application - Ten
- Space maintainers - Two
- Education & motivation of patients - Thirty

- Clinical Discussion
  1. Behaviour Management
  2. Pulp Therapy & Endodontics
  3. Space Management
  4. Oral Habits
  5. Traumatic injuries to teeth
  6. Fluorides

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LIST OF INSTRUMENTS REQUIRED FOR CLINICAL POSTING

Two sets each of

- **Mouth Mirror**
- **Straight Probe**
- **Explorer**
- **Small Spoon Excavator**
- **Tweezer**
- **Diamond Carver**
- **Hollanback Carver**
- **Amalgam Carrier**
- **Parallelogram Condensor**
- **Round Condenser**
- **Plastic filling Instrument**
- **Burnisher Cement Spatula**
- **Agate Spatula**
- **Dappen Dish**
- **Instrument pouch**

Matrices & Retainers (No. 9&1)

Cotton Holder

Waste Receiver

Stainless Steel Kidney Trays (one large & one small)

Glass Slab

Green cloth

Gloves

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BOOKS RECOMMNDED & REFERENCE :-

1. Pediatric Dentistry (Infancy through Adolescences)- Pinkham.
2. Kennedy's Pediatric Operative Dentistry - Kennedy & Curzon
3. occlesal guidance in Pediatric Dentistry - Stephen H. Wei
4. Clinical Use of Fluorides - Stephen H. Wei
5. Pediatric Oral & Maxillofacial Surgery - Kaban.
6. Pediatric Medical Emergencies - P.S.Whatt.
7. Understanding of Dental Caries - Niki Foruk.
8. An Atlad of Glass Ionomer cements- G.J.Mount
9. Clinical Pedodontics - Finn.
10. Textbook of Pediatric Dentistry - Braham Morris.
11. Primary Preventive Dentistry - Norman O. Harris
12. Handbook of Clinical Pedodontics - Kenneth D.
13. Preventive Dentistry- Forrester
14. The etabolism and Toxicity of Fluoride- Garry M. whitford
15. Dentisty for the Child and Adolescence - Mc. Donald
16. Pediatric Dentistry - Damale S.G.
17. Behaviour Management - Wright
18. Pediatric Dentistry - Mathewson
19. Traumatic Injuries - andreason
20. Occlusal guidance in Pediatric Dentistry - Nalata
21. Pediatric Drug Therapy-Tomare
22. Contemporary Orthodontics - Profitt.
23. Preventive Dentistry - Depaola.
24. Metabilism & Toxicity of Fluoride - whitford G.M.
25. Endontic Practice- Grossman.
26. Principles of Endontics - Munford.
27. Endodontics - Ingle.
28. Pathways of Pulp - Cohen.
29. Management of traumatized anterior Teeth - Hargreaves.

CHILD'S HISTORY

Vital Statistics

Date_____

Name of child _____

Birth date of child_____

Race_____ Sex _____

Name of person supplyong the information of this history

_____

Relationship : Mother_____ Father_____Other_____

Occupation of father _____

Occupation of mother_____

Home address of child_____

With whom does the child live?_____

Child's present physician_____

Who referred child?_____

Chief complaint _____

What prompted you to bring your child to the denist_____

_____

Parental History

	Yes	No.
Are you wearing dentures ?	_____	_____
Is your spouse wearing dentures ?	_____	_____

If above yes, at what age were your teeth removed_____

Your spouse's ?_____

Why were your teeth removed ?_____

_____

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	Yes	No.
our spouse's ?		
o you have what is called soft teeth ?	____	____
our spouse ?	____	____
Were your spouse's teeth gray , yellow or brownish in color ?	____	____
yes, explain		
Did your teeth wear down excessively ?	____	____
Your spouse's ?	____	____
Are you or your spouse frightened os a dental appointment ?	____	____

Prental History

Did you have any illness during this pregnancy ?	____	____
If yes , what sort and when?		
Were you on drug therapy at this time ?	____	____
Were you taking antibiotics during this time ?	____	____
If yes, what?		
How long and how often did you take this ?		
Were you on a high vitaminor calcium diet during pregnancy?	____	____
Is there blood incomaptibility between you and your spouse ?	____	____
Have you been told that you are Rh negative by physician?	____	____
Did you have fluoride tablets , or was there fluoride in the drinking water supply where you lived during pregnancy ?	____	____

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	Yes	No.
Natal History		
Was the chid a premature baby ?	____	____
Was he jaundiced at birth ?	____	____
Was he given blood trasfusions ?	____	____
Was he a blue baby ?	____	____
Postnatal and Infancy History		
Did he have any convulsion during infancy ?	____	____
Was he bottle fed?	____	____

For how long?_____

Was he given supplements of fluoride , flurides in the drinking water, vitamins, calcium, iron, or other minerals ? ____ ____

If yes, explain _____

_____

Was the vitamin in the form of syrup or drops?_____

For how long a period of time was it given?_____

_____ How often?_____

Did he suck a sugar teat ?	____	____
Did your child have any childhood diseases during infancy ?	____	____

If yes, name them _____

_____ _____

Dis he have rheumatic fever?	____	____
Did he have pain in the joints (growing pains)?	____	____
Has he had diabetes ?	____	____
Has he had kidney trouble ?	____	____

	Yes	No.
as he had heart trouble ?	____	____
Were you ever told by a physician that your child was anemic ?	____	____
id your child ever receive antibiotics ?	____	____
If yes, at what age?_____		
If yes, how long ?_____		
What antibiotic was given ?_____		
Did your child have any difficulty in learning to walk ?	____	____
Did he have any operations in infancy ?	____	____
If yes, for what reason?_____		
as he broken any bones?	____	____
If yes, how often?_____		
If yes, how did it happen?_____		
_____		
Does he frequently have minor accidents or injuries ?	____	____
there anything unusal about your child ?	____	____
If yes, explain_____		
_____		
ould you call your child a sickly child ?	____	____
Why?_____		
oes he fail to perspire in hot weather?	____	____
oes he have any mental or physical disability or disease?	____	____
yes, explain_____		
_____		
oes your child eat between -meal snacks ?	____	____

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	Yes	No.
If yes, what kind of food ? _____		
_____		
Does he suffer from frequent toothaches ?	____	____
Do his gums bleed easily ?	____	____
Has he ever injured his front teeth ?	____	____
Does he frequently break out in a rash ?	____	____
Is he allergic to any foods, local anesthetics, penicillin, or other drugs?	____	____
Does he have asthma ?	____	____
Is there difficulty stopping bleeding when he cuts himself ?	____	____
Does he bruise easily ?	____	____
Have you been told by a physician that your child is a hemophiliac ?	____	____
Is he a thumb or finger sucker ?	____	____
If yes, when does he do this ?_____		
_____		
Does he have difficulty making friends ?	____	____
Does he fail to get along with other children ?	____	____
Would he rather play indoors than outdoors ?	____	____
does he have brothers or sisters?	____	____
If tes, what are their ages ?_____		
_____		
Does he have difficulty keeping up with his schoolwork ?	____	____
Does he fear the dentist ?	____	____
If yes , do you know why ?_____		
_____		
Has he ever been to the dentist before ?	____	____

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HEAD AND NECK EXAMINATION

- **Face Symmetry-**
- **TMJ Examination-**
- **Lymph Nodes -**

EXAMINATION FOR FORM AND FUNCTION

- Facial Profile
- LIPS : Competent/Potenetially Competent/Incompetent
- SWALLOWING : Teeth Together/Tongue to Lower Lip/Tongue Thrust
- SPEECH : Normal/Defective
- ORAL HABITS:

- Finger - Thumb Sucking
- Lip - Nail Biling
- Mouth Breathing
- Bruxism
- Any Other

Frequancy
Duration
Intensity

- Oral Hygeine Appraisal-
- Recent History of Trauma-

INTRA - ORAL EXAMINATION

- Lip -
- Mucosa-
- Orifice of Salivary Gland
- Palate-
- Pharynx-
- Floor of Mouth
- Tongue-
- Gingiva- Colour
  Form
  Size
  Texture
- Frenum-

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EXAMINATION OF TEETH

1. **Pit & Fissure caries** _____

2. **Smooth Surface caries** _____

3. **Other Findinge (Anamolies, Fracture, Discolouration, etc)** _____

ORTHODONTIC EVALUATION

- **Molar Relation (Primary / Permanent)**
- **Other orthodontic Problems**

PROVISIONL DIAGNOSIS

INVESTIGATIONS

- **Intra- Oral Radiographs : IOPA/Bite-Wing/Occlusal**
- **Extra- Oral Radiographs : Cephalogram/ OPG/Others**
- **Vitality Tests**
- **Mixed Dentition Space Analysis**
- **Blood Investigations**

DIFFERENTIAL DIAGNOSIS

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FINAL DIAGNOSIS

TREATMENT PLANNING

1. Medical Treatment

a. Referral to physician

2. Systematic Treatment

a. Premedication

b. Therapy for oral infection

3. Preparatory Treatment

a. Oral prophylaxis

b. Caries Controll

c. Orthodontic Consulation

d. Oral Surgery

e. Endodotic Therapy

4. Corrective Treatment

a. Operative dentistry

b. Prosthetic dentistry

c. Orthodontic therapy

5. Periodic recall examination & maintenance treatment

Scope of Pediatric Dentistry

*] **Pediatric Dentistry :-**

It is defined as an age defined specialily that provides both primary and comprenshive, previntive and therapeutic oral health care for infants and children through adolescence including those with special health care needs.

⊙ **Aims and objective of Pedodontics :-**

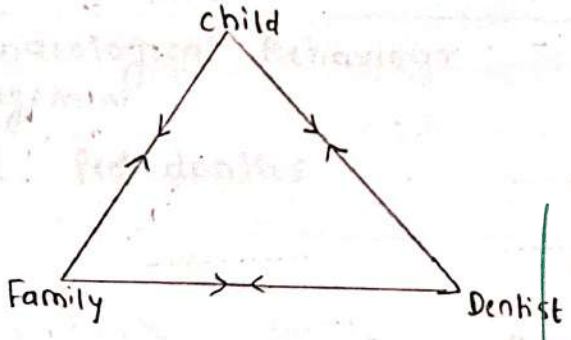
- Health of a child as a whole
- More specifically we are concerned with oral health.
- Early diagnosis and prompt treatment
- Restoring the mouth to good health.
- To observe and control the necessary developing dentition of of child patient
- Relief of pain

Pedodontic Triangle :-

Pedodontic ∆el was first explained and conceptulised by G.Z wright in 1975 and was later modified by McDonald et al.

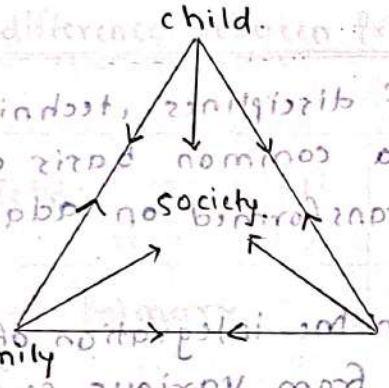
① **conventional model :-**

- Patient doctor relation in adult is linear but in Pedodontics the relation is triangular
- This is because is Pedodontics, the parent and the child both are involved and child is at the apex of triangle as the focus of attention



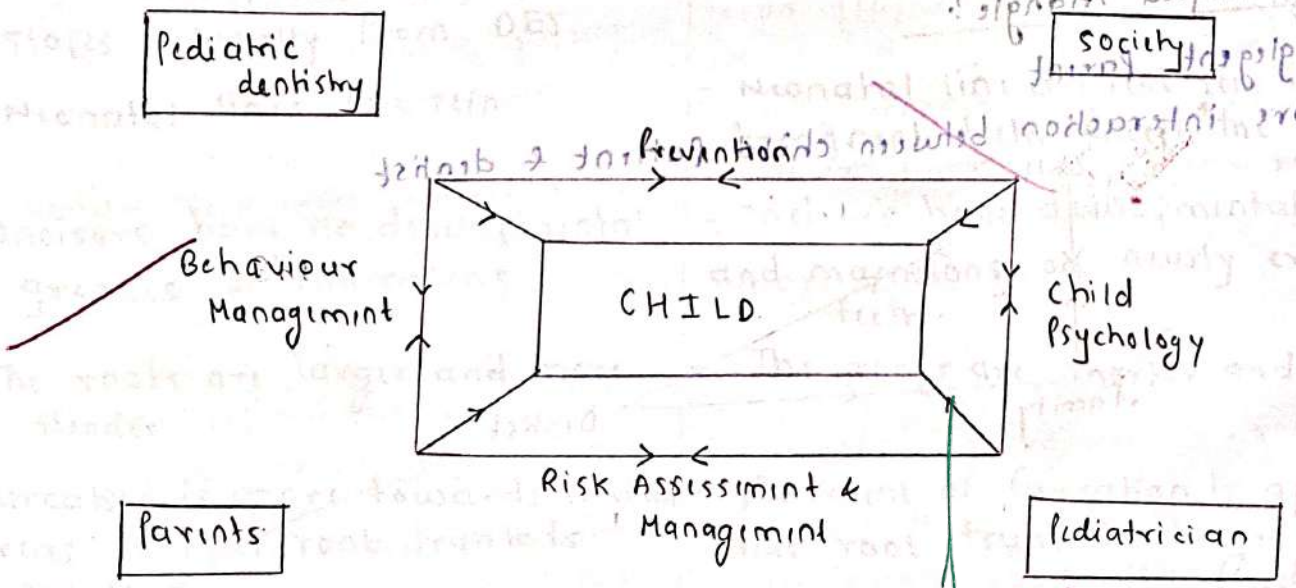
② **Modified Model :-**

- It is given by McDonald et al
- As community has become a major part of oath component of environment therefore recently a new paramet-er has also been added that is Society



⑧ Pediatric Dentistry treatmint Model

- Pediatric dintistry is an amalgamation of all branches of dintistry and most of it's componint have bren either derived from or associated with each otner dentistry branches but the four principle that stand out in this speciality, and preventive risk assessmint and managemint, child psychology
- Vivek have proposed a new model based on the pedondtic ∆el and have terminated it's pediatric treatmint model.
- It presents the former triangle ar a square which has the pediatric dintist, pediatrician, family and society playing important roles and difinitely the child patient is the centre of attention.

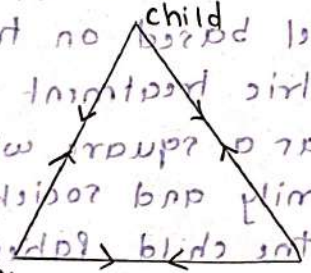


Scope of pediatric Dentistry :-

- Pedodontics encopasses a variety of disciplines, technique Procedure and skills that logically share a common basis with other specialities, but are modified, transformed on adapted to the special health care needs.
- Pedodontics dentistry concintrate on the integration of appropriate didactic and clinical knowledge from various specialities into a framework of quality oral health care for children.

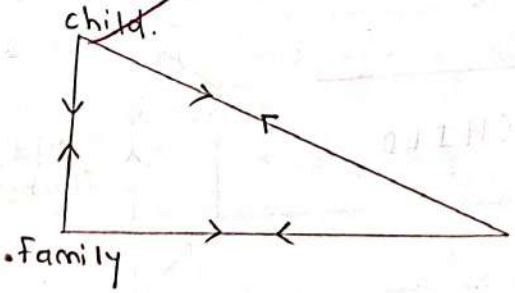
Isosceles triangle :-

- Authorative parent
- More interaction between parent and the dentist



Right angled triangle :-

- Neglegent parint
- More interaction between child patient & dentist



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2) * Morphology difference between primary and permanent teeth *

Primary Teeth	Permanent teeth.
- Number of teeth in primary dentition is 20	- Number of permanent teeth is 32
- Primary teeth are light in colour also called as milk teeth as it's Refractive index is same as milk.	- These are darker in colour, grayish or yellowish in colour.
- Duration of dentition : 6 month to 5 1/2 years	- Duration of dentition : 6 years onwards
- Cervical ridges are more pronounced especially on buccal aspect	- The cervical ridges are flatter.
- More convergence towards occlusal surface i.e narrow occlusal table.	- less convergence towards occlusal surface
- Enamel is thinner, about 1mm thicker throughout	- Enamel is thicker, about 2-3 mm
- The enamel rods at the cervical slopes occlusally from DEJ	- Enamel rods are oriented gingivally
- Neonatal lines are seen	- Neonatal line are not seen in permanent teeth except the 1st molar
- Incisors have no developmental grooves or mamelons	- Incisors have developmental grooves and mamelons on newly erupted teeth
- The roots are larger and more slinder	- The roots are shorter and bulbous
- Furcation is more towards cervical areas so that root trunk is smaller	- Placemint of furcation is apical thus root trunk is larger
- These shows more attrition	- permanent teeth shows less attrition comparatively
- More organic content is seen in enamil	- organic content is less than primary teeth.

- Dentinoenamel junction is flat	- Dentinoenamel junction is scalloped
- Primary teeth undergo physiologic resportion	- Permanint teeth do not undergo physiologic resorption only palnologic changes take place.
- Primary teeth has abundant blood supply as compared to Permaninb teeth	- The blood sapply is comparatively less
- Broad contact areas are seen between the teeth	- A single contact point is present between the teeth.
- Response to external stimuli is the typical inflammatory reaction	- Response in permanint teeth is through calcific scarring
- Density of innervation is less, so teeth are less sensative to operative procedure	- Density of innervation is great thereby leading to more sensitivity
- Pulp chamber is larger in relation with crown size.	- Pulp chamber is smaller in size in relation to crown size.
- Pulp horns are closer to the outer surface mesial pulp horns extends to a closer to the surface than distal pulp horns	- Thus pulp horns are comparatively away from outer surface
- Roots canals are more ribbon like. The radicular pulp follows a thin tortorous and branching path	- Root canals are well-defined with less branching
- Accessory canals present at inter-radicular furcation	- Accessory canals present at apical region of rooty.
- Roots have enlarged apical foramin Thus the abundant blood supply demonstrate a more typical inflammatory response	- Foramin are restricted. Thus reduced blood supply favours defective response & healing by calcific scarring
- Incidence of riparative dentin formation bineath carious lesion is more extensive & more irregular	- Riparative dintin formation

clinical significance :-

- Thickness of enamel and dentin is less in proximal teeth. Hence the spread of caries from enamel to pulp can be faster in primary teeth.
- In posterior primary teeth, the distance from external surface of tooth to pulp is less in proximal teeth.
- Hence any proximal caries in primary teeth must be radiographed and extends of pulpal involvement.
- Pulp horns are very highly placed in teeth e.g. The tip of mesiobuccal pulp horn of mandibular 1st primary molar is a dentinoenamel jct it has deep central pit.
- Hence caries at mesial pit in a mandibular 1st primary molar should be treated with caution. Aggressive removal of caries lead to pulp exposure.
- Prominent buccal cervical ridge on mandibular 1st primary molar may provide some resistance for placement of a SSC
- During cavity preparation, the oblique ridge in maxillary 2nd primary molar should be preserved unless undermined by caries.
- cervical roots of primary anterior teeth facilitate easy removal. However, flared roots of primary molar removal distate the root to be removed with care.
- Understanding tooth morphology of great importance to restore the normal form of tooth which required for function.
- Knowledge of teeth morphology can enable the dentist to identify when there are multiple extracted teeth or in period of mixed dentition.

3. CHRONOLOGY & ERUPTION AGE

Chronology and eruption Age:

- The regular sequence of eruption suggest that it is under genetic control while some is an event, highly influenced by nutritional, hormonal & other disease state.
- At birth, jaws contain partly calcified crown of deciduous teeth and begining of calcification of permanent 1st molar
- Eruption of deciduous dentition begins at an average of 7 1/2 month of age and terminate at about 29 months of age
- At age of 6 years the jaws contain more teeth than any other time, 48 teeth are filling the jaws in total
- The age of 6 to 12 year is a period of mixed dentition it is, most complicated period of dental developement and one in which malocclussion most likely develop.
- The mixed dentition stage is when deciduous teeth are lost and permanent teeth start to erupt
- The permanent 3rd molar do not begin calcification until the 9 years and their eruption starts from 16 years onwards till the completion of craniofacial growth and development.

#] Primary Dentition :

Maxilla :

	Tooth	Hard tissue formation	crown completion	Eryption	Root completion
①	central Incisor	4 months in IU	4 month	7 1/2 month	1 1/2 years
②	Lateral Insci	4 1/2 month IU	9 month	9 month	2 years
③	canine	5 month in utero	9 month	12 month	3 1/2 years
④	1st Molar	5 month in utero	6 month	6 month	2 1/2 years
⑤	2nd Molar	6 month in utero	11 month	20 month	3 years

Mandible :

Tooth	Hard tissue formation	crown completion	Eruption	Root completion
central incisor	4 1/2 months IU	4 1/2 month	6 month	1 1/2 year
Lateral incisor	4 1/2 month in utero	4 month	7 month	2 years
canine	5 month in utero	9 month	16 month	3 1/2 years
1st Molar	5 month in utero	5 1/2 month	12 month	2 1/2 year
2nd Molar	6 month in utero	10 month	20 month	3 years.

Permanent Dentition :

⊙ Maxilla

Tooth	Hard tissue formation	crown completion	Eruption	Root completion
central incisor	3-4 month	4-5 year	7-8 years	10 years
Lateral inci.	10-12 month	4-5 year	8-9 year	11 year.
canine	4-6 month	6-7 year	11-12 year	13-15 year
1st premolar	1 1/2 - 1 3/4 year	5-6 year	10-12 year	12-13 year
2nd premolar	2 1/2 - 3 year	7-8 year	10-12 year	12-13 years.
1st Molar	Birth	6-7 year.	6-7 year	9-10 year
2nd Molar	7-9 years	7-8 year	12-15 year	14-16 year
3rd Molar.	7-9 years	12-16 year	17-24 year	17-25 year.

• Mandible :

Tooth	Hard tissue formation	crown completion	Eruption	Root completion
Central incisor	3-4 months	4-5 years	6-7 years	9 years
Lateral incisor	3-4 month	4-5 year	7-8 year	10 year
Canine	4-5 month	6-7 year	9-10 year	12-14 year
1st PM	1 3/4 - 2 year	5-6 year	10-12 year	12-13 year.
2nd PM	2 1/4 - 2 1/2 year	6-7 year	11-12 year	13-4 year.
1st Molar	Birth	2 1/2 - 3 year	6-7 year	9-10 year
2nd Molar	2 1/2 - 3 year	7-8 year	11-13 year	14-15 year
3rd Molar	8-10 year	12-16 year	17-21 year	18-25 year.

#Nolla stages of tooth development :

- In 1992 Nolla has given an arbitary description of tooth formation divided into 11 stages these are numbered from 0 to 10
- This is usyful in dintal age estimation for medico legal or forinsic purpose
- They show progression from initial appearance of crypt through the last stage of apical root closure for developing tooth

0 → Absence of crypt
1 → Presence of crypt
2 → Initial calcification
3 → 1/3rd of crown completed
4 → 2/3rd of crown completed
5 → crown almost completed
6 → crown completed
7 → 1/3rd of root completed
8 → 2/3rd of root completed
9 → Root almost completed - open apex
10 → Apical end of root completed.

Assignment - 4.

Eruption :-

Eruption is defined as movemint of teeth through the bone of jaw and overlying mucosa to appear and function in oral cavity

- eruptive movemint begin with the onset of root formation before the teeth are seen in oral cavity.
- Movemints leading to eruption of teeth can be divided into three phases

Phase ① - Pre-eruptive phase
Phase ② - Pre-functional eruptive or eruptive phase
Phase ③ - Functional eruptive or post eruptive.

1) Pre-eruptive phase :-

- It is a preparatory to eruptive phase
- During this phase, growing tooth moves into direction to maintain it's position in expanding jaws.
- Bodily movemint is movemint of entire tooth germ. It causes bone resorption in direction of tooth and bone opposition behind it.
- Eccentric growth refers to growth in one part of tooth while rest of tooth remains constant.
- During early pre-eruptive phase, successional permanint tooth develop lingual and near occlusal level of primary precedors.
- But at end of this phase, teeth are positioned lingually and near the apical third of primary anterior teeth.

2) Eruptive phase :-

The eruptive phase begins with initiation of root formation and ends when teeth reach occlusal contacts

Roots begins their formation as a result of proliferation of both epithelial root sheath and mesenchymal tissue of dintal papilla and dintal follicle.

Erupting tooth moves through bone of crypt and the connective tissue and oral mucosa

The reduced enamel epithelium covering the crown comes in contact with the oral epithelium

↓

Tip of crown enter the oral cavity by degrading the membrane and breaking through the stratum of double layered epithelium

↓

crown erupts further and lateral border of oral mucosa now becomes the OET

↓

Reduced enamel epithelium now surrounding like a cuff becomes known as functional or attachment epithelium.

↓

Erupting tooth continues to move occlusally as a result of active eruption, exposing more clinical crown

↓

separating of attachment epithelium from crown resulting apical shift of attachment epithelium

(3) Post eruptive phase :

- Begins when teeth reaches occlusion and continue for long as each tooth remains in oral cavity
- Alveolar process increase in height and root continue to grow.
- occlussion is established
- Alveolar bone density increases, principle fibres of periodontal lig establish themselves into separate groups
- Latter in life, attrition may wear down occlusal surfaces of teeth.
- slight occlusal movement the teeth tend to move anteriorly to mesial wall of socket & bone opposition on distal wall
- These movements include those to accomodate growing jaws to compensate for occlusal wear and interproximal wear.

Shedding :

- The physiologic process resulting in elimination of deciduous dentition is called shedding or exfoliation.

① Pattern of shedding :

shedding of deciduous teeth is result of progressive resorption of root of tooth and their supporting tissue

- The pressure generated by growing and erupting permanent tooth dictate pattern of deciduous tooth resorption.

1) Resorption of Anterior teeth :

- Position of permanent anterior tooth germ is lingual in apical 1/3rd root of primary teeth
- Resorption is in occluso-labial direction
- Later the crown of permanent teeth lies apical to root of primary teeth causes resorption to proceed Horizontally
- Horizontal resorption allow permanent tooth to erupt into position of primary teeth.

2) Resorption of posterior teeth :

- growing crowns of premolars are situated between roots of primary molars
- Initiation is resorption of inter-radicular bone followed by resorption of adjacent surface of root of primary tooth
- Alveolar process is growing to compinsate for lingthening roots of permanent teeth
- Primary molars are more occlusally, it allows premolar crowns to be more apical
- Premolar continue to erupt until primary molar roots are entirely resorbed and teeth exfoliate
- Premolar then appear in place of primary molars.

Theories of Eruption :

① Root elongation theory :

According to this theory, most obvious mechanism of eruption would be that crowns of teeth are pushed into oral cavity by virtue of growth and elongation of roots.

Evidence - Root of tooth elongates as crown erupt into oral cavity

Evidence against - Rootless teeth erupt with concomitant elongation of root. Submerged teeth continue to grow

② Pulpal constriction theory :

It states growth of root dentin and subsequent constriction of pulp may occur due to sufficient pressure to move the tooth occlusally

Evidence : Pulp constriction by growth of root dentin

Evidence against : pulpless teeth crypts or some rate as normal teeth

③ Growth of periodontal tissue :

⊙ Pull by surrounding connective tissue : connective tissue surrounding the tooth may function in pulling the tooth into oral cavity

Theory is invalid by histological examination of direction of periodontal fiber during tooth eruption

⊙ Alveolar bone growth : Growth of alveolar bone may push the tooth out of it's alveolus and into oral cavity

- Histological sections and ray show that bone does not touch the tooth mechanisms can operate only upon single conical roots but not on multirooted teeth.

④ Pressure from muscular action :

Action of muscular cheeck & lips upon alveolar process might serve to squeeze the crown of tooth out into oral cavity like a pumkin seed from between the fingers.

- This process continue until tooth in occlusion being halted by antagonism of teeth

- Theory fails to explain to eruption in cases of unilateral facial paralysis

⑤ Resorption of alveolar crest :

It serve to expose the crown of tooth into oral cavity this theory is not tenable since histological examination shows that alveolar crest is the size of most rapid and continuous growth of bone.

⑥ Hormonal theory :

- Arthur Kuth suggest that hormones secreted by thyroid and pituitary gland might govern eruption of teeth

- Theory does not attempt to eruption mechanism of eruption of teeth and only points out the fact hormone may effect eruption of teeth

⑦ Foregin body theory :

states that a calcified body such as tooth tends to be exfoliate by tissue just as does any foregin body.

⑧ Cellular Proliferation theory :

Noyes pointed out tremindous pressure, which is evolved from cellular proliferation, provides growing plant with sufficient force, break through hard obstacle.

similarly, osmotic pressure and forces resulting from cellular proliferation in pulp and surrounding tissue may account for eryption of teeth.

⑨ Vasular theory :

- The theory point out the fact that tissue, which lie between developing tooth and bony surrounding posses a very rich vascular supply.
- He said that blood pressure exerted in vascular tissue lie blw developing teeth and bony surrounding, active mechanical factor in the process known as eryption of teeth.
- Evidence :- submerged teeth often emrupt under influence of hyperemia It causes supraeruption of tooth.

⑩ Blood vessel thrust theory :

- Eryption involve the blood supply to tooth like vascularity theory
- Blood generate force by Hydrodynamic and hydrostatic force within vessels.

⑪ Periodontal ligamint contraction theory :

- The contractile elemint within periodontal ligamint, collagen constriction and due to fibroblasts are responsible
- Actual force required to move tooth is linked to contractility of fibroblast
- Fibroblast are placed into silicon, they crawl about in doing so create wrinkles or folds in rubber indcating traction forces are associated with locomotion.
- A model system consisting of well-lined by perforated mesh and containing gel placed with fibroblast and silica of root dentin not only there is three dimensional network established by also network generate sufficient force to raise from bottom to top.

Assignment No :- 5

Tooth Numbering System :-

- Tooth designation system have been used for more than hundreds of years and were first reported in early literatures.

(1) Zigmonday - palmar system :-

- The most popular system of tooth designation for much of the 20th century was developed by Adolph Zigmondy.
- In this system, the dintition is divided into quadrants and symbols are used to designate in which quadrant the tooth is found.

⌞ → Upper left quadrant
⌟ → Upper Right quadrant
⌜ → Lower left quadrant
⌝ → Lower Right quadrant

- A number is placed between these bracket which dinotes position of tooth from midline
- palmer notation is simple, easy to use, and most often used by dintist
- Major drawbacks is inability to record them using conventional keyboard input and word processing software.

① Dedious dintition :-

Maxillary Right					Maxillary left				
E	D	C	B	A	A	B	C	D	E
E	D	C	B	A	A	B	C	D	E
Mandibular Right					Mandibular left				

② Permanint dintition :-

Maxillary Right								Maxillary left							
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
Mandibular Right								Mandibular left							

(2) Universal Numbering system

- It was first suggested by Parreidt in 1882 and uses number 1–32 for permanent teeth and uppercase letter 'A' through 'T' for primary teeth
- In this system each tooth is assigned a unique number or alphabet allowing easier use on keyboard's and word processing software used by ADA.

Deciduous dintition:

A	B	C	D	E	F	G	H	I	J
T	S	R	Q	P	O	N	M	L	K

Permanent dintition:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

(3) FDI (World Dental Fedration Notation.)

- The FDI system was developed in 1971 a system to identify teeth with a number system is called the FDI two digit Notation also known as ISO- 3950 notation.
- Each tooth is given two digit number
  1st digit Dintition arch & quadrant
  2nd digit position of tooth relative to midline.
- In permanent dintition is divided into quadrants '1, 2, 3 & 4'.
- Any Primary dintition is divided into quadrant's '5, 6, 7 & 8'.
- FDI system is internationally accepted & followed in many contries.
- It is ideal for verbal communication and visual sense.

Deciduous dintition:

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

Permanent dintition:

18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38

Assignment No. 6 :-

Development of Dentition :-

- Development of tooth is complex process initiated, mediated and controlled by interaction between ectoderm and supporting ectomesenchyme.
- Tooth development begins at 3rd week of IU life after developing oral cavity
- First sign of tooth development in proliferation of oral ectodermal cells to form epithelial thickening called primary epithelial band it projects into ectomesenchyme
- Primary epithelial band is formed by 6th week of IU life It continue to proliferate
- By 7th week two subdivisions arise.
  - ① Buccal - vestibular lamina
  - ② Lingual - Dental lamina
- The vestibular lamina proliferate further and forms wedge shaped structure
- The central cells enlarge and further undergo degeneration forming 'V' shaped cleft or vestibule
- The vestibule separate the cheek and lip from tooth bearing area
- Dental lamina contributes to formation of tooth bearing area

Dental Lamina :-

- Localised proliferation in initial week of IU life, each primary proliferation activity at 10 specific regions.
- Enamel organ of deciduous dental lamina of upper and lower dental arch between 6th & 8th weeks of IU life
- Dental lamina develops into tooth buds 10 deciduous teeth in each arch
- lingual extension are called as successional lamina
- Successional lamina of central incisor develops at 5th month in utero and end premolar at 10th month of age
- Permanent molar develop from distal extension of dental lamina accessional lamina
- Permanent 1st molar bud develop at 4th month of IU life & second molar at 1st year and third molar at 4th & 5th years of life.

- Average period of activity of dental lamina is 5 years. Few remanant cells may persist known as cell rests of serr and may be seen in connective tissue of gingiva.

stages of development of tooth :-

Ten specific Location of dintal lamina

↓

Ten knob like small swelling

↓

Buds

↓

Tooth germs

Tooth germ components :-

Enamel organ = Enamel formation

Dental papilla = Dentin & pulp

Dental follicle = cementum, periodontal ligament, alveolar socket

Morphological stages :-

1) Bud stage

2) cap stage → Early, Late

3) Bell stage → Early, Late.

a) Bud stage :-

- Primordia for teeth are run as structure budding off from basal layer of oral ectoderm
- These buds later forms enamel organ
- cell living in periphery are cuboidal while centrally located cells are polyhedral in shape
- Ectomesenchymal cells undergo condinsation forming dintal lamina
- Peripheral portion enclose enamel organ and dintal papilla called dental sac.

(2) Cap stage :-

- Enamel organ increases in size by proliferation of cell growth is unequal so it takes shape of cap shaped structure

- convex surface faces the oral cavity

- Tooth germ appears cap like enamel organ

- Both are enclosed in sac like dental follicle

- central cells are polyhedral in early stage and stellate shaped in later stage

- Three stages of cells are seen :-

  Inner enamel epithelium - Low columnar

  outer enamel epithelium - cuboidal cell

  central part - stellate reticulum

⊙ stellate reticulum :-

- These are star shaped cell

- They provide nutrition to neighbouring cells, transitory structure of enamel organ (enamel knot, enamel cord, enamel septum, enamel niche)

- They also provide mechanical protection, acts as shock absorber

- Dental papilla is main source of nutrition to IEE, dental follicle it incloses enamel organ & dental papilla.

(3) Early Bell stage :-

- Enamel organ enlarges and evaginates, deepens further and resembles bell

- shape of tooth is determined during this stage

- 4 distinct group of cell

① Inner enamel epithelium undergoes histodifferentiation to form ameloblast

- Ameloblast separated from dental papilla by membranous perform

- Inner enamel epithelium cells are columnar

② stratum intermedium - squamous cell

③ stellate reticulum - star shaped cell with long process

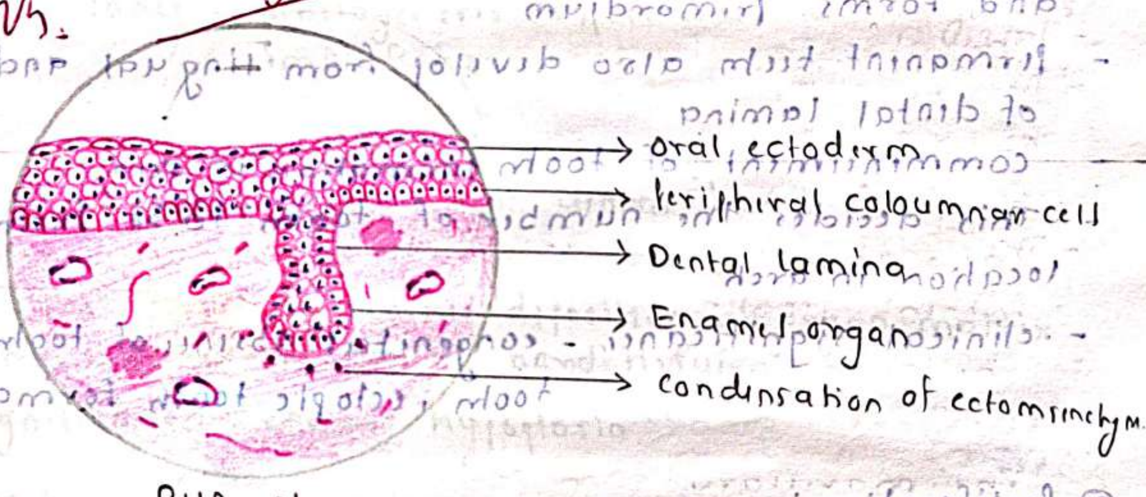
④ outer enamel epithelium - cuboidal

- Dental lamina begins to degenerate & dental follicle becomes more distinct

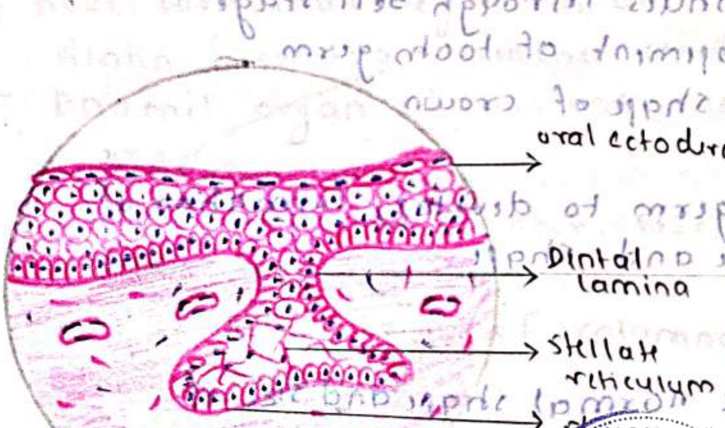
(4) Advance bell stage:-

- Apposition process begins, tooth germ enter advanced bell stage.
- Enamel and dentin formation can be appreciated.
- outer enamel epithelium becomes irregular and stellate reticulum collapse further
- Dentin deposition at dentino-enamel surfat cusp tip progress inward and cervically
- Enamel deposition over dentin at incisal edge progress out ward ~~and~~ cervically
- when both reach at cervical region, root formation by HERS.

Diagram are ~~...~~ 20/09/23.

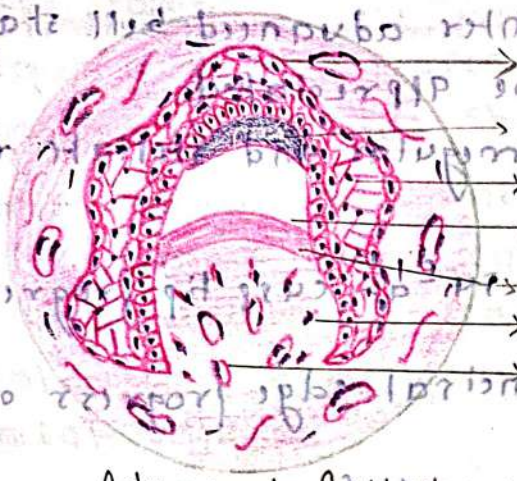


BUD stage



CAP stage.

Bell



Advanced Bell stage

Physiologic phases :

① Initiation :
- At 6th week of IU life
- At specific region of dintal lamina, bud like structure develop and forms primordium
- Permanint teeth also develop from lingual and distal extension of dintal lamina
- commincement of tooth formation is seen
- This decides the number of tooth to be formed by their location in arch
- clinical significance - congenital absince of tooth, supernumiry tooth, ectopic tooth formation

② Proliferation :
- Process begins at bud stage continues through bell stage
- Provides adequate cell for development of tooth germ
- contributes to determination of shape of crown
- clinical significance =
  failure of tooth germ to develop, formation of tooth defective in size and shape

③ Morphodifferintiation :
- Physiologic process which ensure normal shape and size of developing tooth
- Begins in cap stage and becomes complete at early bell stage
- Tooth germ is changed from an undifferintiated stage to more differintiated bell stage

- Enamel organ develops an invagination
- shape of crown is defined and established in early bell stage to more differentiated bell stage.
- Nimbrang Preformative is formed
- It is continuis in advance bell stage during root formation
- clinical significance = leg shape lateral incisor, microdontia Macrodontia

④ Histodifferentiation :
- Physiologic process in which cells undergo morphologic and functional changes to perform their function
- Begins in cap stage and maximum in bell stage
- Inner enamel epithelial cell differentiation into ameloblast
- Dintal papilla differentiate into odontoblast
- clinical significance = Amelogenesis imperfecta, dinknogienisis imperfecta.

⑤ Apposition :
- This process of Rythmic deposition of dintal hard tissue is called apposition
- once DEJ is established, successive deposition of organ matrix which get's mineralised to dintal hard tissue
- clinical significance - enamel Hypoplasia.

Root formation :
- Root formation begins in advance bell stage after enamel and dinkn formation reaches cervical region.
- Enamel organ at cervical loop proliferate to give rise to HERS
- HERS determine number, size, shape of root
- HERS has two layers :
  a) Inner layer of columnar cells derived from inner enamel epithelium
  b) outer layer of cuboidal cell derived from outer enamel epithelium.

Development of occlusion

Development of occlusion is genetically and environmentally conditioned process, which shows a great deal of individual variation.

The various stages of occlusal development are.

1. Pre-dentate jaw relationship.
2. Decidious dentition Period
3. Mixed (transitional) dentition Period
4. Permanent dentition Period.

1) Pre-dentate Period :-

- This is a period from birth to eruption of the first deciduous teeth in the oral cavity.
- The alveolar process at the time of birth is called as gum pads.
- They are horseshoe shape pads that are pink firm and covered with layers of dense periosteum.
- They are divided into two (labiobuccal and lingual) by dental groove.
- The gum pad is further divided into 10 segments by transverse groove between canine and first molar.
- The maxillary gum pads are wider and larger than mandibular, thus when they are approximated there is complete overjet all around.

2) Decidious dentition Period :-

- The initiation of primary teeth occurs during first week of intrauterine life and first primary teeth erupts at age of 6 month.

spacing :-

- spaced dentition given by Baume.
- It is supposed to be good as spaces in between the teeth can be utilized for adjustment of permanent successions, which are always larger in size compared to deciduous teeth.

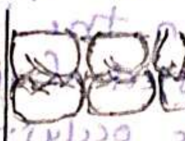
Primate space :-
Exist between the maxillary lateral incisor and canine and mandi. canine and first deciduous molar.
This is also called as anthropoid or simian spaces as they were initially found in our ancestral simian space.

Physiologic space :-
- Present in b/w all the primary teeth and play an important role in development of permanent dentition.
- The total space present may vary from 0-8 mm with the average 4 mm in the maxillary arch and 17 mm with the average of 3 mm in mandibular arch.

Non-spaced dentition :-
- The dentition is highlighted by lack of space b/w primary space either due to small jaw on longer teeth

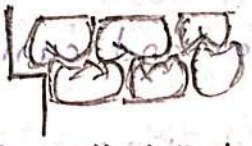
Terminal planes :-
The mesiodistal relation b/w the distal surfaces of maxillary and mandibular second deciduous molar is called as terminal plane

a) Flush terminal plane :-
- The distal surface of the deciduous 2nd maxillary and mandibular molar are in straight plane and therefore situated in same vertical plane.
- It is usually most favourable relationship to guide the permanent molar into class-I



Flush terminal plane.

b) Mesial step plane :-
- The distal surface of deciduous 2nd mandibular molar is more distal to that of deciduous 2nd maxillary molar into class I relationship.
- However a few can proceed into half cusp class III during molar transition and further into full class III relationship with continued mandi growth.



Mesial step plane

c) Distal step plane:

- The distal surface of deciduous 2nd mandibular molar is more distal to that of the deciduous 2nd maxi molar.
- The relationship is unfavourable as it guides the permanent molar into distal occlusion.

Distal step plane.

Anterior teeth relationship:

① overbite:

It is the distance which is incisal edge of the maxillary incisor overlap vertically past the incisal edge of mandi. incisor. The average overbite in primary dentition is 2 mm

② Edge to edge bite:

- When the incisal edge of the two incisors are in the same plane, this is also called as zero overbite
- This is most common due to attrition, lengthening of ramus and downward - forward growth of mandibular

③ overjet:

- It is the horizontal distance between the lingual aspect of maxillary incisors and the labial aspect of mandibular incisors when the teeth are in centric occlusion
- The average in primary dentition is 1-2 mm

canine Relationship:

- The relationship of maxillary and mandibular deciduous canini is one of the most stable in primary dentition.

canine I → The mandibular canine is slightly distal in embrasure between the maxillary lateral incisor & canine.

class II → The mandibular canine interdigitate distal to embrassure between the maxillary lateral incisor and canine.

class III → The mandibular canine interdigitate in any other teeth

3) Mixed Dentition Period :-

The period during which both the primary and permanent teeth are present in the mouth together is known as mixed dentition.

First transitional Period :-

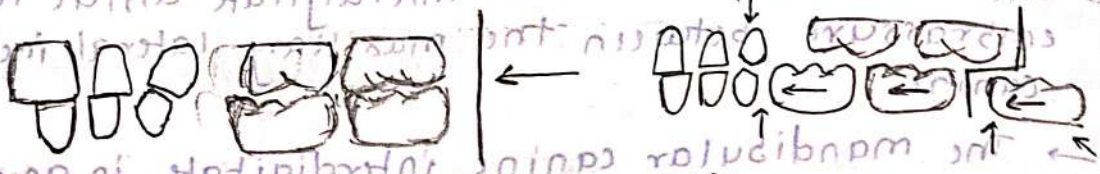
This is characterised by emergence of 1st permanent molar and exchange of deciduous incisors with permanent incisor

- Emergence of 1st permanent molar :-

- The anteroposterior relation between the two opposing 1st molar after eruption depends on their position.
- previously occupied within in the jaw. sagital relation between maxilla and mandible and occlusal relationship is established by the cone and funnel mechanism with the upper palatal cusp sliding into lower occlusal fossa.
- The mandibular molars are the first to erupt at around 6 year of age. Their position and relation is depend on the relation of end deciduous molar as they are guided into dental arch by the distal surface of these teeth.
- If the second deciduous molar is in flush terminal plane then the erupting permanent ~~into class I relation~~ molar will also be in same relation
- For this, to change into class I relation, the molar has to move 2-3 mm in forward direction, this is accomplished by :-

a) Early mesial shift :-

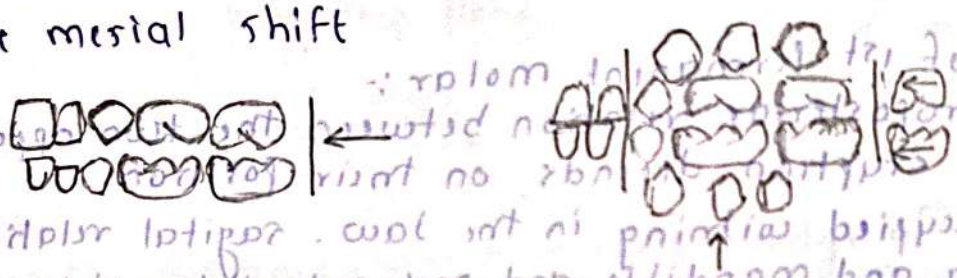
- The eruptive phase of first permanent molar are strong enough to push the deciduous molars forward in the arch.
- There utilising the primate spacing and establishing class - I relationship.



Early Mesial shift.

b) Late Mesial shift :-

- Many children lack primate space and have to non-space dentition and thus erupting permanent molars are not able to establish class I relation even as they erupt
- In these cases, the molars establish class I relation drifting mesially and utilization of leeway space after exfoliation of deciduous molars and this is call late mesial shift



Late mesial shift

Exchange of incisors :-

- Deciduous incisors are placed by permanent incisors
- Period of transition is 6.5 to 8.5 Yrs
- Permanent incisors are larger as compared to their primar counterpart and thus require more space for their alignmi

Intertransitional period :-

- In this period the maxillary and mandibular arches consi of permanent molar that sandwitch the deciduous canine molar
- This phase lasts for 1.5 year and it's relatively stable.

Second transitional period :-

This phase is characterised by replacement of deciduous molar canine by premolar and permanent eruption of maxillary lateral incisor and canine.

Replacement of Deciduous molars & canine :

- The combine mesiodistal width of permanent canine and premolar is less than of deciduous canine and molars
- Extra space is called leeway space and is utilised by mandibular molar to established class III.

Eruption of maxillary canine :

- As the permanent maxillary canine erupt, they displace the root of maxillary lateral incisor mesially
- This force is transmitted to central incisor and their root are also displaced mesially
- This is called ugly duckling stage.
- The condition correct it self after the canine have erupted.

Permanent Dentition :

- The entire permanent dentition is formed within the jaw after birth except for the cusp of 1st molar which are formed before birth
- some changes that can be seen in permanent dentition are
  - Horizontal overbite decrease.
  - Dental arches become shorter
  - vertical overbite decrease up to age of 18 year by 0.5 mm
  - overjet decrease by 0.7 mm b/w 12 to 20 years.

Key of occlussion :

The permanent dentition after establishing itself is governed by various factor

- Molar interarch relationship
- Mesiodistal crown angulation
- Labiolingual crown inclination
- Absence of Rotation

Molar interarch relationship :

The distal surface of distobuccal cusp of upper 1st permanent molar made contact and occluded with the mesial surface of mesiobuccal cusp of lower 2nd molar.

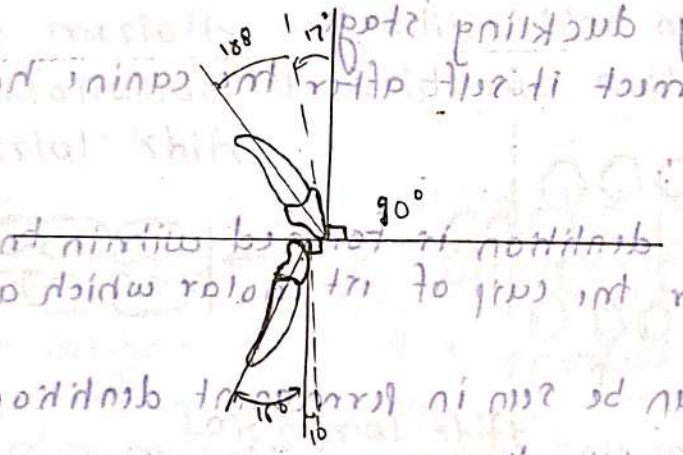
Mesiodistal cusp of upper 1st molar fell within the grooves b/w the mesial & middle cusp of lower 1st permanent lower molar.

Mesiodistal crown angulation :

Crown angulations refers to angulation of the long axis of crown not to long axis of entire tooth.

Gingival part of the long axis of crown must be distal to occlusal part of axis.

crown angulation inclination is determined by the resulting angel b/w 0° to 90° to occlusal plane to 0° line tangent to middle of labial or buccal inclination crown.



Tight contacts :

Permanent dintition should have close contact to optimise space. Person who have genuine tooth size discrepances pose special problems but in the absence of such abnormalities.

Self correcting Anomolies :

① Predintate Period :

Retrognathic mandible - Differential and forward growth of mandible

Anterior open bite - Eryption of primary incisor

Infantile swallowing pattern

i) Eryption of teeth

ii) Enlargement of dict

② Decidlous dentition:

- Anterior deep bite
  - i) when attrission of incisal edges occur
  - ii) when permanint molar erupt
  - iii) when mandible grows forward & downward
- Physiologic spaces
  when permanint incisor erupt they ~~are~~ use spaces
- Primate space
  when early & late mesial shift occurs

Retained Infantile swallow	Mature swallow.
- Tongue is placed between incisor	- Tongue is placed at incisive papillae.
- Temporallis does not contact during swallowing	- Temporalis contact during swallowing
- No horreshoe shape arch	- Horreshoe shaped arch
- Incisors are proclined	- Not proclined
- only cheeck applies force	- cheeck and tongue both applied force.
- crossbite seen in posterior teeth	- Not seen.
- Maxillary arch is more constricted	- less constricted

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8. TEETHING

Defination :

It is a process by which on infant first teeth sequentially erupt and appears in oral cavity.

Sign and symptoms :

- Pain
- General irritability / malaise
- Mucous membrane inflamation
- Drooling
- Sialorrhea
- Facial flushing (circumferential rash
- Biting
- Suckling / Gum rubbing
- Disturbed sleep
- Bowel upset
- loss of appetite
- Eat rubbing on same side as erupting teeth.

Management :

i) Pharmacological
ii) Non-Pharmacological
iii) Alternative Holistic medicine.

i) Pharmacological :-
   a) Topical agents
   b) Lignocaine based products
   c) choline salicylate based product
   d) systemic analgisics.

ii) Non Pharmacological :
   a) Pulled carrots, frozen bagel
   b) Hard non [illegible] rusk.
   c) Teething risk.
   d) Pacifiers

iii) Alternative : Holistic medicine

a) Accupressure
b) Armotherapy
c) Homeopathy
d) Massage.

Teething Disturbances :

1] Eruption Hematromal cyst :
- Bluish purple elevated area, few weeks before permanent teeth
- primary 2nd molar, secondary 1st molar
- self limited

2] Eruption sequestrum :
- cementum like material formed within dintal follicle
- sun at 1st molar eruption
- spontaneously resolve without noticable symptoms

3] Ectopic eruption :
- Arch lingth inadequacy
- Retained primary dintition
- Non spaced primary dintition

Natal and Neonatal teeth :

- Defined by marseter and savara
- Natal = present at birth
  Neonatal = erupt during 1st 20 days of life
- More in female
- Most affected lower primary central incisors.

Heblings classification :

category 1 = A shell like crown structure loosely attached to alveolus by rim of oral mucosa or no root.

category 2 = solid crown loosely attached to alveolar by oral mucosa little root

category 3 = Incisal edge of crown just erupted through oral mucosa.

category 4 = Mucosal swelling with tooth unerupted but palpable

Treatment :-

- CHX 3 times a day
- Extraction Natal : vitamine K Prophylactic
  vitamine K synthesis clotting factor which help in stopping bleeding
  Neonatal : vitamine K may not be needed as gut flora deve within 10 days.

complication :-

- Traumatic ulceration of ventral surfaces of tongue
- Riga fede disease as histologically it was described by them

Non-eruption teeth :-

- Etiology = Premature loss of teeth
  Tx = Incision
  Gum massage

Ankylosed teeth :-

- Most common mandibular primary molar
- Tooth root becomes firmly attached to alveolar bone before their normal exfolliation
- Extensive bony ankylosis of primary tooth may prevent normal exfoliation and eruption of 2° successors

Epstein Pearls :-

- Midpalatine raphe remanents of epithelial tissue trapped along raphe as foetus grows

John nodules :-

- Formed along buccal and lingual aspect of dental ridges and on palate away from

Dental lamina cyst :-

- crest of maxillary & mandibular dental ridges
- Remanents of dental lamina

Dental caries

Introduction :

caries is difined as microbial disease of the calcified tissue of teeth that leads to diminerallisation of inorganic component and subrequint breakdown of the of enamel and Dentin

Defination :

Dental caries is an irreversible microbial disease of calcified tissue of teeth. characterized by diminiralisation of inorganic portion and destruction of organic substance of tooth which leads to cavitation.

classification :

1) According to occurence
   a) Incipiat - Initial primary caries often reversible
   b) Recurrent - secondary caries
   c) Residual - caries left due to mistake of dentist

2) According to speed
   a) Acute - fast streading
   b) chronic - slow spreading

3) According to location :
   a) Pit & fissure
   b) smooth surface
   c) Root surface

4) According to direction :
   a) Forward caries : When caries in V-shaped that is base pointed towards DEJ
   b) Backward caries : When more extensive destruction is toward DEJ with small apex.

5) According to age
   a) Early childhood caries
   b) Adolescent caries
   c) Senile caries.

6) According to surface :
   a) simple - one surface involved
   b) compound - two surface involved
   c) complex - more than two surface involved

7) According to type of surface :
   - a) occlusal
   b) Proximal

Theories of Dental caries

1] Millers chemicoparasitic theory :
- A synthesis of ideas that acid and micro-organism were involved by etiology of dental caries.

Process :
- The microorganism of mouth by secretion of enzyme or by th own metabolism, degrade, fermentable, carbohydrate food material so as to form acid
- The enamel is destroyed by acid of fermentation and disin enamel is subsequently mechanically removed by forces of mastication
- After penetration of enamel the dissolution of dintin is brought about by is some manner with organism, penetrati along dintinal tubules.
- Final breakdown of dintin result from the secretion of proteolytic enzyme that digest the organic part of dintin & form a cavity.

Critique of theory
- unable to explain predilection of specific sites on both to dintal caries
- The initiation of caries on smooth surface was not accoun for
- does not explain why some population are caries free
- Phenomenon of arrested caries is not explained
- concept of tooth resistance histological did not have experimental support.

2] Proteolytic theory :-

- The surface coverings found on the tooth, in grooves and pits are organic in nature also enamel contains small but significant amount of organic material
- They described caries like lesions that were initiated by proteolytic activity of slightly alkaline pH and considered that the process involved depolymerisation & liquefaction of organic matrix of enamel.

3] Proteolytic chelation theory :-

- This theory was proposed by Shartz et al in 1995
- According to this theory simultaneous microbial degradation of organic component and dissolution of the mineral of tooth by process of chelation

critique of theory

- The inficting streptococcus could not hydralyse gelatin casein, collagen or chondritin. Although proteolysis of organic matrix of dintin may indeed occur after demineralisation, there is no satisfactory evidance to support initial attack on enamel is proteolytic.

4] other theories :-

a) legend of worm
b) vital theory
c) chemical theory
d) surface theory
e) complexing & phosphorylation theory.
f) sucrose chelation theory
G) Autoimmunity theory.

Stephan's curve :-

- In 1940, Dr Robert, Stephan suggested that there was continuous change in salivary pH following consumption of food and beverages especially with fermentable carbohydrate.

Resting Plaque pH :-

This describe that plaque has not been exposed to fermintas carbohydrate for approximately 2 hr and generally have a pH of b/w 6 & 7

This resting plaque pH value for an individual tend to be stable and may remain so far long periods.

Decrease in Plaque pH :-

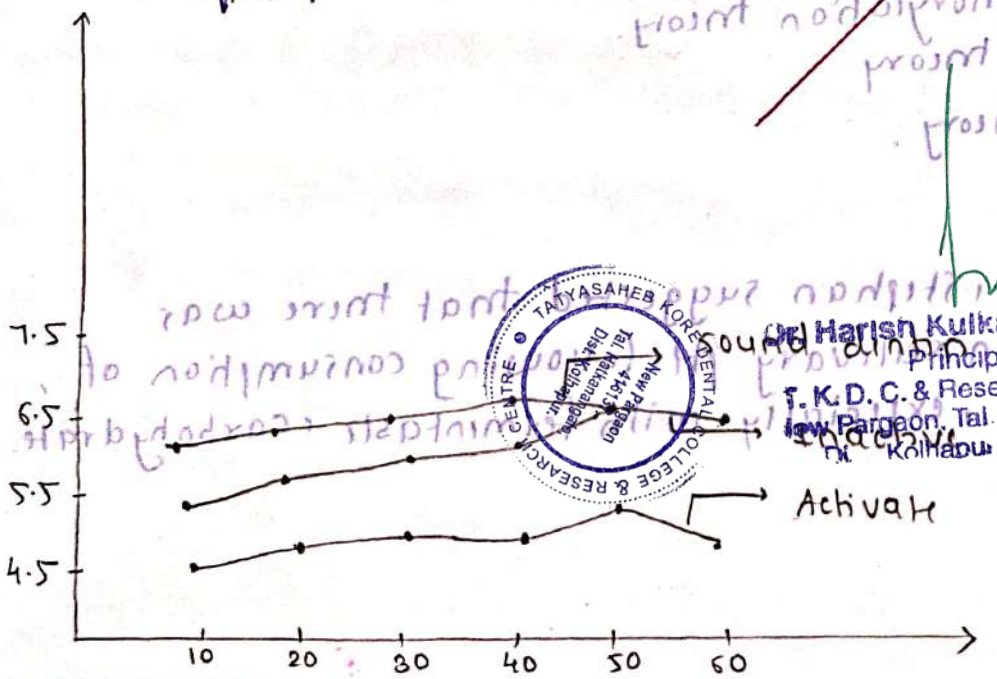
- After exposure of dintal plaque to fermintasu carbohydrate the pH decrease due to part of composition of dintal plaque
- In general if more acidogenic bacteria are presint in plaque the pH would lower more rapidly

Critical pH :-

- The pH at saliva no longer remains saturated with calcium & Phosphate ions thereby permitting hydroxyapetite in dintal enamel to dissolve
- It is highest pH at which there is net loss of enamel from teeth which is generally accepted to be about 5.5 for enamel.

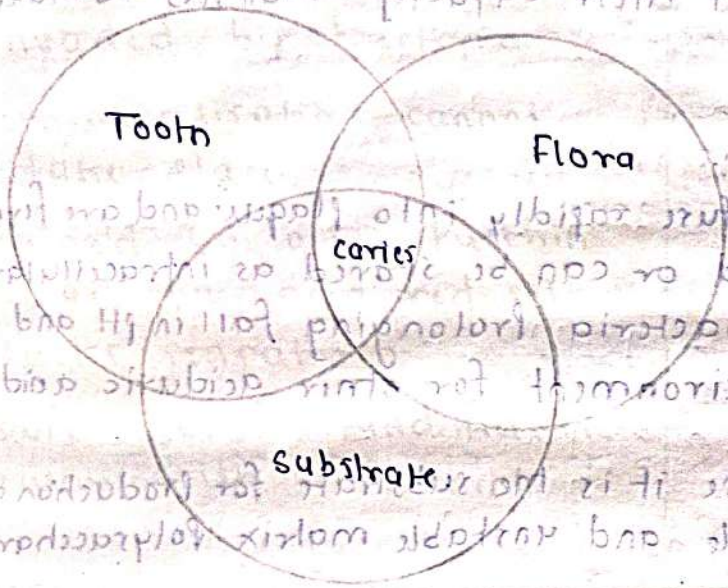
Increase in plaque pH :-

- The low pH remain for same time taking 30-60 min to return to normal pH
- Differences were seen b/w caries free group and caries active group with latter group having significantly lower plaque pH

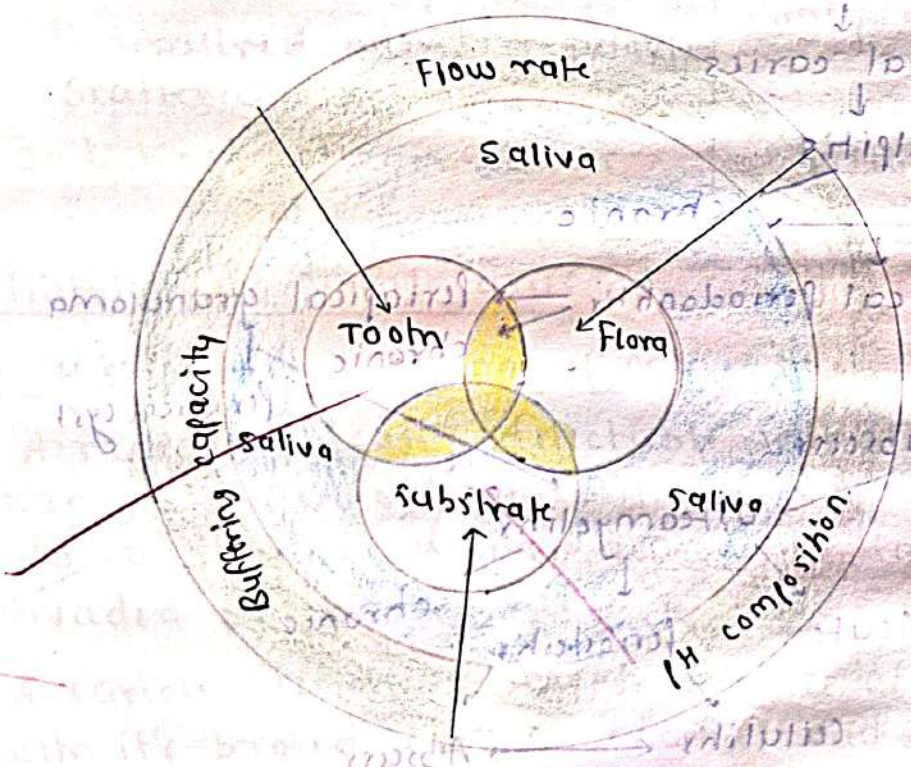


current concept of dental caries :-

1) Keyes model



2) current concept :-



- Interaction between three primary factor is essential for initiation and progression of caries.
  A susceptible host tissue, the tooth, microflora with a cariogenic potential and substrate to meet requirements of pathogenic flora
- Micro-organisms are pre-requisite for carier initiation.

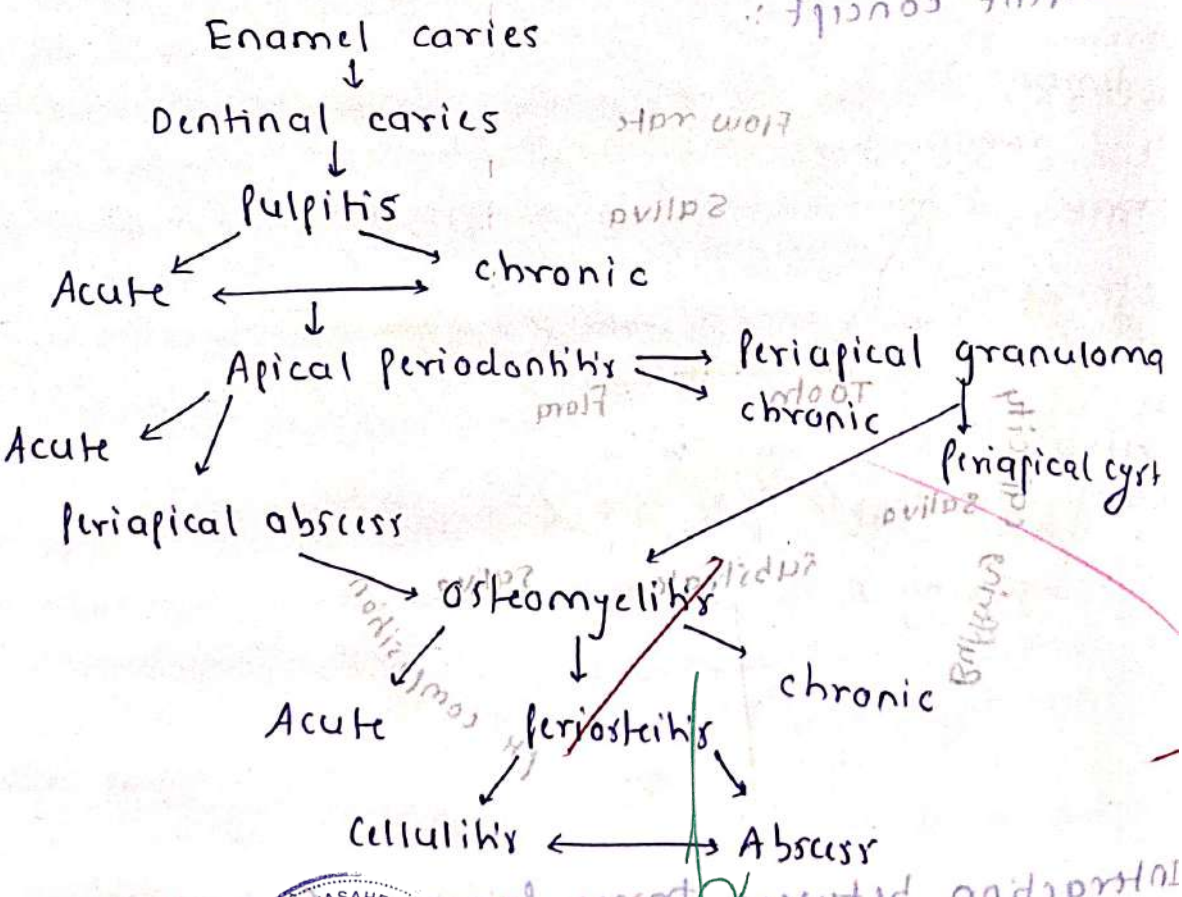
- A singel type of organism is capable of including carie
- The ability of producing acid are cariogenic
- organism vary greatly in their capacity (virulince) to induce caries

Sucrose an arch criminal :

- The dietary sucrose all diffuse rapidly into plaque and are ferm to lactic acid or other acid or can be stored as intracellular polysaccharides by the bacteria prolonging fall in pH and promoting a suitable environment for other aciduric acid acidogenic bacteria

sucrose is unique because it is the substrate for production of extracellular polysaccharide and unstable matrix Polysaccharic

Sequale of Dental caries :



Infected Dentin	Affected Dentin
- superficial dintin layer	- Deep dentinal layer
- Invaded by bacteria	- Not attacked by microbes
- Remineralisation cannot take place	- Remineralisation can occur
- stained by 0.5% Furchin or 1% acid red sol^n	- cannot be stained
- Lacks sensation	- sensitive to instrument
- soft necrotic and flakes away with instrument	- softer than normal dentin discoloured but does not flakes easily, firm & leathery
- Gentle scraping can remove it easily	- Medium pressure gentle scraping can remove easily
- Intertubular layer is dimeralised with irregularly scattered crystal	- only partly demineralised
- Indistinct collagen bands	- Distinct collagen bands

Histology of Dental caries :

A] Histopathology of enamel caries :

- A radiographically detectable initial enamel lesion when examined histologically will show carious process penetrating to underlying dentin, although, dentinal tubule is not invaded by bacteria.
- A carious lesion on smooth surface of enamel is conical shape with it's broad base on enamel and the apex towards Dentin. when lesion reaches enamel dentin junction it spreads laterally along DEJ, thus undermining normal enamel.

1) Translucent zone:

- The advancing front of carious lesion is represented by translucent zone.
- The first discernible signs of enamel breakdown are seen in this area.
- Enamel alteration in this zone or pores of at junction site such as prism boundaries.

2) Dark zone:

- The dark zone lies deep to body of lesion & just superficial to translucent zone.
- The zone is positively bifringement and has pore volume of 2.4 %.

3) Body of lesion

- Deep to relatively unaffected enamel surface layer is body of carious lession.
- Ground section when viewed in transmitted light reveal enhanced straie of Retizus and cross-straiation in enamel prism.
- This zone unlike normal enamel is postively bifriggent dinoting significant degree of mineral loss.
- Pore volume of 5 %.

4) Surface zone:

- An important feature of initial carious lesion is presence of an apparently intact enamel surface overlying an area of substrate diminerialisation.
- quantitative studies of the surface layer 20-100 mm thickness indicate that partial deminerialisation equivalent to about 1-10 % loss of mineral salts has taken place.
- zone of negative bifrengence.

Histopathology of dentinal caries :

As the carious lesion invades dentin, dentinal tubules become involved

This is divided into 5 zones

i) zone of decomposed dentin
ii) zone of bacterial invasion
iii) zone of demineralisation
iv) zone of dentinal sclerosis
v) zone of fatty degeneration.

- Translucent zone is identical to sclerosed dentin
- Presumbly sclerosis is an attempt to block advancing carious lesion
- Narrow zone of demineralisation affecting intertubular matrix is seen occlussion of dentinal tubules is also seen in sclerotic dentin
- Propably due to reprecipitation of crystalline material that had dissolved during carious process
- zone of bacterial invasion - lumen of tubule is distended giving ballooned or dilated appearance variously described as liquefaction foci.
- ~~zone of bac~~ These dilations eventually coalesce forming outermost zone decomposed dentin.

Additional changes :

cleft formation at right angle to tubules or follow contour lines of owen and of dead tracts.

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EARLY CHILDHOOD CARIES

Defination :

- complex disease involving maxillary primary incisors within a month after eryption and spreading rapidly to other primary teeth is called childhood caries
- The disease of early childhood caries is presence of one or more decayed, missing or filled tooth surface in any primary tooth in child 71 months of age or younger
- In children younger than 3 years of age of any sign of smooth surface carier is indicative of severe childhood caries from age -3 through 5. one or more cavitated, missing or filled smooth surface in primary maxillary anterior teeth or a decayed missing or filled score > 4 > 5 , ≥ surface constitute Ecc.

classification :

A] Type I (Mild to moderate)
- Existence of isolated carious lesion involving molars Number of carious teeth increases as cariogenic incisors challenge perists
- cause is usually combination of cariogenic semisolids food and lack of oral hygiene
- seen in 2-5 year old

B] Type II (Moderate to severe)
- Labiolingual carious lesions affecting maxillary incisors
- Mandibular incisors are not affected
- use of feeding bottle or breast feeding or comsination of both with a without poor oral Hygiene

C] Type III (Severe) :
- carious lesion affecting all teeth including lower incisors cause is cariogenic food & poor oral hygiene condition is rampant

Synonems :-

- Nursing caries - By winter (1965)
- Tooth clearing neglect - By Mais (1999)
- Infant & early childhood dintal decay - By Harowitz (1995)
- Early childhood caries - By Davies
- Maternally derived streptococcus mutans disease

clinical feature :-

stage	clinical stage	Age	Features
stage I	Initial reversible	10-16 month	cervically & occasionally interproximal areas of chalky white demineralisation. No pain
stage II	Damaged carious	18-24 month	Lesion in maxillory anterior teeth may spread to dentin & show Yellowish brown discolouration; pain on having cold food items.
stage III	Deep lesion	24-36 month	Depending on time of eryption cariogenic of sweetner and frequency of it's use. This stage can be reached in 10-14 month, also molars are affected - frequint complain of pain and pulpal involvemint in max. incisors.
stage IV	Traumatic	36-46 month	Teeth becomes so weakened by caries that relatively small forces can fracture them. History of trauma, molars with pulpal problem Non vital max. involvemint.

Etiology :

Etiology of Ecc is similare to other types of coronal smooth surface caries biology may differ in some respect.

1] Plaque :

- When fermentable carbohydrate are present, lactate is present Produced, pH drop in plaque
- Bacteria and alkaline Product provide contribution to pH rise in plaque and base generating metabolism of plaque bacteria considered by many to be significant determinant of cariogeneciatty of plaques
- Presence of visible plaque and it's early accumulation have been related to caries occurence among children

2] Mutans streptococci

- They possess a wide range of cariogenic traits they synthesiz α-1,3 rich water insoluble glucans
- Larger production of acid driving demineralization, irreversibly adhere to pellicle through synthesize of glycans mediated by glycosyntransferases

3] Infant feeding pattern

- studies have examined reports bedtime bottle use in children with or without maxillary anterior decay.
- Length of contact with bottle at night time is also important children who are exclusively breastfeed also appear to be susceptible to caries.

4] Tooth brushing :

- Major problem confronting the investigation of relionship b/w tooth brushing and Ecc is methodological tissue of assessing frequency of brushing, quality of plaque removed actual level of oral hygiene.

5) Salivary factor :

- Major problem confronting the investigation of relationship b/w tooth brushing and Ecc is methodological tissue of assessing frequency of brushing, quality of plaque removal.

6) Sugar:
- sucrose, glucose and fructose in fruit juices & vit. c as well solids are probably main sugar associated with caries
- sugar is only substrate used fore bacterial generation of plaqui dixtran.

7) Oral clearance of carbohydrate:
- sleep time consumption of sugar is another common charact increase length of contact btw plaqui and substrate characteristically, localized to maxillary primary incisor and 1st molar

8) Bovine milk:
- Milk decrease solubility of enamel and result have been extend by intraoral cariogenicity. rest protection by milk appear to work are decreasing demineralisation as enamel increasing calcium and phosphate conc. in plaque

9) Human milk:
- compared to bovine milk human breast milk has lower mineral content, higher conc. of lactose and less protein

10) Fluorides:
- Topical effect of fluorides are complex changes in mineral phase

Secondary etiological Factor:

① Immunological factor
- Hard tissue are immunologically inactive, host defense mecha. involved in dintal caries is centred on prevention of colonization and patnogenin activity of cariogenic bacteria.
- Immune mechanism include specific immune factor dirved from saliva or seru

② Tooth maturation defect:
- Tooth is most susceptible to caries in period immediately after eruption and prior to final maturation

- combination of recently erupted immature enamel in environment of cariogenic flora with frequent ingestion of fermintable carbohydrate.

③ Race & ethinicity :-
- Increased risk of that could be associated with cultural norm including concern for oral health

④ Acid fruit drink :-
- Acid in fruit juices and soft drinks may decreases oral pH presence of sugars in drink. This fall in pH likely to enhance fermintation of carbs cause more profound enamel demin

⑤ Stress :-
- Brown studied relationship b/w caries and stress demonstr as positive relationship b/w parents anxiety about dental treatment and childhood caries.

Prevention of ECC :-
- Early screening for sign of caries development showing risk of developing ECC
- High risk children should be targeted with professional representative program that include fluoride, suppliment sealant, diet counselling & CHX

Rapid scale :-
- Readiness assessment of parents concerning infant dent decay scale was developed to assess parent stage of change, pre contemplative or action with regard to child dental health
- openess to health information
- valuing dental health.
- convinience and change difficulty

community based education :-

- Increased knowledge of mother about Ecc to improve dietary and nutritional habits of infant and mothers.
- self care habits and dietary practice improve oral hygiene habits of infants leading to prevention of Ecc.

Prevention of transmission of cariogenic bacteria :-

- cariogenic bacteria are transmitted from mothers to infant Program included Provision of dintal education oral hygine instruction, dintal treatmint tooth cleaning application of 2% NaF & Fluoride varnish.

Fluoride use according to H_2O Fluoride levels :-

Age	F^- H_2O level (mg Fl/day)		
	<0.3	0.3 - 0.7	>0.7
0 - 2	0.25	0	0
2 - 3	0.50	0.25	0
3 - 16	1	0.50	0

Risk base tt/t methodology :-

No Ecc sign low risk	sign of Ecc/ high risk
Fluoridated dentifrices Review of dietary & oral hygiene	Fluorides varnish Sealant CHX varnish Xylitol Pacifiers Fluoridated supplimint Dietary counselling

RAMPANT CARIES :

Massler difined rampant caries as suddenly appearing widespread rapidly spreading burrowing type of caries resulting in early involvement of pulp and affecting those teeth which are usually regarded as immune to decay.

Winter et al (1986) difined rampant caries as caries of acute onset involving many or all teeth in areas that are usually not susceptible. It is associated with rapid crown distruction with frequent pulpal involvement.

Etiology :

1) salivary deficiency
   - Due to radiation therapy
   - In stressed children who have tranquilizer
   - Xerostomia
2) Acidogenic bacteria, dental plaque, tooth structure susceptible to dissolution
3) Genetical
4) Habits
5) Feeding sweetened milk through night
6) sweetened pacifiers
7) Nursing of child through night
8) Diet - In b/w meal snacking of cariogenic food
9) sucrose in diet
10) Physiological factors :
    - emotional disturbance
    - Repressed emotional fear may cause decreased salivary flow

clinical features :-

1) The initial lesion :-

→ Labial surface of maxillary incisors, close to gingival margin as a whitish area of decalcification or pitting of enamel surface shortly after eruption

soon these lesions
- Pigmented to light yellow
- Extend laterally to proximal surfaces
- Downward to incisal edge.

2) Advanced stage :-

- Lesions extends tooth circumference leading to fracture of crown on minimal trauma. other teeth involve gradually
- Decreased in salivary flow rate during sleep and pooling of sweet fluid around teeth like milk, vit C syrup. sweetned fruit juices, carbonated drinks result in highly cariogenic environment.

Teenager's / Adolescant's :-

Buccal and lingual caries of premolar and molar and proximal and labial carier in mandibular incisors.

Management :-

Type of treatment instituted to patient

① Patient and parent motivation towards dintal treatment.

② Extent of decay

③ Age & co-operation of child.

Initial treatment :

① Provisional restoration
② Diet assesment
③ oral hygiene instructions
④ Home and professional final treatment

- Decreased frequency of sucrose consumption with meals
- consumption of sugar containing food and beverages should be restricted to meal times
- Parents can be instructed to record amount and quantities of food and beverage consumed during with meal for 3 consiquative days
- Introduced proper brushing technique to patient under 8 years - fones technique / circular scrub technique
  11-12 years - Bass technique
- systemic and topical fluoride treatment (0.3 - 0.7 ppm)

Type	0-1 yrs	2-3 yrs	3-13 yrs	7-13 yrs
Dietary fluoride supplement	-	0.25 ml/ day	0.5	-
operator applied	APF topical sol or gel 1.23 % fluor applied in day time	APF topical sol or gel 1.23 % Fluoride 4 times a day	APF topical solution 1% gel. 2.3 % Fluoride 4 times in a day	APF topical sol 1% gel 2.3 % F 4 times a day
self applied	-	-	self application of gel tray daily for 4 weeks then continue with daily F- rinse	self application of gel tray daily for 4 times then continue with daily rinse (0.05 % NaF)

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Age specific Prevention of Rampant caries :

① 0 - 5 years :
- oral hygiene instructions to parents
- Tooth brushing with supervision
- 6 month recall

② 5 - 12 years :
- Toothpaste
- Fluoride tablets upto 8 years if in area without water Fluoridation
- Mouth rinse
- Professional topical fluoride application every 6 month

③ 12 years and above :
- Interdintal cleaning with floss
- sealants

Rampant caries	Nursing Bottle caries
- Acute widespread rapid	- Specific form of rampant caries
- All ages	- Infant, children
- Primary & permanent dentition	- Primary dentition involved
- etiology = Multifactoral	- Bottle feeding, pacifier dipped in honey at will breast feeding
- T/t Pulp Therapy	- T/t Topical fluoride
- Prevention - Dental health education	- Prevention - Dental health education
- Acute generalised spread of caries and pulpal involvement of all teeth	- Acute generalised spread of caries and pulpal involvement in selected teeth of dentition.

PULP AND PERIAPICAL DISEASES

- Dintal pulp occupies center of each tooth and consits of soft connective tissue
- Primary teeth have so pulp organ, their shape confines to tooth

Pulp disease:

Dintal pulp responds to changes in invironment in someway as any other loose connective tissue

Etiology of pulp diseases:

- Most common cause and of pulp and periapical disease is presence of micro organism within involved tooth

other factor:

A] Physical
- i) mechanical - trauma
  - Pathological
  - crack through body of tooth
  - Baromerric changes
- ii) Thermal - Heat from tooth preparation
  - Exothermic heat from setting of cement
- iii) Electrical - Galvanic current

B] chemical:
- Phosphoric acid
- Acrylic monomer etc.
- Erosion

c] Bacterial:
- Toxin associated with caries
- Microbial colonisation.

clinical classification of pulpal Diseases :-

1) Inflammatory diseases of pulp
   - Acute Reversible pulpitis
   - chronic Reversible pulpitis
2) Irreversible Pulpitis
   - symptomatic irreversible pulpitis
   - Asymptomatic irreversible pulpitis
   - chronic Hyperplastic pulpitis
2) Pulp degeneration :-
   - calcific degineration
   - Fibrous degeneration
3) Pulp Necrosis

classification of Peri-radicular diseases :-

1) symptomatic Periradicular disease
   - Primary symptomatic Apical Periodontitis
   - Secondary symptomatic Apical Periodontitis
   - symptomatic alveolar process
2) Asymptomatic Periradicular direase
   - Assymptomatic apical periodontitis
   - Assymptomatic alveolar abcess
   - condinsing osteitis
3) Histological classification
   - Apical granyloma
   - Apical abcess
   - Apical cyst.

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Reversible pulpitis :

- Pulp with reversible pulpitis has mild inflammation and is capable of healing once the limitating stimulus has been removed.
- Pain is only felt when a stimulus is applied to tooth
- pain cases within few seconds or immediately upon removal of stimulus
- This is due to movemint of dintinal fluid toward pulpal tissue
- pain is short and shary in nature never spontaneous.
- No radiographic changes evidint in periapical region.

Treatmint :

Grossman stated - Best treatment is previntion. Removal of noxious stimulus generally is sufficint to allow pulp to return to healthy

Irreversible pulpitis :

- Pulp is damaged beyound repair and even removal of nox stimulus will not allow it's proper healing
- pulp generally degenerates progressively causing necrosis & reactive distruction
- classic symptoms of irreversibly pulpitis is lingering pain included by thermal stimulus
- Initial reackon is very sharp to hot or cold stimulus followed by dull ache or throbbing pain for minute to hrs after stimulus is removed.
- pain increase on binding or lying down
- spontaneous pain is another hallmark feature
- If periapical tissue is involved, tooth is tender on percu
- Radiograph are not useful in diagnosis by helpful in idintifying possible cause of disease

Treatmint :

Pulpectomy.

Chronic Hyperplastic Pulpitis (Pulp polyp)

- It is an productive inflamatory response of pulp
- Involves chronically inflammed young pulp widely exposed by caries on it's occlusal aspect
- characterized by proliferative growth of inflammaed connective tissue rising out of carious lesion
- Tissue is firm, insensitive to touch and ocasionally may cause mild discomfort during mastication
- often covered with epithelium, it resembles pyogenic granuloma of gingiva from which it may be easily differintiated by lifting it away from the walls with spoon excavator to view of pedicle of origin.
- No significant radiographic changes

Treatmint :

- Brodily decayed tooth restoration is impossible extraction indicated
- Tooth can be restored, Pulpectomy or endotherapy are recommended.

Dentoalveolar abscess :

- Symptomatic (acute) apical abscess is an inflammatory reaction to pulpal infection & Necrosis characterised by rapid onset spontaneous pain, tenderness of tooth to pressure pus formation and eventful swelling of associated tissues

causes =
Trauma / chimical / mechanical irritation / bacterial invasion of dead pulp tissue.

Symptoms = Tenderness of tooth, severe throbbing, attendant swelling of overlying soft tissue as swelling extends become more painful elongated & mobile. pus starts from breakm swelling, fever, chills, foul, breath

Treatmint : Establishing drainage
controlling systemic reaction.

Apical Periodontitis :-

- It is painful inflammation of periodontal tissues which result of microbes spreading from root canal to periapical tissues
- Patient will generally complain of discomfort to biting or chewing
- sensitivity to percussion is hallmark
- tooth non sensitive to hot or cold
- Depending on cause of inflammation it may be distinct radiolucency

Treatment :-

- Determination of cause of relieving symptoms pulpal involvement
- endodontic treatment indicated

Periapical Abscess :-

- References to painful localisation of pus in periapical connective tissue
- characterized by rapid onset, spontaneous pain, pus formation and often swelling of associated tissues
- Depending upon location apices of tooth & muscle attachment swelling will usually develop in buccal vestibule or lingually palatal or facial space infection.
- Percussion testing produces response that is usually exclusively sensitive
- Palpation testing may produce a sensitive response
- Radiographically PDL space may slightly widened, demonstrate as distinct radiolucency

Treatment :-

Endodontic treatment with drainage control of systemic manifestation

GLASS INOMER CEMENT

- Glass inomer cements are adhesive tooth-coloured anticariogenic restorative material which originally used for restoration of eroded areas.
- The first reliable glass inomer system was formulated in 1972 by wilsons & Kent and was known ASPA
- It is named glass inomer because, powder is a type of glass and setting reaction and adhesive bonding to tooth structure is due to ionic bond.

Synonyms :-

- Polyalkenoate ciment
- GIC
- ASPA (Alumino silicate polyacrylic acid.)

classification :-

Iso classification

a) Luting
b) Bases and liner
c) Restorations

According to modifications :-

a) conventional GIC
b) Resin modified GIC
c) Metal modified GIC

Acc. to application

1) Luting
2) Restorative
3) Base & liner
4) Pit & fissure sealant
5) orthodontic purpose
6) core build up
7) Fluoride releasing
8) ART
9) Pediatric

composition :

Powder

- The powder is an acid - soluble calcium fluro - aluminosilicate glass

1. silica (SiO_2) - 41.9%
2. Alumina (Al_2O_3) - 28.6%
3. Aluminium fluoride - 1.6%
4. calcium fluoride - 15.7%
5. sodium fluoride - 9.3%
6. Aluminium Phosphate - 3.8%

Liquid :

- originally liquid was 50% aqueous solⁿ of polyacrylic acid
- Modern glass inomer liquid are in form of copolymers
  1. Polyacrylic acid 50%.
  2. Tartaric acid 13%.
  3. water

Mixing time → 45 seconds

Setting time → 7 min for lutting type
→ 4-5 min for restorative type

Setting reaction of GIC :

Powder & Liquid

↓

surface of GI particles is attacked with H^+ ion of acid

↓

Acid soluble glass is attacked by polyacid releasing Ca^{++}, Al^{+++}, Na^+, F^-

↓

Initially ca and later Al replaces hydrogen on carboxyl grp of polyacid to make ca and Al polysalts

↓

Acid attacks ca-rich sites and metal ions migrate aqueous phase of cement towards polyacrylic acid

↓

chain get's cross linked leading to formation of ca polyacrylate & gleatin.

The salts hydrate to forms gel matrix while unreacted portion of glass particle are surrounded by silica gel that arises from loss of surface cations

↓

Na^+ ions replaces H^+ ions of carboxylic group whereas remaining from NaF, F^- ions thus lie free within matrix and are able to conduct F^- release.

Indication :-

- Non-stress bearing
- class III & V restoration in adult
- class I & II restoration in primary dentition
- Temporary & caries control restoration
- crown margin repairs
- cement base under amalgam, resin, ceramics direct indirect gold

Contraindication :-

- High stress application
- class IV & II restoration
- cusp replacement
- core buildup with less than 3 sound walls remaining.

Advantage :-

- Bonds to enamel & dentin
- significant F^- release & recharge ability
- Tooth coloured
- low thermal conductivity.

Disadvantage :-

- opacity higher than resin
- less permeability than resin
- poor wear resistance
- Brittle, poor tensile strength
- poor longevity in xerostomic pt.

Modification:

1) Metal modified GIC:

→ silver alloy, miracle mix

Ag amalgam alloy particle mixed with glass particle

Simmon used - core buildup

- High caries index
- poor esthetic and do not burnish

2) Cermet:

→ By Mclean and Grasser

Improved resistance to abrasion

High flexural strength

strength is still insufficient to replace amalgam alloy and t
ure is confined to low stress bearing cavity preparation

3) Resin modified GIC

→ - visible light cure

- Fundamental acid base curing reaction is supplemental by a second curing process which is light/chemically
- Dual cure or Tri cure elements

ART

Defination :-

A dental caries treatment procedure involving removal of soft mineralised tooth tissue using hand instrument alone followed by restoration of tooth with adhesive restorative material

Advantages :-

- No Need of injection
- No scary second making instrument
- less chances of bleeding
- less expensive
- Fast Procedure for better child co-operation
- Removal only of caries

Disadvantage :-

- ART restorations are not long lasting
- fundamental principle of cavity preparation are not follow
- less wear resistance & low stregth
- Hand fatigue due to hand instrumentation

Procedure :-

Tooth is isolated with cotton rolls.

↓

cleaning of tooth surface

↓

lesion is slightly widined by hand instrument to remove unsupported enamel using enamel hatchet

↓

caries are removed by spoon excavator.

↓

If necessary provide pulpal protection

↓

Cavity is acid etched

↓

Mixed glass inomer is inserted into cavity

↓

cavity is slightly overfilled

↓

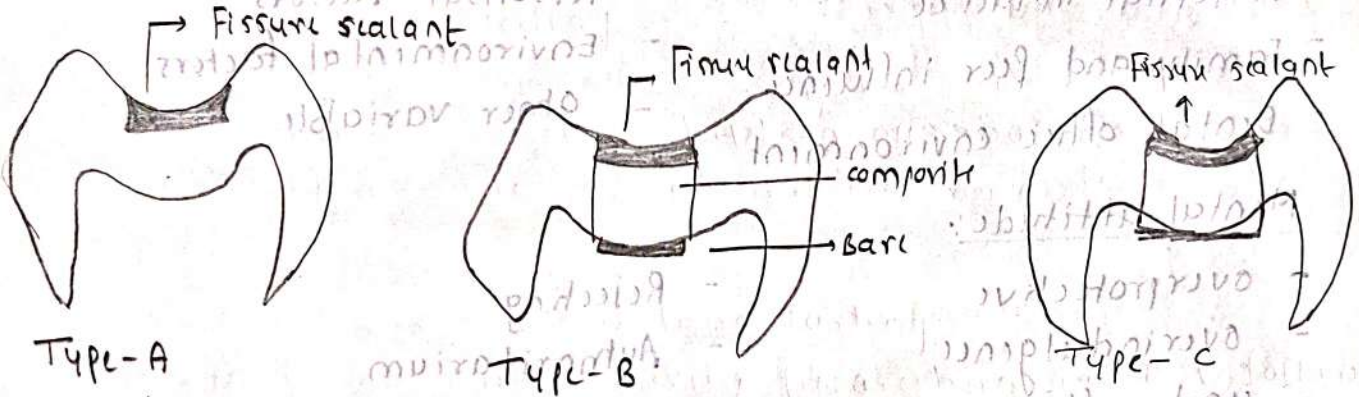
Bite is checked & excess material is removed

↓

filling covered by petroleum jelly

Preventive Resin Restoration

- They are natural extention of use of occlural sealants
- Integrates preventive approach of sleant thrapy of caries susciptible pit and fissure with therapeutic restorations of incipient caries between composite resin that occur on same occlusal surface
- Types of PRR based on extent and depth of caries / lesion determined by exploratory preparation. Simson has classified them as :-



Type A :-

- Suspicious pit and fissure where caries removal is limited to enamel
- Local anesthesia is required
- Speed of 1/4, 1/2 round bur is used to remove decalfied enamel
- Sealant is placed

Type-B :-

- Incipient legion is dintin that is small and confined
- NO LA needed
- Appropriate based placed in areas of dintin exposure, compression is placed and removing pit & fissure are covered with sealant

Type-C :-

- More extensive dintinal involvment and require restoration with proper composite material
- Appropriate base is placed over dintin
- Pits & fissure are covered with sealant & LA is required

NON-PHARMACOLOGICAL BEHAVIOUR MANAGEMENT

- Means by which dental health team effectively and efficient performs treatment for child and same time instills very positive dental attitude

Factors influencing child's behaviour in dental office:

- Medical History
- Maternal influence
- Family and Peer influence
- Dental office environment
- Growth and development
- Personal factors
- Environmental factors
- Other variable.

Mental attitude:

- overprotective
- overindulgence
- underaffectionate
- Rejecting
- Authoritarium

Classification of child's behaviour in dental office:

- co-operative
- Tense co-operative
- outwardly apprehesive
- Fearful
- stubborn/ Defiant
- Hypertensive
- Handicapped
- Emotionally immature

Pre-appointment behaviour modification:

1) Audiovisual modelling - for stimulation of new behaviou
2) Pre-appointment mailing - contact with parent

1. communication - May relax the youngster
2. Non-verbal communcation - Gains patient's attention
3. Descriptive Praise - Emphasize specific co-operative beha
4. signaling - Raising hand, finger
5. use of second language e.g. C.D., rubber dam, X-ray machine → camera

6. Positive Pre-visit imagery :-

7. Tell show do - Teach patient aspect of visit and familarize the patient with instruments.

8. Desinsitization: Perceived links between stimulus and anxiety response is weakened.

9. Direct observation : Familarize patient with dental setting

10. Behaviour shaping : Explain necessity for Procedure

11. contigency management : Positive reinforcement
Negative reinforcement
omission (timeout
punishment)

12. Externalization : Decrease perception of unpleasantness.

13. Distraction : To relax patient
To decrease anxiety during treatment
Placebo effect
Audio distraction

14. Assimilation & coping - Behavioural
congnitive

15. Parental Presince / absence - establish authority

16. Retraining - for fabricating positive value to replace negative

17. Memory reconstructing - Improve patient behaviour at subsequint dental visit

18. Relaxation breathing - Benefits Fearful patient
Progressive muscle relaxation

19. Visual imagenary - To established authority / dreaming

20. Voice control - To establish authority

21. Use of Poetry & drawings

22. Hypnosis - To decrease nervousness & apprension

23. Hand-over-mouth technique - patient soon begins to gain cooperation

24. Protective stabilization for patient lacking maturity & Physically / mentally disabled patient

Behaviour management :

It is the means by which the dental health team effectively and efficiently performs dental treatment for a child & thereby instills a positive dental attitude.

Behavious modification :

Attempt to alter human behaviour and emotion in a beneficial manner and in accordance with the laws of learning.

Behaviour guidance :

It is continum of individualised interaction involving the dentist and patient directed towards communication & education which ultimately builds trust and allows fear & anxiety.

i) communication :

By involving the child in conversion, the dentist not only about the patient but also may relax the youngster.

There are two ways :

a) Verbal → spoken language to gain confidence

b) Non-Verbal → Expression without words like smile, handshake, patting, eye contact

- communication with children aged 2-7 years should be based on Piagetain concept (Animism - giving life to an inanimate object.)

ii) Non-Verbal communication :

It is the reinforcement and guidance of behaviour through appropriate contacts, posture, facial expression and body language

It enhances effectiveness of other communicative management techniques

iii) Descriptive praise

The praise emphasize specific co-operative behaviour

e.g Thank you for sitting still

iv) signaling :
signaling allows the patient to communicate with the dental team during the treatment by means of previously established signals with specific meanings

v) Euphenism :
- Adress the child at his/her level, of comprehinsion. This does not suggest the use of baby talk but rather employing words that have meaning to child

Air ⟶ wind
Impression material ⟶ Pudding, mashed potatos
Bur ⟶ Brush on pencil
Caries ⟶ sugar bags
Explorer ⟶ Tooth counter
Rubber dam ⟶ Rain coat
SCC ⟶ Hat for toom
Handpiece ⟶ whistling train

vi) Tell show do :
- It was given by Harold Addleston in 1959
- The dentist tells the child what is going to be done in words the childs can understood. second the dentist demonstrate to child exactly how the procedure will be conduct
- finally the practioner performs the procedure exactly as it was described and demonstrated

a) Tell :
- verbal explanation of procedure in phases appropriate to the developmintal level of the child
- Tell the child before yo do it, min you are doing it & after you have done it

b) show :
- Demonstration of the visual, auditory, olfactory & tackle aspect of the procedure in carefully defined non-threating setting
- The dentist can demonstrate on himself or an inanimate object.

c) Do :-

- without deviating from the explanation and demonstration the dentist proceeds directly to perform the previewed operation

vii) Ask - Tell - Ask :-

- The technique involve inquiring about the patient visit & feeling toward or about any planned procedure
- Explain the procedure throughout the demonstration in a non-treating language
- Again inquire the patient and understand how he/she feels about impinding treatment

viii) Tell - Play - Do :-

- It is based on the learning theory where interchange of thought and two way interchange of information takes place
- This is done by performing dental treatment on dental imitating toys where child understand the dentist frame of reference and feels more comfortable and develops co-operative behaviour.

ix] Desensitization :-

- It means to take away ones sensitivity to type of behaviour
- This is used in children having pre-established fears and unco-operative behaviour
- Wolpe used relaxation as the inhibitor of anxiety - visual imagery of anxiety provoking stimuli
- The technique calls for a hierarchy of fear stimuli whereby patient conquers fear or anxiety towards low-anxiety or moderate anxiety stimuli before approaching the more dramatic stimuli
- Howith and Sticker addressed the hierarchy of anxiety evoking stimuli as

Injection → exposure of dental instrument → drill → rubber dam → hand instrument → Prophylaxis

x] Modelling

- Based on Psychologic Principle that much of one's learning or Behaviour acquisition occurs through observation of suitable model performing a specific behaviour.
- Modelling has been used as technique to eliminate or minimise fear of dinistry in children allowing the child to observe an older sibling undergone treatment
- Types of modelling → Audiovisual
  → Live modelling by sibling / parent.

xi] Direct observation :

- patients are shown a video or are permitted to directly observe a young co-operative patient undergoing dental treatment

xii] Behaviour shaping :

- A process which slowly develop a behaviour by reinforcement succesive approximation of the desired behaviour until the desired behaviour is expressed.
- The dintal assistant or dinist is teaching child how to behave
- young children are led through procedure step by step they have to be communicate and co-operative to absorb information that may be complex for them

xiii] contigency Management :

- Based on B.F Skincer's operant conditioning
- The presintation of positive reinforcer's and withdrawl of negative reinforcers is termed as contigency management
- It include positive reinforces
  Negative reinforces
  omission or removal
  punishment

a) Positive reinforcer's :

- It's presentation increases frequincy of desired behaviour

b) Negative reinforcers :
- It's contingent withdrawl increases frequency of behaviours

c) Material :-
- sticker, pencils, small toys
- Rewards are given after dental procedure

d) Social :
- Praise, Positive, Facial expression, hand shake, smile, hug, pat on shoulder.

e) Activity :
- opportunity of participating in a preffered activity like cartoon show, visit to park.

xiv) Externalization :
- It is process by which attention is focused away from the sensation associated with dental treatment by involving verbal or dental activity

xv) Distraction :
- Newer method of behaviour management in which the patient is distracted from the sounds and for sight of dental treatment thereby reducing anxiety
 - use stories & fairy tales
 - use slow instrumentation music
 - Audio distraction
 - Audio visual distraction

xvi) Asimilation & coping :
- coping refers to congnitive & behaviour efforts made by individual in master, tolerate, or reduce stressful situations
- Behaviour coping → Physical or verbal activities in which child engages to deal with stress
- congnitive coping → Effort which involve manipulation of emotion, these are not visible to dentist but play critical role in child ability to deal with treatment

PREVENTIVE PEDODONTICS

Oral prophylaxis:-

Removal of plaque, calculus and stains from exposed and unexposed surface of tooth by scaling as preventive measure for control of facal irritation.

Plaque: Dental plaque is difined clinically as structured resilient yellow-grayish substance that adhere tenaciously to intraoral hard substances, including removal and fixed restorations.

calculus: calculus consits of mineralised bacterial plaque that forms of on the surfaces of natural teeth and dental prostheris.

stains: Pigemented diposits on tooth diposits are called dintal stains

Materia alba: It is a concentration of micro-organism desquamated epithelial cell, leukocytes and mixture of salivary proteins, lipids, with few or no food particle and it lacks, regular internal pattern observed in plaque.

Oral debris: Loss of food particles collected above the cervical third and proximal embrassure of teeth.

Fluoride :-

- The term fluoride is derived from word fluoro meaning to flow atomic weight is 19 and atomic number is 9.
- Fluoride is primarily absorbed from stomach.
- In plasma fluoride exists as ions fluoride and non ionic bond fluoride
- Fluoride concentration is most tissues is lower than plasma level exception healthy kidney where because of urine production on occasional fluoride accumulation may result
- Fluoride Excretion by kidney
- There exists a steady state between concentration of fluoride in plasma and urine i.e they are parallel to each other very closely

Metabolism of fluoride

Diet

Digestive tract → Faeces

Circulating plasma fluoride
- → Digestive Juice
- → Milk
- → Soft tissue
- → Urine
- → Placenta & foetus
- → Saliva
- → Teeth
- → Bone
- → Sweat

Water Fluoridation :-

- It is defined as upward adjustment of concentration of fluoride ion in public water supply in such way that concentration of fluoride ion in water may be consistently mainted at 1 ppm by weight
- USPH (1986) Fluoride optimum concentration → 0.7 - 1.2 ppm
- Saturation, dry feeder, solution feeder system are equipment

Advantage

- Large number of people are Benefitted
- Least expensive
- consumption is regular
- systemic & topical effect

Disadvantage

- Interference with human rights.
- other modes aren't consider
- common source of water
- supply may not be present

School water Fluoridation :-

Advantage

- Good results in reducing caries
- Minimal equipment
- Not expensive

Disadvantage

- children do not get benefit until they go to sch.
- Not all children go to school in poor countries like India
- Amount of water drunk can't be regulated.

Salt Fluoridation :-

Advantage

- Fluoridated salt is safe
- Prevent dental caries by systemic & topical action
- NO supervision of setup / distribution of system
- Low costs.

Disadvantage

- No precise control over indicated consumption, since intake varies greatly
- International effort to decrease sodium intake

Milk Fluoridation :-

- Calcium fluoride, sodium fluoride, Na_2CO_3 Disodium Silicophosphate are used compound.
- Less expensive than water fluoridation

Dietary Fluoride Supplements :

Age	< 0.3 ppm F	0.3 - 0.6 ppm F	> 0.6 ppm
Birth - 6 month	0.00	0	0
6 month - 3 yrs	0.25 mg	0	0
3 yrs - 6 yrs	0.50 mg	0.25 mg	0
6 yrs - ≥ 16 yrs	1 mg	0.5 mg	0

Topical Fluorides :

Professionally Applied	Self Applied
- Neutral NaF - Stannous Fluoride - Acidulated phosphate fluoride. - Ammine Fluoride - Fluoride varnishes - Fluoride gas	- Toothbrushing dentifrices - Toothbrushing solution - Toothbrushing prophylaxis - Mouthrinses

① Sodium Fluoride (NaF).

cleaning & polishing of teeth

↓

quadrant are isolated with cotton rolls & teeth are dried throughly

↓

NaF is then applied with cotton applicator

↓

permitted to dry on teeth for 4 min

↓

Procedure is followed for remaining quadrant

patient is instructed to avoid eating, drinking, or rinsing for 30 min so as to prolong availability of fluoride to react with tooth surface 2nd, 3rd & 4th application are given at weekly interval 6, 7, 11, 13 years of age

② Stannous Fluoride :-

stannous fluoride with hydroxyapatite in addition to Fluoride and forms a stannous fluorophosphate

↓

Rapid penetration of tin and fluoride in 30 secs therefore continuous reapplication after 15-30 secs

↓

In addition to stannous trifluorophosphate 3 more additional product are formed viz stannous Hydroxyphosphate, CaF_2, calcium trifluorostannate.

③ Acidulated Phosphate Fluoride :-

After thorough prophylaxis, teeth are isolated with cotton rolls on both lingual and buccal sides

↓

For application of gel, position of it is upright & provide saliva ejector.

↓

Place enough gel to fill one third of through area of tray so that it is sufficient to cover arches.

↓

Place loaded tray over arch and squeeze buccal & lingual surface forcing gel btw them and lingual surfaces forcing gel them & allow tray to maintain in mouth for 4 min

↓

Recommended frequency of APF topical application is semiannual

↓

After prophylaxis teeth are dried

↓

Do not isolate with cotton rolls as varnish primarily sticky has tendency to stick

↓

A total of 0.3-0.5 ml varnish is required to cover full dentition

Application is done first on lower arch and then on upper arch with help of single tufted small brush starting with proximal surface

↓

After application patient is made to sit with mouth open for 4 min before spitting

↓

Patient should be clearly instructed not to rinse or drink anything solid but take liquid and semisolid only till next morning. A special emphasis on instruction is needed maintain contact with varnish & tooth surface for about 18 hrs for prolonging b/w varnish and enamel.

Fluoride Dentifrices :-

Age (In yrs)	Recommendation
Below 4	Not recommended
4 – 6	Once daily with fluoride paste & twice without paste
6 – 10	Twice daily with fluoridated paste & once without paste
Above 10	Trice daily with fluridated paste.

Fluoride Toxicity :-

① Acute toxicity

Nausea, vomiting, abdominal pain, excessive salivation
Mucosal doses of fluoride of one time, cardiac arrythmia, generalised weakness

② chronic toxicity :
Ingistion of variant dose of fluoride over prolonged period of time

Dental
Skeletal

Dental Fluorisis:

Developmental disturbance of dental enamel, caused by successive exposure to high concentration of fluoride during tooth development leading to enamel with lower mineral content and increased porosity.

can be hypoplasia / hypomaturation of tooth enamel.

Clinical Feature:

- snow cap phenominon
- Thin white striae across enamel surface
- cloud, paper white areas are scattered over surface
- Brown strains
- chalky white teeth
- pits on tooth

Skeletal Fluorosis:

May be mild, moderate or severe.

Agent	Fluoride content in dentifrices
3-5 yrs	500 ppm
5-8 yrs	upto 1000 ppm
8 yrs	above 1000 ppm

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PIT AND FISSURE SEALANT

Introduction:

- caries potential is directly related to the shape and depth of pits and fissure
- The succers of fluoride in caries prevention on smooth tooth surface have made caries primarily disease of pits & fissure of teeth
- Narrow isolated crevices and grooves that harbour food & micro-organism are the most important anatomical feature leading to development of occlural caries.

Defination:

- A fissure sealant is a material that is placed in pits and fissure of teeth in order to prevents or arrest the development of dental caries
- Pits and fissure are enamel faults, narrow shafts or cracks at some length whose blind ends are directed more or less towards DEJ.
- Pits are small pin-point depression located at junction of developemental grooves or at terminal of these groove whereas fissure are long clefts b/w cusp and ridges

classification:

① Based on generation

a) First generation

Polymerized with U.V light of 350 nm wave length
Absorbs u.v light exassively & prevents complete polymerisation of sealant

b) second generation:

- They are self cured or chemically curved
- Most of them contain filler & undergo complete polymerisation sealant.

c) Third generation
visible light cured of 430–490 nm wavelength
may be filled or unfilled

d) fourth generation
- with addition of fluoride for added length.

According to presence of filler:
a) filled
b) unfilled

According to chemical structure of monomer.
a) Methyl methacrylate (MMA)
b) Triethylglycol dimethylacrylate (TEGDMA)
Bisphenol Dimethacrylate (BPD)
c) Bis GMA Products of bisphenol A & glycidyl methacrylate (GMA)
d) Propyl methacrylate urethane (PMU)

④ Based on curing
a) Autopolymerising
b) light cure.

Indications:
- Deep retentive pits and fissures which may cause wedging of explorer
- stained pits and fissure with minimum appearance of decalcification
- No radiograph or clinical evidence of proximal caries
- Possibility of adequate isolation
- Questionable enamel caries in pit & fissure
- caries free pits & fissure
- If pt. desires.
- Morphology of pit & area of caries
- factor associated with increased caries incidence

Contraindication :-

- well coalesced, self cleaning pits & fissure
- Radiographic or clinical evidence of interproximal caries if tooth not fully erupted
- Isolation not possible
- Life expectance of tooth is limited
- Dietinal caries.

Clinical technique for placement

① step ① → Tray set up
Prior to start of procedure a tray with all necessary instrument, supplies and equipment should be prepared

② step 2 → Isolation of tooth
Tooth should be isolated from salivary contamination by use of rubber dam or by cotton roll & suctioning

③ step 3 → Tooth preparation
Early concept was to treat surface with slurry of pumice & water.

④ step 4 → Acid etching tooth surface
- Applying etching agent to tooth surface using a fine brush and minisponge according to manufacture recomendation
- 37% Phosphoric acid is recommended
- Etching time = 15-60 sec
- Gel form of etchant is preferred as it is more effective & its flow can can be controlled

⑤ step 5 → Rinse & dry tooth surface
- Rinse etched tooth surface for 30 sec with air water spray
- Dry tooth for 15 sec with compressed

⑥ step ⑥ Application of Bonding Agent

→ Application of halogenated bonding agent after etching displaces saliva from enamel there by improving sealant wetting of tooth surface and increase bond strength both in saliva

⑦ step 7 :- Application of sealant

→ The sealant kit have their own dispenser's preloaded that directly apply sealant to tooth structure.

In mandibular teeth apply sealant distally & allow it to flow mesially with conserve being true for maxillary teeth

⑧ step 8 :- cure the sealant

→ cure according to manufactures recommended times for curing

⑨ step 9 :- Explored sealed tooth surface & evaluate occlusion

→ explore entire tooth surface for fits & voids that may have not bein sealed

Evaluate occlusion of sealed tooth surface with articulating paper

⑩ Step 10 :- Recall and Revaluation

→ Recall & check patient at subsequent visits

Case History - 1

Personal Information :-

Patient Name = Mr. Parth shivaji Ghunke.
Date = 11/5/2024
OPD No = 7419
Age/sex = Male/ 12 years weight = 23 kg
Date of Birth = 16/5/2014
Religion : Hindu Education = 5th std.
Name of person accompaning : shivaji ghunke.
with whom does the child live = Grandfather, Mother, Father.
occupation of Father & Mother = Father → Bussinessman
Residintial adress : karadga, Nipani
contact No: 9945127834

cheif complaint :-

Patient complains of pain in Right and left upper back teeth region of jaw since 4 month.

History of Presenting illness :-

- pain is Dull aching, periodic, aggrevates on mastication and Relieved own medication
- Swelling - NRH
- Fever - NRH
- Trauma - NRH

Pre-natal History :-

① H/o illness during Pregnancy = NRH
② H/o specific medication during Pregnancy = No History
③ H/o Fluoride supplements = No history
④ H/o vitamin / calcium supplement = B. complex tablet, calcium supplements, Iron supplement

Natal :-

① Type of delivery = C section
② Term = full term (9 months)
③ H/o Birth asphyxia, Jaundice, Blood transfusion = No-history

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Post-natal History :-

① Developmental milestones = Normal

② H/o immunization = Vaccination completed

Past medical History :-

No-relevant history

Family History :-

No-relevant history.

Dental History :-

Patient has undergone Pulpectomy under LA without any complication of history of restorations

Personal habits :-

① oral Hygiene methods : commercially available tooth paste and toothbrush

② Method of cleaning teeth : Horizontal brushing technique

③ Time of cleaning teeth : In morning & before sleeping

④ Frequency & duration : twice a day, 5 min

⑤ Unassisted method of brushing

⑥ Use of other hygiene aids : No

Dietary Habits :-

① source of water = Muncipal

② Type of diet = Mixed

Details about daily dietary habits

9 am breakfast (tea and chapati)

11 pm chapati, rice, Bhaji (lunch)

8 pm Dinner (Dal, rice)

Sweet score

① sticky chocolate

② liquid milk

2 (without sugar)

Local

Extraoral examination :-

① Shape of Head = Dolicocephalic
② Facial form = leptoprosopic
③ Facial symmetry = Appears bilaterally symmetrical
④ Facial profile = straight
⑤ TMJ examination = Non tender, NO deviation
⑥ Lymph node = non tender, Non palpable.
⑦ Speech = Normal
⑧ Lip = competent

Intra-oral examination :

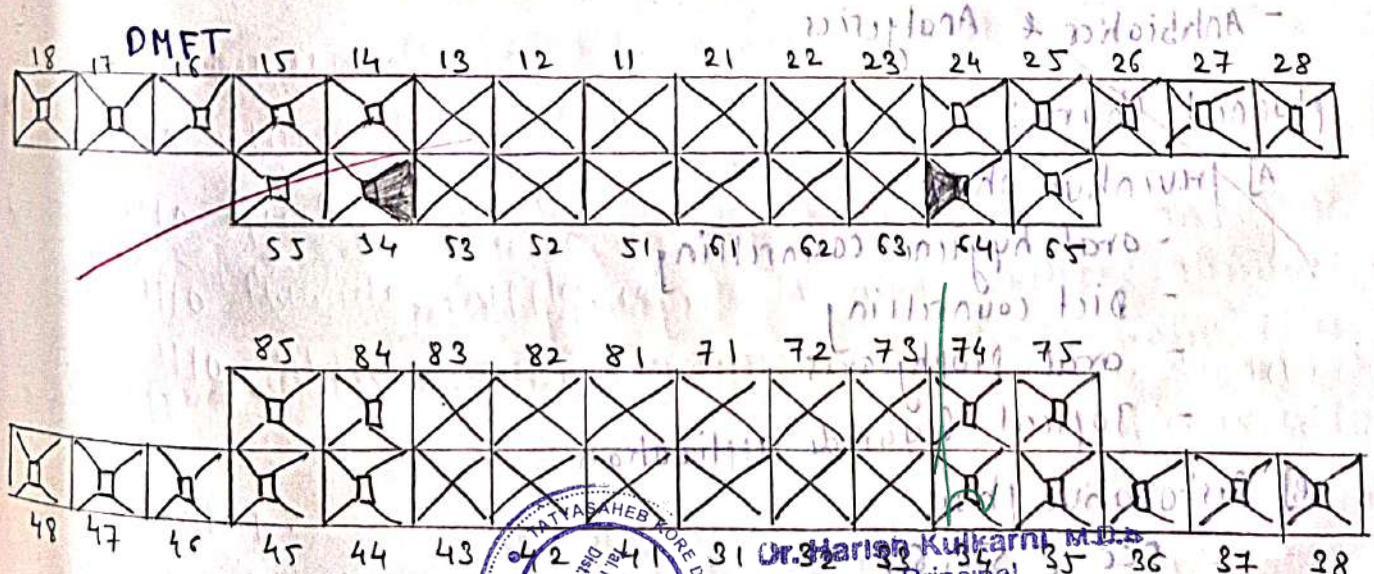
1) Adverse oral habit = No history
2) soft tissue examination = No abnormality
3) Hard tissue examination

16 55 54 53 12 11	21 22 63 64 65 26
46 85 84 83 42 41	31 52 73 34 75 36

Deep proximal caries - 54, 64

Type of dentition → Mixed
Angel's class I on both side
Dental age → 11 years

DMFT



D = 2
DMFT = 2

Provisional Diagnosis :

chronic irreversible pulpitis $\overline{c}$ 54, 64

Investigation :

IOPA $\overline{c}$ 54, 64

Radiographic Diagnosis :

A] Area : IOPA of maxillary right back teeth region of jaw
Teeth seen : $\overline{c}$ 18, 54, 55, 53
Tooth of intrest $\overline{c}$ 54
Crown : Diffuse radiolucency involving enamel, dentin & pulp
Root : No abnormality.

B] Area : IOPA of max. left back teeth region of jaw
Teeth seen $\overline{c}$ 64, 65, 26
Tooth of intrest $\overline{c}$ 64
Crown : Radiolucency involving enamel, dentin, pulp.

Final Diagnosis :

chronic irreversible pulpitis $\overline{c}$ 54, 64

Treatment plant :

I] Emmergency phase :
- Ao $\overline{c}$ 54, 64
- Anhbiotics & Analgesics

II] Planned phase :

A] Preventive phase :
- oral hygiene counselling
- Diet counselling
- oral prophylaxis
- Topical fluoride application

B] Restorative phase
- Scc $\overline{c}$ 54, 64

C] Endodontic
: Pulpectomy $\overline{c}$ 54, 64

D] orthodontic
→ Band & loop. space maintainer.

E] Maintaina phase
→ Recall after 6 month to check integrity of previous restoration and detection of New carious lesions.

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Case History - 2

Personal Information :-

Patient Name : Miss Arohi Abhijeet Patil
Registration No. : 6966 Age/sex : 12 / Female Date : 3/4/24
Weight : 22 kg
DOB : 6/6/2013
Religion : Hindu Education : 5th standard
Name of Person accompaning : Abhijeet Datatray Patil
With whom does the child live : Father & Mother
Occupation of mother & parent : Father → Job.
Residential address :
Ranarkangav, Karveer, Kolhapur
Contact No : 9552203203

Cheif complaint :-

Patient complains of pain in Right upper back teeth region of Jaw sience 3 month

History of Present illness :-

Pain is Dull aching, Spontaneous, Aggrevates on Hot & cold fo Relieved on medication, Nocturnal pain Present.

Swelling → NRH
Fever → NRH
Trauma → NRH

Pre-natal History :-

H/O illness during Pregency - NRH
H/o specific medicines during Pregnancy - NRH
H/o Fluoride supplement during pregnancy - NRH
H/o High vitamin / calcium supplement - Ca++ & B-complex supplements

Natal History :-

Type of delivery : Normal Term : Fullterm
H/o Birth asphyxia, Jaundice, Blood transfusion :- NRH.

Post-natal History :-

Developmental milestones : Normal
H/o immunization : vaccination completed

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Past medical History :-
No-relevant History.

Family History :-
No-rrelvant History

Past Dental History :-
Patient 1st Dental visit.

Personal Habits :-
oral Hygiene method : Toothpaste and toothbrush
Mimod of cleaning teeth : Horizontal brushing
Frequency & Duration : 2-3 min & Twice in a day
Time of cleaning teeth : in Morning & Before sleep
unassisted
use of other oral hygiene aids : No

Dietary Habits :-
source of water : Muncipal
Type of diet : Pure veg

Dietary Details :-
8 am → Breakfast (tea & chappati)
1 pm → chappati & Bhaji, (lunch)
8 pm → Dal rice (Dinner)

sweet score :-
① sticky chocolate = 1 X 15
② liquid (Milk) = 2 X 5

25 (watchout zone.)

Local examination :-
a) Extra oral examination :-
shape of Head : Dolicocephalic
Facial Form : Mesoprosopic
Facial symmetry : Appear bilaterally symmetrical
Facial Profile : convex.
TMJ : Non tender, No deviation

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Lymph node : Non-palpable, Non-tender
Speech : Normal
Lip competency : competent

b) Intra-oral examination :

Adverse oral Habits = No history
Soft tissue examination = No abnormality
Hard tissue

16 55 52 11	21 22 63 64 25 26
46 85 43 42 41	31 32 33 34 75 36

Ellis class I fracture $\bar{c}$ 11
Deep occlusal $\bar{c}$ 16
calculus +
Angel's class I on both side
overjet 3mm overbite 1.5 mm
Type of Dentition : Mixed

Provisional Diagnosis :

chronic irreversible pulpitis $\bar{c}$ 16

Investigation :

IOPA $\bar{c}$ 16

X-ray interpration :

Region : IOPA of maxillary right back teeth region of jaw
Teeth seen : 55, 16
Tooth of intrest $\bar{c}$ 16
Crown : Radiolucency involving enamel, dentin & pulp
Root : Three roots seen

Final Diagnosis :

chronic irreversible pulpitis $\bar{c}$ 16

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Treatment Plan :-

I] Emergency phase :-
- Ab | $\bar{c}$ 16
- Antibiotic + Analgesic

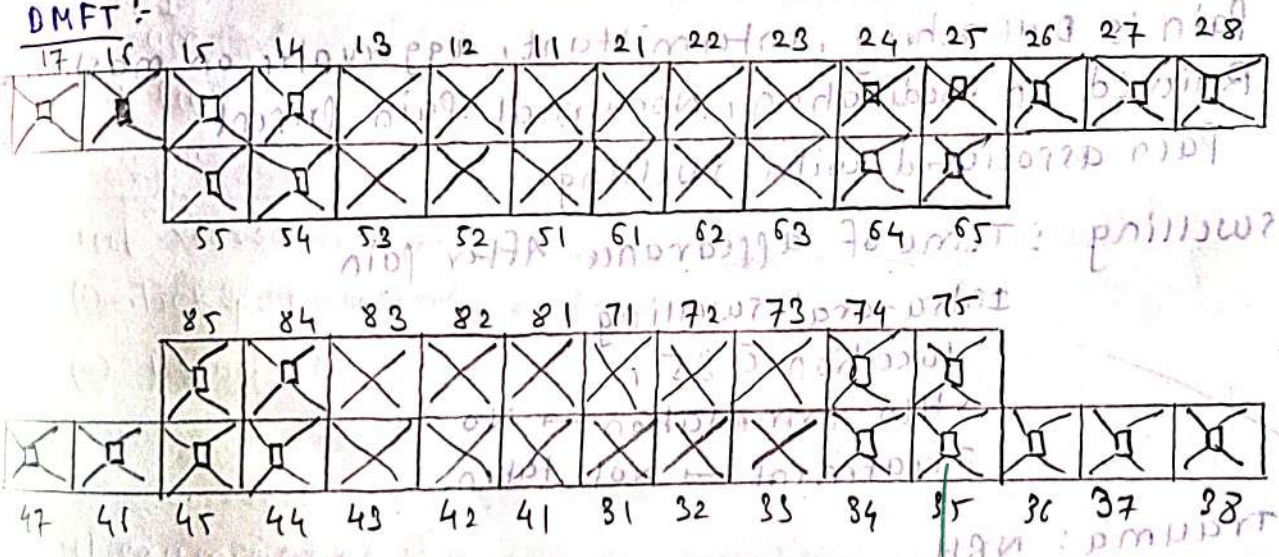
II] Planned phase :
- oral Hygiene counselling
- Diet counselling
- oral Prophylaxis

Restorative phase :
- scc $\bar{c}$ 16 (Intermin restoration)

Endodontic phase :
- RCT $\bar{c}$ 16

Maintainance phase :
- Recall after 6 month to check for integrity of previous restoration and detection of New carious lesions.

DMFT :-



Decayed = 1
Missing = 0
Filled = 0

DMFT = 1

Case History - 3

Personal information :-

Patient Name: Mr Saroush sarg Ligade. Date : 8/5/24

OPD No : 4157 Age/sex : 9 yrs / Male

weight : 21 kg

Date of birth : 24/10/2015

Religion : Hindu

Education : 3rd std.

Name of person accompaning : sarang Ligade

with whom does child live : Parents

Occupation : Father → Job

Residential address : kolhapur, karveer, kolhapur

contact No : 9873581987

Chief complaint :-

Patient complains of pain in Right lower back teeth region of jaw since 1 week.

History of Present illness :-

Pain is Dull aching, Intermittant, aggrevates on mastication Relieved on medication, Nocturnal Pain present

Pain associated with swelling

swelling : Time of appearance After pain

Intra-oral swelling

location c 85,

H/o fermentation → No

Treatment → Not taken

Trauma : NRH

Pre-natal History :-

H/o illdness during pregnancy :- No

H/o specific medicines during pregnancy :- No

H/o Fluoride supplements during pregnancy :- No

H/o High vitamin / calcium supplement :- calcium + B-complex supplement

Natal History:
Type of delivery : Normal
Term : 9 month

Post Natal History:
Developmental milestones : Normal
H/O immunization : completed.

Past medical History:
No-relevant history

Family History:
No-relevant History.

Dental History:
It had undergone Restoration before 4 month.

Personal Habits:

Oral Hygiene method: commercially available toothbrush & toothpaste
Method of cleaning teeth :- Horizontal scrub.
Frequency & Duration : once in a day & 4-5 min
Time of cleaning teeth : Morning (once in a day)
unassisted
Use of other oral hygiene aids : No

Dietary Habits:
Source of water: Borewell
Type of Diet : Mixed

Details:
9 am : Breakfast (Milk)
1 Pm : Lunch (chappati, Bhaji)
8 Pm : Dinner (chappati, Dal, Rice, Bhaji)

Sweet score
① liquid 1x5 = 5
② solid (chocolate) 1x10 = 10

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(15 [illegible] 16.12)

Local examination :

a) Extra oral examination :

① Shape of Head : Dolicocephalic

② Facial form : Mesoltroscopic

③ Facial symmetry : Appear bilaterally symmetrical

④ Facial Profile : convex

⑤ TMJ examination : Non tender, No deviation.

⑥ Lymph node examination : Non tender, Non palpable

⑦ speech : Normal

⑧ Lip competency : competent.

b) Intraoral examination :

Adverse oral Habits = No history

soft tissue examination = No abnormality detected

Hard tissue

16 55 54 53 52 51	21 22 63 64 65 26
46 85 44 43 42 41	31 32 73 75 36

Pit & fissure caries $\bar{c}$ 16

Deep occlusal caries $\bar{c}$ 36, 85

Root stumps $\bar{c}$ 53, 54, 73, 75, 83

Calculus +

Dental age : 10 year

Angel's class I on left & Right side

Provisional Diagnosis :

chronic dento alveolar abscess $\bar{c}$ 85

Investigation :

IOPA $\bar{c}$ 85

IOPA interpretation :

Type : IOPA

Region : Right lower [illegible] tooth region of jaw

Item run : $\bar{c}$ 44, 45, 46

Item of intrest $\bar{c}$ 45

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crown: [illegible]
Root: Two roots are seen
Radiolucency involving furcation area

Final Diagnosis:
chronic Dento alveolar Abscess $\bar{c}$ 85
Pulp Necrosis $\bar{c}$ 53, 54, 73, 75, 83
Dental caries $\bar{c}$ 16

Treatment Plan:
I] Emergency Phase:
- Antibiotics & Analgesics
- Ao $\bar{c}$ 85

II] Planned Phase:
A] Preventive Phase
- oral Hygiene counselling
- Diet counselling
- oral Prophylaxis

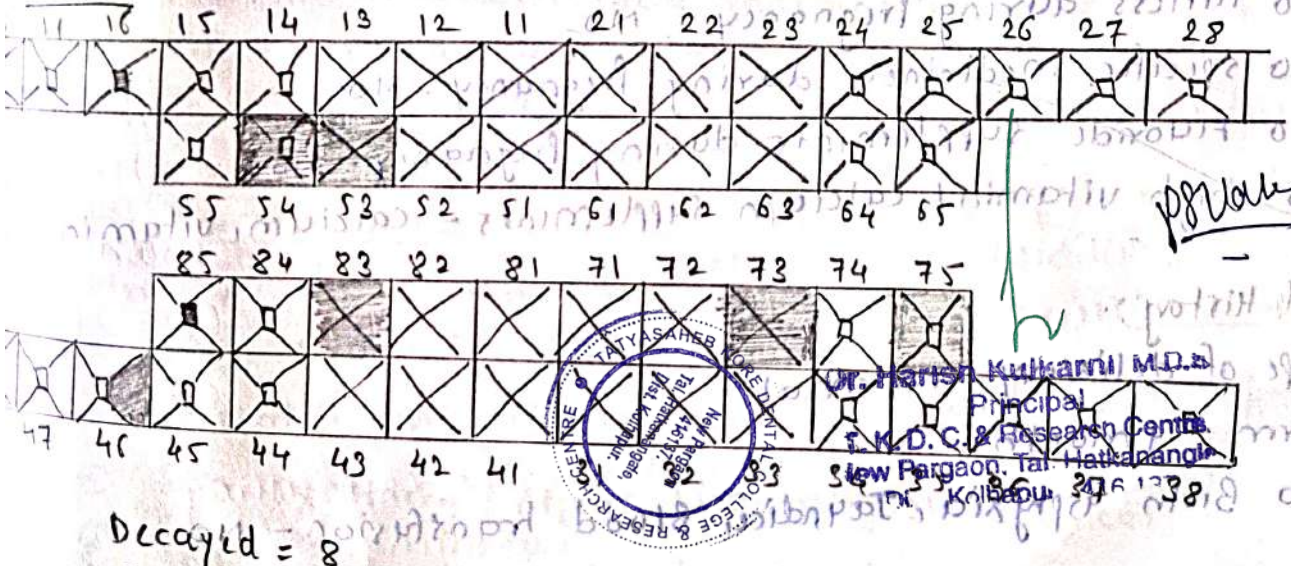
B] Restorative phase
- Restoration $\bar{c}$ 16
- ~~SEE $\bar{c}$ 85~~

C] Endodontic phase: ~~Pulpectomy~~

D] Surgical Phase: Extraction $\bar{c}$ 85, 53, 54, 73, 75, 83

E] Maintainence phase:
Patient is Recall after 1week to check healing of extraction socket.
Recall after 6 month for integrity of previous restoration.

DMFT:



Decayed = 8
Filled = 0
Missing = 0

DMFT = 8

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Case History

Personall information: Date :-

Patient Name : Mr. Kushal Mahindra Jadhav Weight : 23 kg

OPD No : 8044 Age/sex : Male/ 12 years

Date of Birth : 12/4/2013

Religion : Hindu Education : 6th std.

Name of Person accompaning : Mahindra Jadhav

with whom does the child live : Parents.

occupation of Mother & father : Father → Farmer

Mother → Housewife.

Residential address :

Kavalanaka, Kolhapur, Karveer

contact No : 7020198220

Chief compliant :

Patient complians of Pain in left upper back teeth region of jaw since. 4 days.

HOPI :

Nature of Pain → Dull aching, ~~non~~ spontaneous, Aggravates on water and Relieved on Medication.

Noctournal pain → Present

Swelling → No - relevant History

Fever → No - relevant History

Trauma → No - relevant History

Prenatall History :

H/o Illness during Pregnancy - No

H/o specific medicines during Pregnancy - No

H/o Fluoride supplemints during Pregnancy - No

H/o high vitamin / calcium supplemints - calcium, vitamin.

Natal History :

Type of delivery - Normal

Term : 9 month

H/o Birth asphyxia - Jaundice, Blood transfusion - No

Post natal :
Developmental milestones : Normal
H/O immunisation : vaccination completed.

Past Medical History :
No- relevant History

Family History :
No- relevant History

Past Dental History :
- 1st Dental visit.

Personal Habits :
- Oral Hygiene Methods : Toothpaste and toothbrush
- Method of cleaning Hem : Horizontal brushing
- Frequency and Duration : once in a day and 5 Min.
- Assisted / Unassisted : Unassisted.
- Use of other oral hygiene : No.

Dietary Habits :
Source of water : Municipal
Type of diet : Mixed

Details :
8 am breakfast (tea and chapatti)
1 pm chappati & Bhaji (lunch)
9 pm Dal rice, chappati & Bhaji (dinner)

Details about In between meal snacking :
- Frequency : 2 times in a day
- sugar in soft : Tea / coffe.

Local examination :
a) Extra oral examination :
   ⓐ Shape of Head : Dolicocephalic
   ⓑ Facial form : Leptoprosopic
   ⓒ Facial symmetry : Appear bilaterally symmetrical
   ⓓ TMJ examination : No deviation, Non-Tender.
   ⓔ Speech - Normal
   ⓕ Lip competency : competent

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b] Intra-oral examination :

Adverse habits : No relevant history

Soft tissue examination: NRH , gingival attachment — gingival

Hard tissue examination :

16 55 14 13 12 11	21 22 25 65 26
46 85 42 41	31 32 33 35 75 36

Pit & fissure caries : Distal pit c̄ 55, 65

Deep caries : Deep Proximal c̄ 16 (distoproximal), 26, 46.

occlusal pit c̄ 85, 75

calculus : +

Dental age : 11 years

Provisional diagnosis :

~~chronic~~ Acute reversible pulpitis c̄ 16

Investigation :

IOPA c̄ 16

Region : upper left back teeth region of jaw

Teeth seen : c̄ 16, 55, 13

Teeth of interest c̄ 16

crown : Radiolucency involving enamel & dentin

Root : Three roots are seen

PDL space Not widen

Final Δsis :

Acute reversible pulpitis c̄ 16.

Treatment plan :

I] Emergency phase :

→ Antibiotics & Analgesics

Access opening c̄ 16

II] Planned phase :

A] Preventive phase : Oral hygiene counselling

Diet counselling

Oral prophylaxis

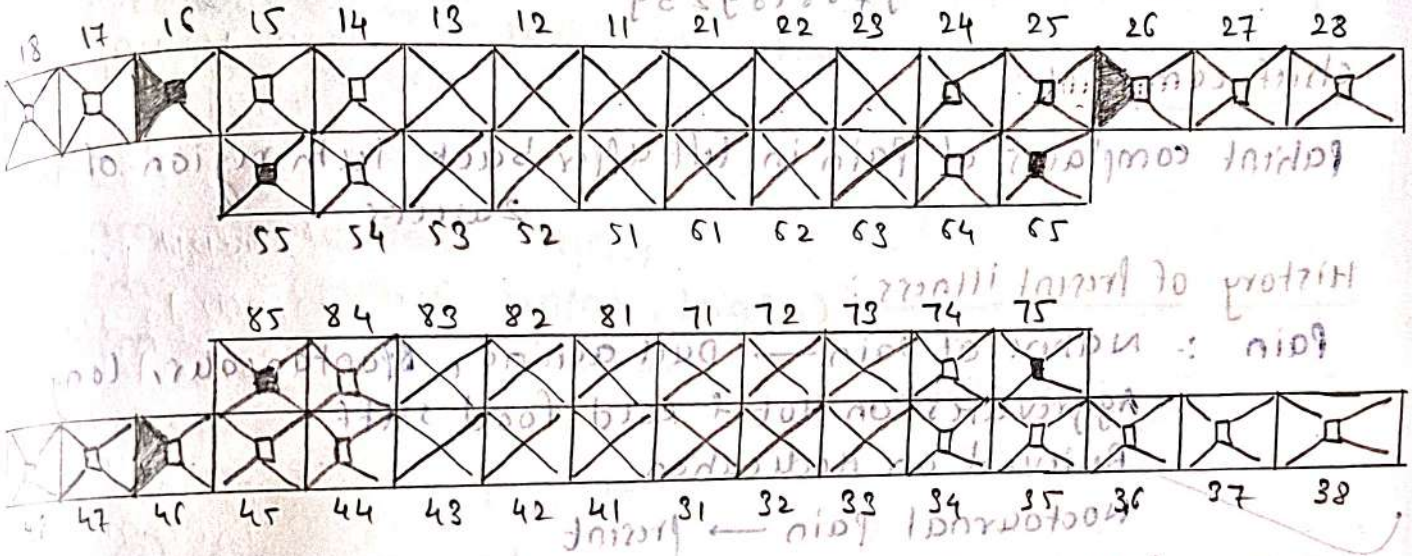
B] Restorative phase:
Restoration ⊂ 55, 65, 26, 46.
SCC ⊂ 16

C] Endodontic phase:
Root canal ⊂ 16

D] surgical phase :-

E] Maintainance phase : Patient is recall after 6 Month to check integrity of Previous restorations.

DMFT:



D → 7
M → -
F → -

DMFT = 7

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Case History - 5

Personal information :

Patient Name : Mr Vipul Vilas Jadhav

OPD No : 6124 Age / sex : 6 yrs / Male Date :

Date and place of birth : 20/9/2018

Religion : Hindu Education : Pre-primary

Name of person accompaning : Pushpa Vilas Jadhav

with whom does child live : Parents

occupation of father → Farmer

Mother → Housewife

Residential adress → Pargoan, Kolhapur

contact No. → 9765189239

Chief complaint :

Patient complains of Pain in left upper back hem region of jaw since 2 weeks

History of Present illness :

Pain :- Nature of pain → Dull aching, Spontaneous, long duration

Aggrevates on Hot & cold food stuff.

Relieved on Medication

Nocturnal pain → present

Swelling, Trauma, Fever → No relevant History

Prenatal History :

H/o illness during Pregnancy → No

H/o specific medicines during Pregnancy → No

H/o Fluoride supplements during Pregnancy → No

H/o high vitamin / calcium supplimnts → Vit & Catt supplimnts

Natal History :

Type of delivary → C-section Term

H/o Birth Asphyxia / Jaundice / Seizures : No-relevant history

Family History :

No-relevant history.

Past Dental History :

Pt had undergone Pulpectomy under LA without complication before 8 month

Personal Habits :

Oral Hygiene method : Tooth paste & toothbrush
Method of cleaning tech : Horizontal brushing
frequency & duration : once in a day for 5 min unassisted.
use of other oral hygiene aids : No

Dietary habits :

source of water : Municipal corporation
Type of diet : Mixed

Details :

8 am : Breakfast (Milk)
1 Pm : lunch (chapati, bhaji)
8 Pm : Dinner (Dal, Rice)

Sweet score :

① Tea (5x1) = 5
② sugar in solid cadbury (20x1) = 20

25

Local examination :

a) Extra oral examination :

1) shape of head : Dolicocephalic
2) Facial form : Mesoprosopic
3) Facial symmetry : Bilaterally symmetrical
4) TMJ examination : Non tender & no deviation
5) lymph Nodes : Non palpable, Non tender
6) Speech : Normal
7) Lip : competent

b) Intra-oral examination:

Adverse oral habits: No relevant findings

① soft tissue examination:

lip → competent

Gingiva → No fistula.

Type of attachment → Gingival

② Hard tissue examination:

Molar relationship: Deciduous: Mesial step

incisor relationship: overjet: 1mm

overbite: 1.5mm

Type of dentition: Mixed.

55 54 53 52 51	61 62 63 64 65 26
85 84 83 82 41	31 72 73 74 75 36

Smooth surface caries: Deep Proximal caries $\bar{c}$ 55, 51

grossly decayed $\bar{c}$ 515, 85

Proximal caries $\bar{c}$ 54, 84

calculus: +

Dental age: 6 year

Provisional Diagnosis:

chronic irreversible Pulpitis $\bar{c}$ 55.

Investigation:

IOPA $\bar{c}$ 55 Ⓐ Type of X-ray = IOPA $\bar{c}$ 55

Region = IOPA of upper left back tech region of jaw

Teeth in: 53, 54, 55, 16

Tooth of intrest = 55

Crown: Radiolucency involving enam

Root: Three root seen, PDL space Not widen.

al Diagnosis:

Chronic irreversible pulpitis $\bar{c}$ 55.

reatment Plan:

Emergency Phase:

Access opning $\bar{c}$ 55

Antibiotics & Analgesics

Planned Phase:

A] Preventive phase: oral hygiene counselling
Diet counselling
oral prophylaxis

B] Restorative phase:
SCC $\bar{c}$ 55

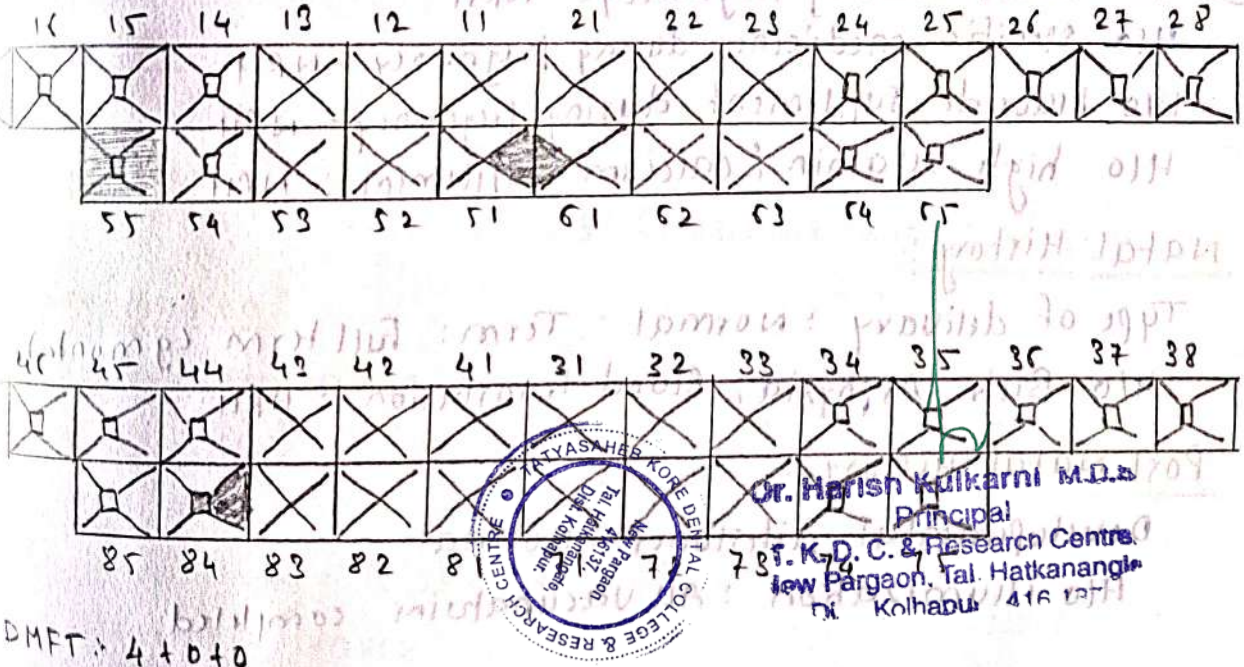
C] Endodontic phase: Pulpectomy $\bar{c}$ 55

D] surgical phase: Extraction $\bar{c}$ 85

E] Maintainance phase: Recall after 1st week to check healing of extraction socket
Recall 6 month check for integrity of previous restoration.

psvau

FT:



DMFT: 4+0+0
= 4

Case History - 6

Personal Information:

Patient Name: Miss Vaidahi santosh Tadhav Date: 19/9/24
OPNO: 14752 Age/Gender: 9 IF Weight: 20 kg
Date of birth: 2/10/14
Religion: Hindu Education: 3rd stand.
Name of Person accompaning: Rati santosh Tadhav
with whom does the child live: Parents
occupation of momer & famer: Famer; Buisnesman
Residinkal adress: Kolhapur, Karveer, Kolhapur.
contact No: 8856920850

chief complaint:

Patient complains of pain in left upper back teeth region of jaw since 1week.

HOPI:

Pain: Pain is Dull aching, continuous, Nocturnal
Aggrevates on Hot and cold food stuff
Relieved on medication.

Swelling, Fever, Trauma → No relevant History.

Prenatal History:

Hlo illness during Pregnancy - NRH
Hlo specific mediciner during Pregnancy - NRH
Hlo Fluoride supplement during Pregnancy - NRH
Hlo high vitamin / calcium supplimint: NRH

Natal History:

Type of delivary: Normal Term: Full term (9 month)
Hlo Birth, Asphyxia, Blood transfurion: NRH

Post Natal History:

Developimental Milestones: Normal
Hlo illumizakon: All Vaccination completed.

Medical History:
No-relevant History.

Family History:
No-relevant History

Dental History:
I had undergone extraction under LA without any complication before 3 month.

Personal Habits:
Oral hygiene method: commercially available toothbrush & toothpaste
Method of cleaning teeth: Horizontal brushing
frequency & duration: Twice a day for 3 min.
unassisted
used other oral hygiene aids: No

Dietary habits:
Source of water: Municipal
Type of Diet: Mixed

Details:

8 am	breakfast (upama & milk)
1 pm	lunch (chapati & bhaji)
5 pm	Milk
7 pm	~~dinner~~ (Dal & Rice)

Sweet score:
solid (chocolate) 15 x 1 = 15
liquid (Milk) 5 x 1 = 5
25 (watchout zone)

Clinical examination:

Extra oral examination:
① Shape of Head: Dolicocephalic
② Facial Form: Leptoprosopic
③ Face symmetry: Bilaterally symmetrical
④ Face Profile: convex
⑤ TMJ: No deviation, No clicking sound
⑥ lymph node examination: Non palpable, Non-Tender.
⑦

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Intraoral examination:

Adverse habits → No relevant history

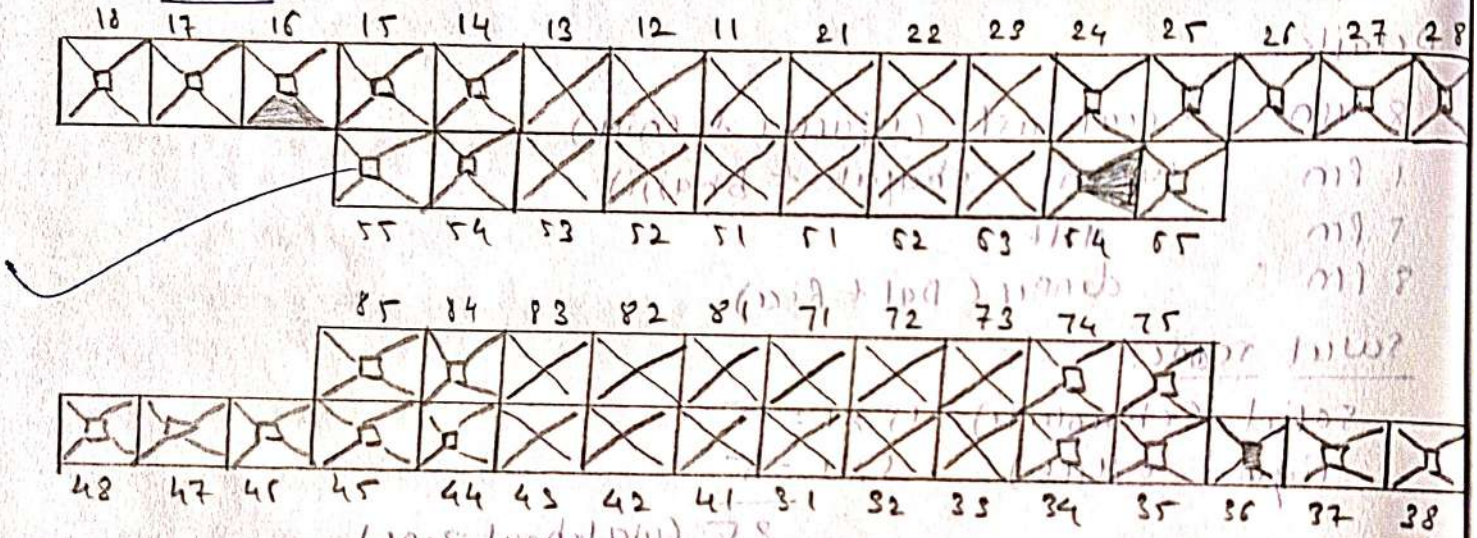
① soft tissue examination: Lip competent
gingiva: No sinus / Fistula
gingival type of frenum attachment

② Hard tissue examination:
Molar relationship: Angel class I on left & Right side
incisor relationship: overjet 1.5 mm, overbite 1mm
Type of dentition: Mixed.

16 55 54 53 12 11	21 22 63 64 65 26
46 83 42 41	31 32 73 74 75 36

Pit & fissure caries $\overline{C}$ 36
smooth surface caries $\overline{C}$ 64 n 16
calculus +:
Dental age: 8 years

DMFT:



DMFT = 3 + 0 + 0
= 3

Provisional Axis:

Chronic irreversible pulpitis $\overline{C}$ 54

Investigation:

IOPA $\overline{C}$ 54

Radiographic interpretation:-

Region → Maxillary left back teeth region of Jaw
Teeth seen ̅c 63, 64, 65, 26
Tooth of interest ̅c 64
Crown :- Diffuse radiolucency involving enamel, dentin, pulp
Root : Three root seen, No PDL widening.

Final Diagnosis :-
Chronic irreversible pulpitis ̅c 64
Dental caries ̅c 16, 36

Treatment plan :-

Emergency phase :
- Access opening ̅c 64
- Antibiotics & Analgesics

Planned phase :

(A) Preventive phase
oral Hygiene counselling → Proper brushing tech (Bass)
Use of Fluoridated toothpaste
Diet counselling → Reduction of in between meal sugar exposure

(B) Restorative phase :
Restoration ̅c 36, 16
SCC ̅c 64

(C) Endodontic phase : Pulpectomy ̅c 64

(D) Surgical phase : Not required.

(E) Maintainance phase :
Pt Recall visit after 6 Month to check oral Hygiene & Integrity of Previous Restorations

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Case History - 7

Personal Information:

Patient Name : Miss Rujvi Pruthviraj Nimbalkar Date 21/9/24

OPD No: 11307 Age/Sex: 7/F Wt: 21 kg

DOB: 17/8/17

Religion: Hindu Education: 2nd standard

Name of person accompaning : Pruthviraj Nimbalkar

with whom does child live: Parents

occupation of mother & father: father → govt. Teacher

Residential adress → Karaba Bavada, Kolhapur

Contact No: 8412000020

Chief complaint:

Pt complains of pain in left lower back teeth region of jaw since 1 week.

HOPI:

Pain is dull aching, continuous, spontaneous, Nocturnal.

aggrevated on Hot & cold food stuff

Relieved on medication

swelling, fever, Trauma → No-relevant History

Pre-natal History:

H/O Illness during Pregnancy → NRH

H/O Specific Medication during Pregnancy → NRH

H/O Fluoride supplument during Pregnancy → NRH

H/O vitamin & calcium supplument

Natal History:

Type of delivery: C-section Term: 9 month

H/O Birth asphyxia, Jaundice, blood transfusion - No

Post Natal History:

Dev. Milestones : Normal H/O immunization: All vaccination completed

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Past Medical History:

No-relevant History.

ly History:
relevant history

Dental History:
had undergone oral prophylaxis treatment before 11 month.

nal habits:
al hygiene method: commercially available toothpaste & toothbrush
thod of cleaning tech: Horizontal scrub method
equency & Duration: 3 min
me of cleaning tech: once in a day
unassisted
se of other oral hygiene method: No

ary habits:
Source of water: Muncipal corpporation
Type of Diet: Mixed.

ails:
om breakfast (Milk)
.00 pm lunch (chapati, bhaji)
00 pm Milk.
00 pm Dinner (Rice, Dal, chapati).

sweet score
liquid diet 5 x 2 = 10
solid diet 1 x 10 = 10
20

l examination:
Extra oral examination.
Shape of Head: Mesocephalic
Facial form: Mesoprosopic
Face symmetry: Bilaterally symmetrical
Facial profile: convex
TMJ examination: No deviation, pain tender
lymph nodes: Non palpable, Non tender
il competency: competent.

b) Intraoral examination:

Adverse oral habits → No relevant findings

Soft tissue examination → lip competent

Gingiva: Absence of fistula & sinus

Frenal attachment: Gingival

Hard tissue examination → Angels class I on both sides

incisor overjet: 2.5 mm overbite 1mm

Type of dentition: Mixed.

16 55 54 53 52 51	61 62 63 64 65 26
46 85 84 83 82 31	41 72 73 74 75 36

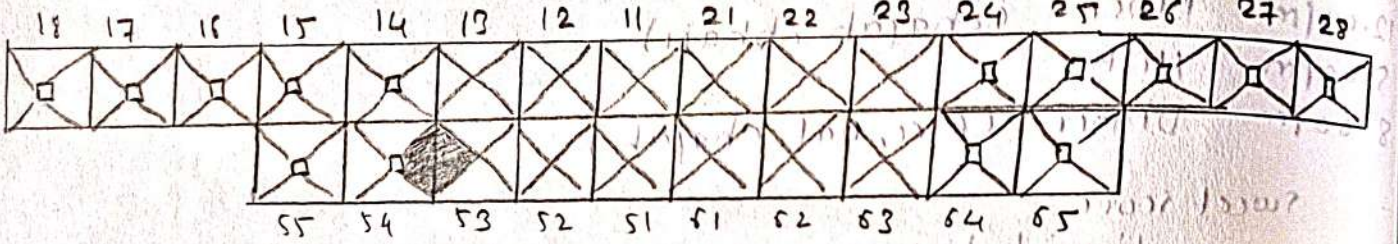
smooth surface caries: Deep proximal c̄ 84, 85

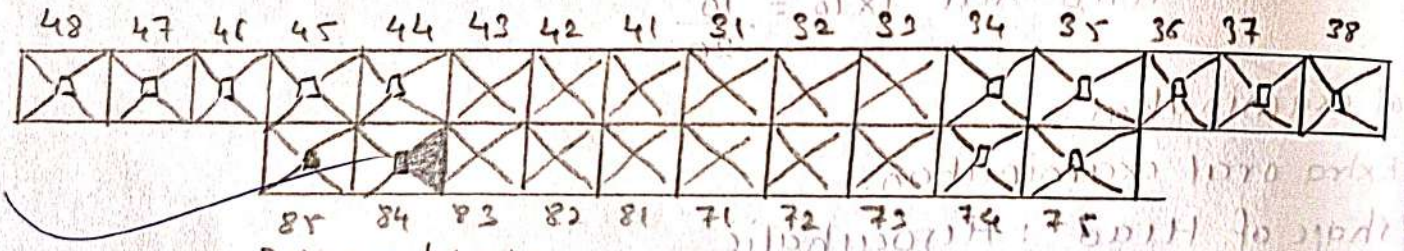
Proximal caries c̄ 53, 54

calculus: +

Dental age: 6 year

DMFT:





DMFT = 4+0+0

= 4.

Provisional Diagnosis:

chronic irreversible pulpitis c̄ 84

Investigation:

IOPA c̄ 84

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i of X-ray : IOPA c̄ 84
Region: Right lower back teeth region
Teeth seen c̄ 45, 85, 84
Tooth of intrest 84
Crown → Diffuse radiolucency on Mesioproximal surface involving enamel, dentin, pulp
Nolla stage 84 → Five
Root → Two root seen.

nal Diagnosis:
hronic irreversible pulpitis c̄ 84

reatment Plan:

Emergency phase:
AO c̄ 84
Antibiotics & Analgesics

lanned phase:
oral Hygiene counselling → Proper brushing tech. (Bass tech.) use of Fluoridated toothpaste
Diet counselling → Reduction in b/w sugar Meal exposure

PSvalli

3) Restorative phase
→ SCC c̄ 84
Restoration (GIC) c̄ 53, 54, 85

) Endodontic phase:
Pulpectomy c̄ 84

) Surgical phase: Not required

) Maintaince phase: It recalled after 6 month to check for integrity of previous Restoration & detection of new carious lesions

Case-History - 8

Personal information :

Patient Name : Mr Arnav Patil Date: 24/9/2024
OPD No : 21397 Age/sex 6 yrs/Male Weight : 18 kg
DOB : 10/3/2018
Religion : Hindu Education : 1st std.
Name of person accompaning : Amol Patil
with whom Perron acompaking : Parents
occupation of Mother & Father : Father (Businessman)
Residintial adress : chandur, Hatkanagle, Kolhapur.
Contact No : 7756823640

chief complaint :

Patient complains of pain in Right Upper back Helm region of Jaw since 2 weeks

HOPI :

Nature of pain Dull aching, ~~Non~~ spontaneous, continuous, Nocturnal
Aggrevates on Hot & cold & relieved on medication
swelling, Fever, trauma → No relevant history

Pre-natal History :

H/O illness during Pregnancy → NRH
H/O specific medicines during Pregnancy → NRH
H/O Fluoride ~~Supplements~~ during Pregnancy → NRH
H/O high vital/ calt supplk → NRH

Natal History :

Type of delivary : Normal Term → Full term (9 month)
H/O Birth asphyxia, Jaundice, blood transfusion → NRH

Post Natal :

Developmental milestones : Normal
H/O immunisation : All vaccinations are completed

Past Medical History :

No-relevant History.

ily History:
-relevant History
t dental History:
had undergone Restoration before 6 months.

sonal Habits:
ral Hygiene method: commercially available toothpaste & toothbrush
ethod of cleaning tech: Horizontal scrub.
requency & duration: once in a day for 2 min
Time of cleaning cleaning: Early morning
unassisted:
use of other oral hygiene Method: NO

ietary habits:
source of water: Borewell
Type of diet: Mixed

Details:
8 am breakfast (Milk)
12.00 pm lunch (chapati & bhaiji)
4.00 pm (Tea & biscuit)
8.00 pm Dinner (chappati, bhaiji)

sweet score.

liquid (Tea/Milk) = 5 x 2 = 10
solid (biscuit) = 10 x 1 = 10
20 (watchout zone)

During meal exposure = Milk x 1 (5)
BW meal sugar exposure = chocolate Biscuit x1 (10)

cal examination:
extra oral examination:
Shape of Head → Dolichocephalic
Facial form → Leptoprosopic
Face symmetry → Bilaterally symmetrical
Facial Profile → Straight
TMJ examination → No deviation, Non tender
lymph node → Non palpable, Non tender
Speech → Normal
lip competency → Competent

Intraoral examination:

Adverse oral habit → No-relevant History

soft tissue → lip= competent

gingiva = No fistula / sinus

final attachment = gingival

Hard tissue → ~~Molar~~ Flush terminal

incisor relation overjet 1mm, overbite 1.5 mm

Type of dentition → Mixed

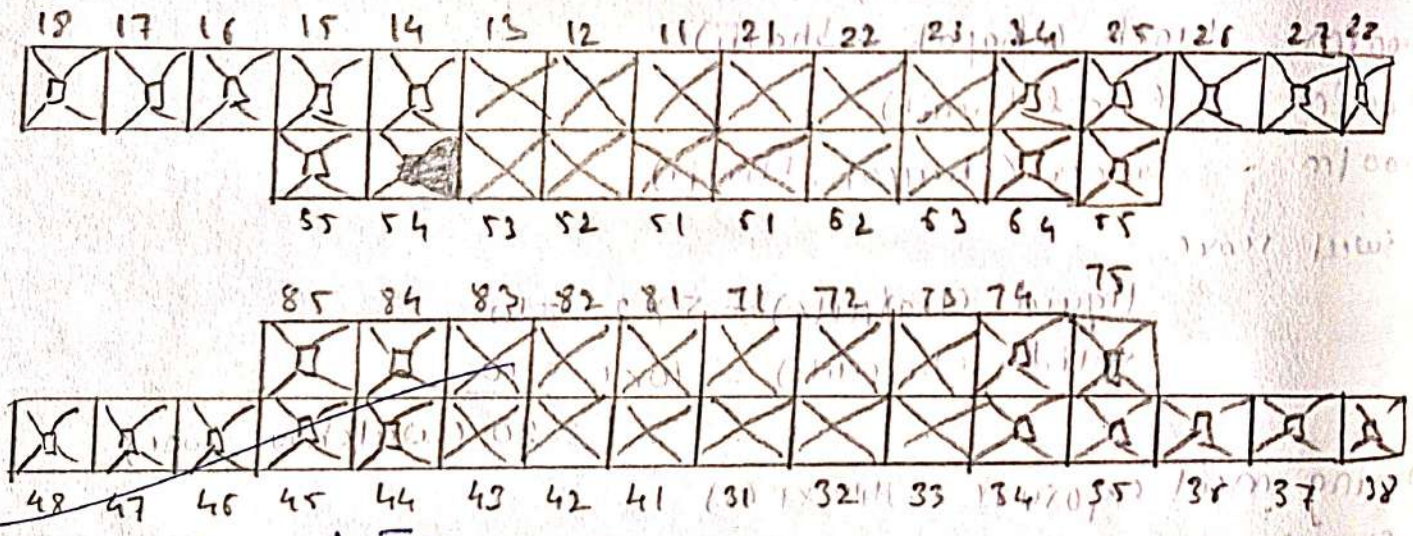
55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75	36

Deep Proximal caries $\bar{c}$ 54

calculus +

Dental age = 6 year.

DMFT:



Decayed $\bar{c}$ 1

Missing - filled 1 DMFT= 2.

Provisional Dx:

Chronic irreversible pulpitis $\bar{c}$ 54

Investigation:

IOPA $\bar{c}$ 54

TATYASAHEB KORE DENTAL COLLEGE & RESEARCH CENTRE New Pargaon Tal. Hatkanangale Dist. Kolhapur 416137

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New Pargaon, Tal. Hatkanangle
Dt. Kolhapur 416 137

Region → Right upper back teeth region of raw
Teeth seen ⊂ 53, 54, 55
Tooth of interest ⊂ 54
Crown: Diffuse radiolucency at Mesioproximal surface involving enamel, dentin, pulp
Root: Three root seen

Final Dx:
Chronic irreversible Pulpitis ⊂ 54

Treatment plan:

1) Emergency phase:
- Access opening ⊂ 54
- Antibiotics & Analgesics

2) Planned phase:
(A) Preventive Phase:
→ Use of Proper brushing technique Coral Hygiene counselling)
Use of fluoridated toothpaste (Dentorshine)
Oral prophylaxis
PRF sealant ⊂ 36.

(B) Restorative phase
→ See ⊂ 54

(C) Endodontic phase
→ Pulpectomy ⊂ 54

(D) Surgical phase
→ Not required

(E) Maintainance phase
→ Recall after 6 months for check oral hygiene & integrity of Previous restoration

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CASE HISTORY

Sr. No.	Patient's Name	Date	Signature
1.	Mr: Parth Shivaji Ghunke (OPD = 7419)	1/5/2024	
2.	Miss Arohic Patil (OPD = 6966)	3/5/2024	PSValu
3.	Mr. Saroush Sarang Ligade (4167)	6/5/2024	PSValu
4.	Mr. Kushal Mahendra Jadhav (8044)	8/5/2024	PSValu
5.	Mr. Vipul Vilas Jadhav. (6124)	8/5/2024	PSValke
6.	Miss Vaidahi Santosh Jadhav (4752)	19/9/24	PSValu
7.	Miss Rujvi Prithviraj Nimbalkar	21/9/24	PSValu
8.	Mr Arnav Patil (21397)	24/9/24.	PSValu

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WORK DONE

Preventive Treatment

Sr. No.	Work Done		Date	Signature
60652	Smartha Patil (11/M)	oral Prophylaxis	7/6/2023.	
61265	Arohi Gaikwad (12/F)	oral Prophylaxis.	12/6/2023	
59455	Darshana Ingale (9/F)	oral Prophylaxis	15/6/2023	
62557	Kedar Shelar (10/M)	oral Prophylaxis	22/6/2023	
62987	Nida Nadaf (4/F)	oral Prophylaxis	26/6/2023	
63128	Varun Patil (10/M)	Class I cavity done, $\overline{E}$ 75, followed by GIC restoration $\overline{E}$ 75	27/6/2023	
56275	Poorva Hangave	composite restoration $\overline{E}$ 26 done	29/6/2023	
7328	Tushar chavan. (11/M)	PFS done $\overline{E}$ 16.	11/4/2024.	
7328	Tushar chavan (11/M)	PFS done $\overline{E}$ 26	11/4/2024.	
	Vihan Kamble (10/M)	oral Prophylaxis done.	21/9/2024	

CENTRE & RESEARCH TALUKA KOLHAPUR DENTAL COLLEGE New Pargaon, Tal. Hatkanangale, Dist. Kolhapur. 416131

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WORK DONE

Restorations & Endodontic Treatment

Sr. No.	Work Done	Date	Signature
18.)	Ayush malgi. (7273)	8/5/2024.	
	- composite restoration $\bar{c}$ is done.		

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