

# THE NINTH QUADRANT

*Powered by Macrofacial Intelligence*

Sep-Dec 2025



ONLINE  
STATS

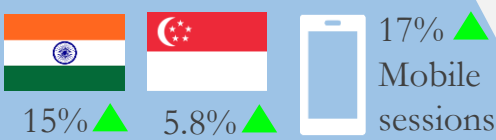


[www.doped.co.in](http://www.doped.co.in)

120 DAYS

893 UNIQUE VISITORS

939 SITE SESSIONS



(via Hostinger Analytics)



Follow us: [@doped.cdsrc](https://www.instagram.com/doped.cdsrc)



Subscribe: [@doped\\_cdsrc](https://www.youtube.com/channel/UCdoped_cdsrc)

PATIENT  
STATS

778

PREVENTIVE

1123

RESTORATIVE

223

INTERCEPTIVE

1147

PULP THERAPIES

06

SPECIAL CASES

*Adam and Eve had many  
advantages, but the principal one  
was that they escaped teething.*  
**-Mark Twain**

The Ninth Quadrant is one of the many attempts of the **Department of Pediatric & Preventive Dentistry at the College of Dental Sciences & Research Centre (Ahmedabad, India)** to impart dental education and engage young scholars in scientific reading & writing. This newsletter is a triannual publication. We welcome potential contributors to send us an email at [bopalpedo@gmail.com](mailto:bopalpedo@gmail.com).



### THREE 'R's for on-site management of an avulsed permanent tooth

**Retrieve:** Handle the tooth only by the crown.

**Rinse:** Gently rinse, but do not scrub or wipe it.

**Replant/Reserve:** Try to gently push it back into the socket, or store it in a container of milk (or saliva) immediately & visit the dentist.

MNEMONIC



- ✓ A study from AIIMS Raipur on reducing painful mucositis in oral cancer patients using low-level laser therapy won top recognition at the ESMO Asia Congress 2025 in Singapore. Read More: <https://bit.ly/4b1IGpF>
- ✓ The American Dental Association (ADA) has partnered with the Academy for Sports Dentistry to boost sports dentistry awareness and education worldwide. Read More: <https://bit.ly/3LOHED1>
- ✓ 10 dental colleges in Rajasthan fined 10 crore INR for irregular admissions. Read more: <https://bit.ly/4bChRsf>

DENTAL NEWS

RECOMMENDATIONS

**READING**  
Development of the Human Dentition by Frans P. G. M. van der Linden

**LISTENING**  
IAPD–Colgate Podcast Series  
Protrusive Dental Podcast

**ANIME**  
Moyasimon: Tales of Agriculture

**WEBSITE**  
<https://www.tripdatabase.com/> for literature search

**SOFTWARE**  
Bibliometrix for Bibliometric Analysis

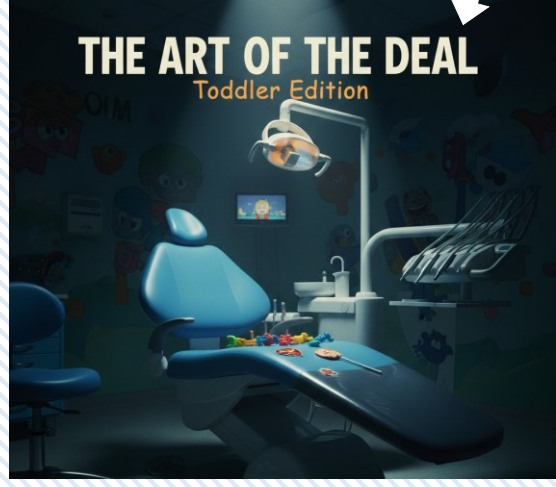
**APPLICATION**  
DentalRx

**BEWARE OF**  
Academia Journal of Medicine

**BE AWARE OF**  
Journal of Stomatology

**AI PROMPT EXERCISE!**  
You have a task of generating this image using a large language model. What would be your prompt?

LISTEN UP!



**THE ART OF THE DEAL**  
Toddler Edition



PEDONOW

The University of Louisville School of Dentistry's Dental Hygiene program has introduced the Ultradent Gemini EVO™ diode laser for students to receive training on the use of lasers in a dental hygiene setting.

More: <http://bit.ly/49s75Uc>



DOWNLOAD THIS  
<https://bit.ly/4qlxybL>

CHECK THIS OUT  
<https://www.doped.co.in/learn/ing-resources-pepper>

SCAN TO BE  
A PART OF IT!



PATIENT  
FAQ

*I recently learned that my kids' teeth can be protected from decay with a few easy treatments. What should my kid first receive? A sealant or a fluoride therapy?*

Both sealants and fluoride contribute towards prevention of dental decay. Both techniques can be performed in the same visit by the pediatric dentist. A sealant application must be done first, then a fluoride application. However, if the pediatric dentist first applies fluoride, you may be recalled for the sealant application at the next session.

Which crown fits my case?

👑 Choose SSC when...

- Uncooperative child
- Durability > Esthetics
- Low budget

👑 Choose Zirconia when...

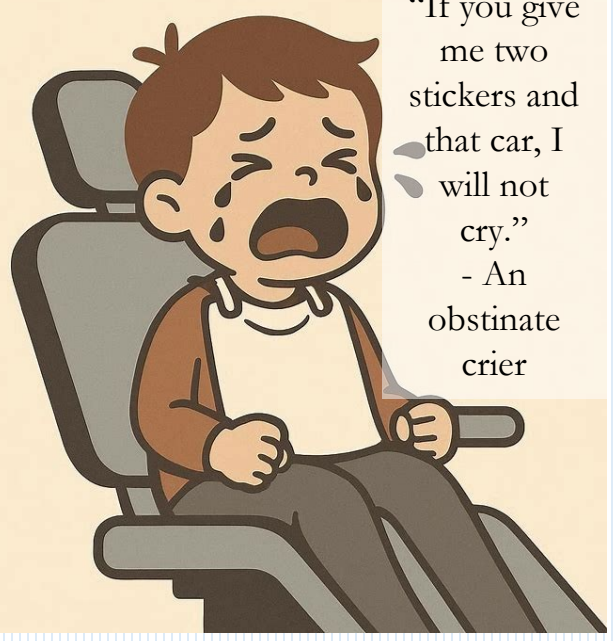
- Esthetics are essential
- Cooperative child
- Isolation & bleeding control are achievable

👑 Choose BioFlex when...

- Esthetics (without aggressive preparation) is essential
- Limited budget
- Moderate loss of tooth structure

CLINICAL  
CONUNDRUM

ACADEMEMEICS



“If you give me two stickers and that car, I will not cry.”  
- An obstinate crier

CLINICAL QUIZ

- If resin infiltration does not remove caries, how does it stop it?
- Why does local anesthesia fail more often in teeth with irreversible pulpitis?
- Why is space loss more dramatic after the early loss of primary canines?

By sealing the micropores, stopping diffusion pathways, and halting lesion progression.  
Inflammation lowers tissue pH → anaesthetic remains in ionized, inactive form, reducing nerve penetration.  
Because primary canines maintain arch form and midline symmetry.  
Losing one → midline shift.  
Losing both → arch collapses.

ANSWERS

## HOW-TO

### CHOOSE A PULP CAPPING AGENT

Traditional indirect pulp capping (IPC) focused mainly on protecting the pulp by placing a liner, such as calcium hydroxide, over residual dentin. While effective in creating a protective barrier, these materials were largely passive in nature. Modern IPC has shifted toward a **bioactive approach**, where materials actively interact with the pulp–dentin complex.

Newer calcium-silicate–based materials such as **Biodentine, TheraCal LC, MTA, and bioceramics** release calcium ions and create an alkaline environment that stimulates pulp healing. These materials promote **reparative dentin formation**, enhance sealing ability, and support pulp vitality rather than merely isolating it. By triggering biological responses within the pulp, they encourage natural repair and regeneration.

Hesy-Ra was an Egyptian scribe who lived around 2600 B.C. and is recognized as the first dental practitioner.

Edward H. Angle, who started the first school of orthodontics in 1901, created a simple classification for crooked teeth in the late 1800s, a system still in use today.



## DENTASTIC PEOPLE

Paul Revere, famous for warning Colonial troops that the British were coming, was also trained as a dentist by America's first dentist, John Baker.



## TOPIC OVERVIEW

### BIOETHICS

- Bioethics began as a part of medical ethics in the **1970s** (younger than composites!)
- **19<sup>th</sup> October** is celebrated as World Bioethics Day
- **'Ethioscope'** is a newsletter by Santosh Dental College that is dedicated to education on bioethics.
- The three primary areas where bioethics is implemented in healthcare include **ethical decision-making, patient centred-care, and research ethics.**
- Bioethics = Autonomy + Non-maleficence + Beneficence + Justice + Assent/Consent + Accountability + Cultural Competence + Social Responsibility + Collaboration
- Due to the widespread use of Artificial Intelligence (AI) and the risks that it poses, the Indian government has passed **the Digital Information Security in Healthcare Act (DISHA) & Personal Data Protection (PDP) Bill** to keep a check on data privacy and security issues associated with large language models.
- **RAPID** = Regulation, Awareness, Policy Making, Implementation, and Dental Education; an approach to increase the education on bioethics with respect to hurdles posed by AI.

**IT'S A DATE!**

**26<sup>TH</sup> JANUARY**

Dentist Drill Appreciation Day

**FEBRUARY**

Children's Dental Health Month

**4<sup>TH</sup> FEBRUARY**

World Cancer Day

**21<sup>ST</sup>-22<sup>ND</sup> FEBRUARY 2026**

Gujarat Dental Show

**1<sup>ST</sup> WEEK OF MARCH**

Dental Assistant's Week

**6<sup>TH</sup> MARCH**

National Dentist's Day

**12<sup>TH</sup>-14<sup>TH</sup> MARCH 2026**

ISPPD PG Convention

**20<sup>TH</sup> MARCH**

World Oral Health Day

**21<sup>ST</sup> MARCH**

World Down's Syndrome Day

**7<sup>TH</sup> APRIL**

World Health Day

Can you identify which of these are myths and which of these are truths?



- You should wait at least 30 minutes after eating acidic food (like oranges or soda) before brushing your teeth.
- Diet sodas and sugar-free drinks are totally safe for your teeth since they don't have sugar.
- Once a cavity starts, there is nothing you can do to stop or reverse it yourself.

**MYTH VS TRUTH**

F	I	S	S	U	R	E	S	T	M	A	L	G	U	S
L	S	E	D	A	T	I	O	N	D	J	P	V	T	E
U	N	U	I	I	O	P	D	A	E	L	U	S	U	A
O	A	P	D	X	V	R	E	F	N	U	L	T	I	L
R	E	R	P	O	I	T	P	A	T	O	P	H	O	A
I	L	E	F	Y	L	E	U	V	R	T	E	C	T	N
D	A	P	M	A	L	O	C	C	L	U	S	I	O	N
E	N	C	I	N	D	L	A	O	E	P	C	D	P	T
S	T	E	R	I	L	E	A	N	G	O	P	Y	S	D
Y	T	H	U	C	F	O	I	G	A	P	T	N	C	E
E	P	U	L	P	E	C	T	O	M	Y	A	E	O	N
T	O	B	O	N	D	I	N	G	H	Y	Z	D	N	T
A	S	K	L	M	X	C	A	R	I	E	S	T	T	S
Z	N	T	E	N	T	R	C	O	P	C	T	U	E	H
F	I	B	L	I	N	G	M	I	S	T	E	R	V	P

Answer: Fluoride, Fissure, Sealant, Malocclusion, Pulpotomy, Sedation, Bonding, Incisor, Caries, Plaque, Dentin, Sterile, Eruption, Pulp, Prevent

**THINGS THAT STOOD THE TEST OF TIME**



# DENTAL MANAGEMENT OF CHILDREN WITH CONGENITAL HEART DISEASE

Full oral health examination including radiographs<sup>46</sup>

**Confirm medial history.**

**Specific cardiac related questions to assess:**

- Is it a cyanotic or acyanotic cardiac defect?
- The name of cardiologist and frequency of reviews
- Previous hospital admissions?
- Confirm medications
- Any previous or upcoming surgeries?
- Confirm the IE risk status and if antibiotic prophylaxis is required<sup>41</sup>

**Provide enhanced prevention in line with DBOH including<sup>47</sup>:**

- Hands on tooth brushing instruction
- Apply fluoride varnish and fissure sealants
- Consider prescribing sodium fluoride mouthwash/ toothpaste when age appropriate
- Reduce recall interval to 3-4 months to ensure early diagnosis of oral disease

Yes

Is oral disease present?

No

- Requesting the last cardiology clinic letter can be helpful
- Inform cardiology of the patients oral health status
- Inform cardiology of the dental management plan

- Inform cardiology of the patients oral health status
- Take radiographs in line with the patients caries risk status<sup>46</sup>
- Reduce recall interval to 3-4 months
- Ensure early diagnosis of oral disease

**Is the patient suitable to be managed in primary care?**

**For patients with:**

- Stable cardiac disease
- No co-morbidities
- No medication
- Good cooperation

**Consider referring to a specialist when:**

- Upcoming cardiac surgery/ intervention (urgent referral is required<sup>1</sup>)
- The patient is on an anti-coagulant medication
- Dental trauma in primary or permanent teeth
- Conditions listed in Table 4

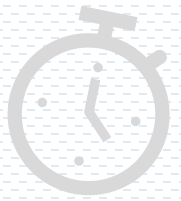
**Treatment planning in primary care**

- Carious primary and permanent teeth should have complete caries removal and be definitively restored or extracted
- Caries affecting two surfaces on a primary tooth should be considered for extraction
- All teeth with caries and/or restorations close to the pulp should be extracted
- Carious mobile primary teeth should be extracted
- Primary teeth with severe Non Carious Tooth Surface Loss (NCTSL) should be considered for extraction
- Ensure traumatised teeth are asymptomatic with no periapical pathology
- Sound mobile primary teeth can be allowed to exfoliate naturally
- Plan balancing extractions of carious primary canine teeth and consider for first primary molar teeth

Hughes, Sophie; Balmer, Richard; Moffat, Michelle; Willcoxson, Fiona . (2019). *The dental management of children with congenital heart disease following the publication of Paediatric Congenital Heart Disease Standards and Specifications*. *British Dental Journal*, 226(6), 447–452. doi:10.1038/s41415-019-0094-0

## 1-MINUTE RIDDLES

1. I stand between sweetness and your smile — I'm invisible until I travel miles. Dentists fight me every day. What am I?
2. I don't move, but I can fall — I protect what's under my wall. I come first and I come last; lose me and your dentist acts fast. What am I?



Answer: 1. Plaque 2. Enamel

## STUDYING TECHNIQUE

**Visualization** is a method of learning wherein the reader can create mental images for better understanding. For example, to understand the amount of density that dentinal tubules contribute to in a healthy tooth structure, then a fun fact can be associated with this. For example, if you were to unroll all the dentinal tubules in a single tooth, the total surface area could be massive, and the collective length of the tubules themselves, in a healthy tooth, could theoretically stretch for almost 3 miles (5 km)!



### CAVITY VARNISH

A dental material applied to prepared tooth surfaces in deep cavities to reduce sensitivity & microleakage by sealing dentinal tubules

**SO CLOSE!**

### FLUORIDE VARNISH

A dental material applied on tooth surfaces as a preventive treatment against caries, which promotes remineralization & decreases sensitivity.

## BEHAVE!

### SENSORY-ADAPTED DENTAL ENVIRONMENT

**SADE:** Dim lights, calm sounds, relaxed child

**Conventional Clinic:** Bright lights, loud sounds, anxious child

SADE applies sensory science to behavior management, whereas conventional clinics rely primarily on patient adaptability.

#### Sensory Modifications

**Visual:** Dimmed lighting, slow-moving projections, covered instruments

**Auditory:** Soft music, white noise, or noise-cancelling headphones

**Tactile:** Weighted blankets or deep-pressure vests for calming input

**Olfactory:** Neutral, mild, non-clinical scents



Source: Mums and stories

*When the Clinic Adapts to the Child,  
Not the Other Way Around*

<b>Flesch Reading Ease</b>	Considers average sentence length and average word length in syllables	The readability assessment tools exist so that the writer can know how comprehensive is their writing and how understandable it is for the readers. While some formulas infer a score that lets the writer understand the ease of reading their work, some others draw an inference which suggests how understandable it is for a certain grade of students.
<b>Gray and Leary</b>	Considers average sentence length, hard words, personal pronouns, unique words, & prepositional phrases	
<b>Gunning Fog Index</b>	Considers average sentence length and percentage of hard words	
<b>SMOG Index</b>	Considers number of polysyllable words used	
<b>Fry Graph</b>	Considers average number of sentences and syllables per 100 words	
<b>FORCAST Formula</b>	Considers number of single syllable words used per 150 words	

THE TOOTH AND... THE TONGUE

**A healthy smile doesn't just look good—it sounds good too.**

Teeth, lips, tongue, and palate work together to guide airflow and form sounds. Anterior (front) teeth are especially important for sounds like /s/, /f/, /v/, and /th/. Dental conditions such as missing or maligned teeth, open bite, or ill-fitting restorations or habits can alter airflow and tongue placement, leading to speech distortion or lisping, highlighting the importance of timely dental care in children. Modern dentistry goes beyond aesthetics and function – it supports communication. By considering speech during restorations, orthodontics, and prosthetic design, dentists help patients speak with clarity and confidence.

PEEKABOO

Can you identify the clinical procedure?



Answer: This image depicts the application of P11-4 self-assembling peptide varnish. Apart from the available varnishes newer P11-4 self-assembling peptides based in preventing demineralization as peptides self-assemble into scaffolds that attract calcium and phosphate ions, facilitating true remineralization in a way that mimics natural enamel development. Darkness exists only until the sun checks in. Likewise demineralization exist till the varnish checks in.



THANK YOU CONTRIBUTORS

Prof Dr Anup Panda • Prof Dr Krishna Dere • Prof Dr Mira Virda • Dr Jina Jani • Dr Deepika Chari • Dr Balraj Shukla • Dinesh Gohel • Rakesh Vaniya