



**Chettinad**

Dental College & Research Institute



## DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

### E-Teaching/Learning sessions for Post Graduate


#### Post Graduate academic schedule

DATE	TOPIC	PRESENTER	PARTIPANTS
25.05.2020	Cephalometric points and landmark	Dr.Sriman	17

 Zoom Meeting 40-Minutes



### Sriman Vishnu's Zoom Meeting

Meeting ID	792 6972 4665
Host	Sriman Vishnu
Password	12345
Invite Link	<a href="https://us04web.zoom.us/j/79269724665?pwd=Y2lzVnlxOXh0Wk5Pa1dZei9QOWRsdz09">https://us04web.zoom.us/j/79269724665?pwd=Y2lzVnlxOXh0Wk5Pa1dZei9QOWRsdz09</a>  Copy URL
Participant ID	343194

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Find a participant

Dr Navin.N (Me)  



10



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Find a participant

AN Anitha Nallusamy





~~U~~ ~~U~~

 No smoking and no open flames





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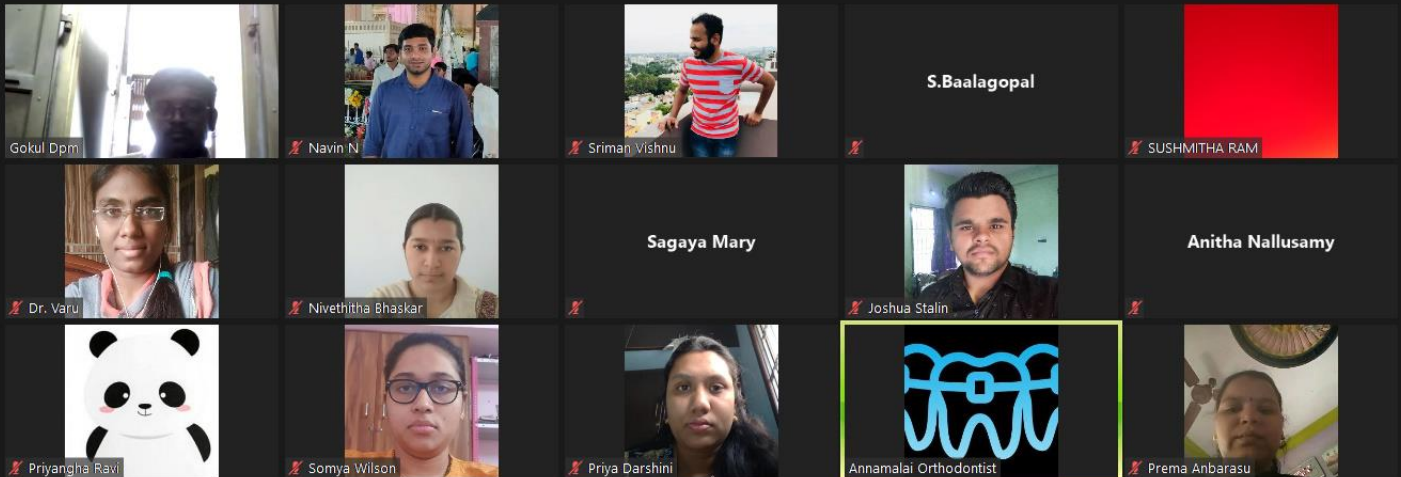


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Zoom Meeting 40-Minutes

00:19:48

Speaker View



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Participants 15

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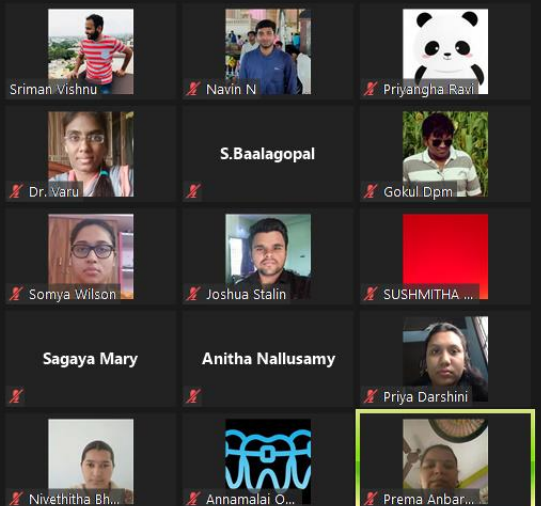
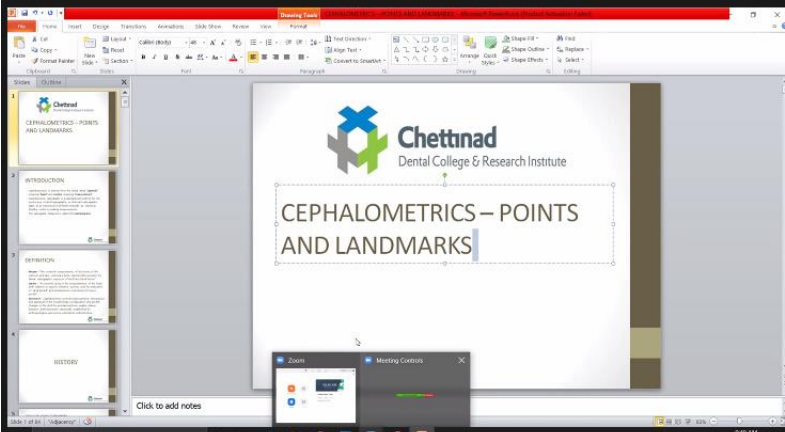
Zoom Meeting 40-Minutes

You are viewing Sriman Vishnu's screen

View Options

00:07:15

Speaker View



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Zoom Meeting 40-Minutes You are viewing Sriraman Vishnu's screen View Options

00:10:37 Speaker View

## DEFINITION

- **Moyers** - "The scientific measurement of the bones of the cranium and face, utilizing a fixed, reproducible position for lateral radiographic exposure of skull and facial bones"
- **Grabner** - "A scientific study of the measurements of the head with relation to specific reference points; used for evaluation of facial growth and development, including soft tissue profile"
- **Salzmann** - Cephalometrics include measurements description and appraisal of the morphologic configuration and growth changes in the skull by ascertaining lines, angles, planes between anthropometric landmarks established by anthropologists and points selected by orthodontists

Participants: 15

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ENG IN 9:44 AM 5/25/2020

Participants: Gokul Dpm, Navin N, Sriraman Vishnu, Dr. Varu, S.Baalagopal, Somya Wilson, Joshua Stalin, SUSHMITHA ..., Sagaya Mary, Anitha Nallusamy, Priya Darshini, Nivethitha Bh..., Annamalai O..., Prema Anbar..., Connecting to...

Zoom Meeting 40-Minutes You are viewing Sriraman Vishnu's screen View Options

00:18:14 Speaker View

## Uses

- Helps in orthodontic diagnosis, by enabling study of skeletal, dental and soft tissue structures of the craniofacial region.
- Helps in classification of malocclusion.
- Helps in treatment planning.
- Evaluation of treatment results.
- Helps in predicting growth related change.
- It is also valuable aid in research work.

Participants: 15

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ENG IN 9:51 AM 5/25/2020

Participants: Gokul Dpm, Navin N, Sriraman Vishnu, Dr. Varu, S.Baalagopal, Somya Wilson, Joshua Stalin, SUSHMITHA ..., Sagaya Mary, Anitha Nallusamy, Priya Darshini, Nivethitha Bh..., Annamalai O..., Prema Anbar..., Priyanga Ravi





Zoom Meeting 40-Minutes

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View Options

00:19:07

Speaker View

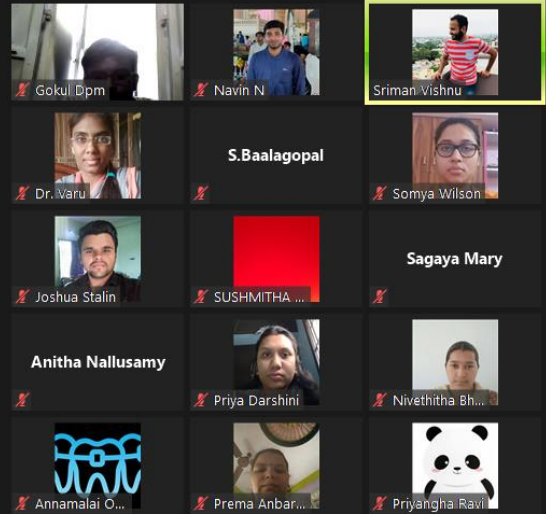
## Cephalometric landmarks

A conspicuous point on a cephalogram that serves as a guide for measurement or construction of planes

— Jacobson

**Anatomic:** represent actual anatomic structure of the skull

**Constructed:** constructed or obtained secondarily from anatomic structures in the cephalogram



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Participants 15

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Windows taskbar showing system tray with date 5/25/2020 and time 9:52 AM.

Zoom Meeting 40-Minutes

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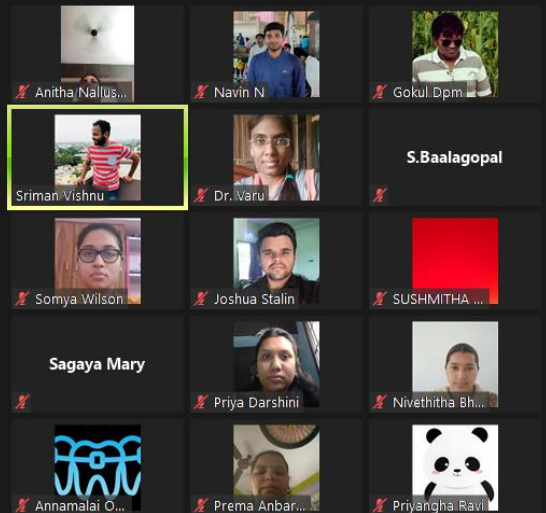
00:24:54

Speaker View

Remaining Meeting Time: 09:00

## Po- porion

- **Po (Porion)** –
- **Tweed** – 4.5mm above geometric center of ear rod.
- **Craig** – Uppermost point on the soft tissues overlying the external auditory meatus.
- **Ricketts** – True Porion, located directly over that of basion and downward and forward from internal auditory canal.
- **Moorrees** – Center of ear rods.
- **Higley** – Highest point on the root of the left external auditory meatus.



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Participants 15

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Windows taskbar showing system tray with date 5/25/2020 and time 9:58 AM.



Zoom Meeting 40-Minutes

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View Options

00:03:36

Speaker View

## Errors

ERRORS	CAUSE	MANAGEMENT
<b>Magnification:</b> Enlargement	X ray beams are not parallel with all points of the object	By using a long focus-object distance & a short object-film distance
<b>Distortions:</b> Head being 3D causes different magnifications at different depths of field	Landmarks & structures not situated in the midsagittal plane are usually bilateral & may cause dual images in radiographs	Overcome by recording the midpoint of 2 images
	Rotation of patient's head in any plane of space in cephalostat may produce linear/angular distortions	By standardized head orientation using ear rods, orbital pointer & forehead rest



S.Baalagopal

Navin N

Sriman Vishnu

SUSHMITHA ...

Dr. Varu

Nivethitha Bh...

Sagaya Mary

Joshua Stalin

Anitha Nallusamy

Gokul Dpm

Priyanga Ravi

Somya Wilson

Priya Darshini

Annamalai O...

Prema Anbar...

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ENG 10:11 AM 5/25/2020

23

Zoom Meeting 40-Minutes

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00:13:12

Speaker View

## CLASS III Malocclusion

Class III malocclusion occurs when the lower teeth occlude mesial to their normal relationship by width of one premolar or in even extreme cases -ANGLE



Gokul Dpm

Navin N

Sriman Vishnu

S.Baalagopal

SUSHMITHA ...

Dr. Varu

Nivethitha Bh...

Sagaya Mary

Joshua Stalin

Anitha Nallusamy

Priyanga Ravi

Somya Wilson

Priya Darshini

Annamalai O...

Prema Anbar...

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ENG 10:21 AM 5/25/2020

23



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Zoom Meeting 40-Minutes

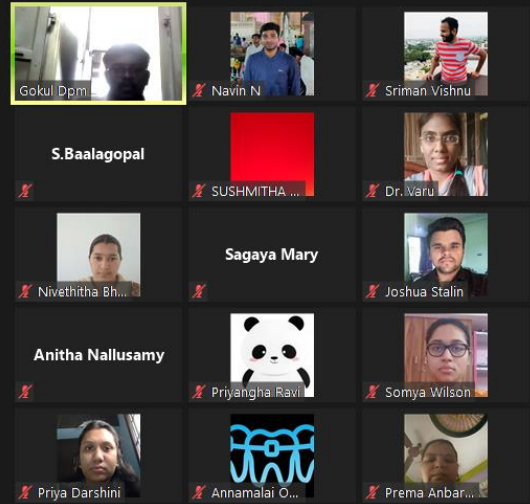
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View Options

00:16:32

Speaker View

- The lines AO and BO constructed by connecting A and B perpendicular to occlusal plane
- The first tracing was superimposed on follow up making initial tracing as constant
- The points A and B on later follow up radiograph are located and the new lines AO and BO by connected with occlusal plane of the first tracing
- The distance between the A point in the two tracings gives the horizontal growth changes of maxilla similarly B point gives horizontal growth changes of mandible



Unmute Start Video

Participants 15

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Reactions

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ENG 10:24 AM 5/25/2020

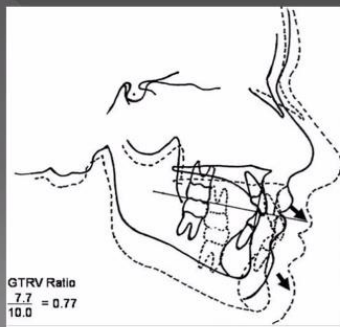
Zoom Meeting 40-Minutes

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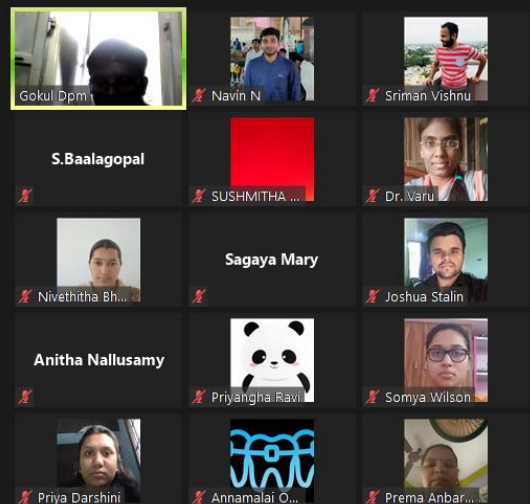
View Options

00:17:05

Speaker View



GTRV Ratio  
 $\frac{7.7}{10.0} = 0.77$



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ENG 10:25 AM 5/25/2020



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## JC Presentation [Priyanga R]



me

To [rsushmi@gmail.com](mailto:rsushmi@gmail.com)

25 May at 11:05 am

 2 attachments



bartzela2009.pdf

267.9kB



Effects of ... .pptx

516kB



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## DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS


### E-Teaching/Learning sessions for Post Graduate

#### Post Graduate academic schedule

DATE	TOPIC	PRESENTER	PARTIPANTS
26.05.2020	Drugs in orthodontics	Dr.Priyangha	17

 Recording

### Priyangha Ravi's Zoom Meeting

Meeting ID	743 3804 5380
Host	Priyangha Ravi
Password	12345
Invite Link	<a href="https://us04web.zoom.us/j/74338045380?pwd=bGZqdTFiMFZnZ09GeEJtbHFsNktadz09">https://us04web.zoom.us/j/74338045380?pwd=bGZqdTFiMFZnZ09GeEJtbHFsNktadz09</a>  Copy URL
Participant ID	350931

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groups namely the control group (no medication), saline and fluoxetine dissolved in saline.  
In all groups, nickel titanium closed-coil spring was used between the left maxillary central



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Participants (17)

Find a participant

**SM** Sagaya Mary (Me)

Priyangha Ravi (Host)

**AN** Anitha Nallusamy

Annamalai Orthodontist

Dr. Varu

Joshua Stalin

Navin N

Nivethitha Bhaskar

**PA** Prema Anbarasu

Priya Darshini

**RG** R Gokul raj

**S** S.Baalagopal

Saravanakumar Subramanian

Somya Wilson

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Participants (17)

Find a participant

Annamalai Orthodontist

Dr. Varu

Joshua Stalin

Navin N

Nivethitha Bhaskar

**PA** Prema Anbarasu

Priya Darshini

**RG** R Gokul raj

**S** S.Baalagopal

Saravanakumar Subramanian

Somya Wilson

Sriman Vishnu

SUSHMITHA RAM

**YJ** Yamini Jeyaraj

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## DISCUSSION

- Only a few human clinical trials have been involved;
- This review focuses mainly on well-controlled animal studies.
- Comparison of the data from these studies was hampered by the great variability in experimental design, administration regimens, and force characteristics.

R Gokul raj

Sagaya Mary

Sriman Vishnu

Anitha Nallusamy

SUSHMITHA ...

Yamini Jeyaraj

Priya Darshini

Priyanga Ravi

Dr. Varu

Annamalai Or...

Somya Wilson

Joshua Stalin

Saravanakum...

Prema Anbarasu

Nivethitha Bh...

Navin N

S.Baalagopal

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## DISCUSSION

- Direct extrapolation of experimental animal studies to the clinical situation is impossible.
- Comparison had great variability in animal models
- Krishnan V, Davidovitch Z et al : Antidepressants, anti-ulcerants, cholesterol reducers, broad-spectrum antibiotics, etc

Krishnan V, Davidovitch Z; Cellular, Molecular, and Tissue-Level Reactions to Orthodontic Force; Am J Orthod Dentofacial Orthop 2006 Apr;129(4):469.e1-32.

R Gokul raj

Sagaya Mary

Sriman Vishnu

Anitha Nallusamy

SUSHMITHA ...

Yamini Jeyaraj

Priya Darshini

Priyanga Ravi

Dr. Varu

Annamalai Or...

Somya Wilson

Joshua Stalin

Saravanakum...

Prema Anbarasu

Nivethitha Bh...

Navin N

S.Baalagopal



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Recording

Remaining Meeting Time: 09:08

**CROSS REFERENCE**

ELSEVIER journal homepage: [www.elsevier.com/locate/journalofdent](http://www.elsevier.com/locate/journalofdent)

**Review**

**Influence of bisphosphonates in orthodontic therapy: Systematic review**

Alejandro Iglesias-Linares<sup>a</sup>, Rosa-María Yáñez-Vico<sup>a</sup>, Enrique Solano-Reina<sup>a</sup>, Daniel Torres-Lagares<sup>a</sup>, Miguel Ángel González Moles<sup>b,\*</sup>

**Abstract** The objective of this paper was to analyze the effects of bisphosphonates and their influence on orthodontic therapy.

**Discussion:** The literature was systematically reviewed using PubMed/Medline, Scopus, Embase, EMBASE, and Cochrane databases up to December 31, 2018.

**Study selection:** Articles were independently selected by two different researchers based on previously established inclusion and exclusion criteria, finding a good concordance (kappa index of 0.82). The methodological quality of the reviewed papers was assessed. The search strategy identified 200 articles. Thirteen articles were selected after application of the inclusion/exclusion criteria, and only one of them had a high methodological quality. Bisphosphonate applications in orthodontic therapy were divided between two main groups: tooth movement and alveolar resorption.

**Conclusions:** Topical or systemic application of bisphosphonates decreases orthodontic tooth movement and reduces orthodontic tooth movement relapse and alveolar resorption after maxillary expansion or mandibular distraction and similar procedures. Further long-term studies are required to assess possible adverse effects after bisphosphonate treatment for these purposes.

	<b>Sagaya Mary</b>		<b>Anitha Nallusamy</b>
	<b>Yamini Jeyaraj</b>		
	<b>Prema Anbarasu</b>		
<b>S.Baalagopal</b>			

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Remaining Meeting Time: 08:32

**CROSS REFERENCE**

ELSEVIER journal homepage: [www.elsevier.com/locate/journalofdent](http://www.elsevier.com/locate/journalofdent)

**Systematic Review**

**Does long-term use of pain relievers have an impact on the rate of orthodontic tooth movement? A systematic review of animal studies**

Miltiadis A. Makrygiannakis, Eleftherios G. Kakkamanos<sup>a</sup> and Athanasios E. Athanasiadis<sup>b</sup>

**Background:** Pain relief drugs are used and misused widely and may theoretically affect the events leading to orthodontic tooth movement.

**Objective:** To systematically investigate and appraise the quality of the available evidence regarding the effect of pain relief medications on the rate of orthodontic tooth movement.

**Search methods:** Search without restrictions in eight databases (including grey literature) and hand searching until October 2018.

**Selection criteria:** Animal controlled studies investigating the effect of pain relievers on the rate of orthodontic tooth movement.

**Data collection and analysis:** Following study retrieval and selection, relevant data were extracted and the risk of bias was assessed using the SYRCL's risk of bias tool.

**Results:** Fourteen studies were finally identified, most of which at unclear risk of bias. Ibuprofen and naproxen did not show any significant effects on the rate of orthodontic tooth movement, whereas indomethacin, ketorolac, morphine, and high doses of etoricoxib were found to decrease it. Inconsistent or conflicting effects were noted after the administration of acetaminophen, acetylsalicylic acid, celecoxib, meloxicam, and tramadol. The quality of the available evidence was considered at best as low.

**Conclusions:** Long-term consumption of pain relievers may affect the rate of orthodontic tooth movement. The orthodontist should be capable of identifying patients taking pain relievers independently of orthodontic treatment and consider the possible implications.

**Trial registration:** PROSPERO (CRD42017070206).

	<b>Sagaya Mary</b>		<b>Anitha Nallusamy</b>
	<b>Yamini Jeyaraj</b>		
	<b>Prema Anbarasu</b>		
<b>S.Baalagopal</b>			





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## BISPHOSPHONATES

- ❖ Most studies on the effect of bisphosphonates on the rate of OTM have been performed by a group of Japanese researchers. A similar model and protocol were used consistently during their experiments.
- ❖ They induced lateral or medial movement in rat molars with a force of approximately 15 cN, with either topical or systemic administration of bisphosphonates. A mouse model in which the first molar was moved in a palatal direction by a force of approximately 20 cN also showed a significant decrease in the rate of OTM by injections of pamidronate at a dosage of 5 mg per kilogram per day over 8 days.
- ❖ A serious drawback of bisphosphonates is osteonecrosis, especially in the maxilla and the mandible.

Priyanga Ravi

Sagaya Mary

Anitha Nallusamy

Sriman Vishnu

Dr. Varu

R Gokul raj

Saravanakum...

SUSHMITHA...

Yamini Jeyaraj

Priya Darshini

Annamalai Or...

Somya Wilson

Joshua Stalin

Prema Anbarasu

Nivethitha Bh...

Unmute

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Participants 17

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Remaining Meeting Time: 06:08

## REFERENCES

- ❖ Alejandro Iglesias-Linares, Influence of bisphosphonates in orthodontic therapy: Systematic review; journal of dentistry 38 (2010) 603-611
- ❖ Miltiades A. Makrygiannakis, Eleftherios G. Kaklamas and Athanasios E. Athanasios; Does long-term use of pain relievers have an impact on the rate of orthodontic tooth movement? A systematic review of animal studies; European Journal of Orthodontics, 2018, 1-10
- ❖ Eleftherios G. Kaklamas, Miltiades A; Does medication administration affect the rate of orthodontic tooth movement and root resorption development in humans? A systematic review; European Journal of Orthodontics, 2019, 1-8
- ❖ Adriano Pedrosa Moura, Carolina Cristina Moutalvary-Antonucci; Effects of angiotensin II type I receptor blocker losartan on orthodontic tooth movement; Am J Orthod Dentofacial Orthop 2016;149:358-65.
- ❖ Jing Sun, Juan Du; Histological evidence that metformin reverses the adverse effects of diabetes on orthodontic tooth movement in rats; J Mol Hist

R Gokul raj

Sagaya Mary

Sriman Vishnu

Priya Darshini

Anitha Nallusamy

SUSHMITHA RA...

Yamini Jeyaraj

Priyanga Ravi

Dr. Varu

Annamalai Orth...

Somya Wilson

Joshua Stalin

Saravanakumar...

Prema Anbarasu

Nivethitha Bhas...

Navin N




S.Baalagopal

**DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS**

**E-Teaching/Learning sessions for Post Graduate**

**Post Graduate academic schedule**

DATE	TOPIC	PRESENTER	PARTIPANTS
27.05.2020	Micro and Macro esthetics	Dr.priyadharshini	16

 Recording

## Priya Darshini's Personal Meeting Room

Meeting ID

713 418 7601


Host

Priya Darshini

Password

425887

Invite Link

<https://us04web.zoom.us/j/7134187601?pwd=T3RFaTlQdk90a0VZczFwNWZ2T0FMZz09>  
 Copy URL

Participant ID

397598

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Participants (16)

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SM

Sagaya Mary (Me)

Priya Darshini (Host)

AN

Anitha Nallusamy

Annamalai Orthodontist

B

Baalagopal

Dr. Varu

Joshua Stalin

Nivethitha Bhaskar

PA

Prema Anb arasu

Priyanga Ravi

RG

R Gokul raj

Saravanakumar Subramanian

Somya Wilson

Sriman Vishnu

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Participants (16)

Find a participant

AN

Anitha Nallusamy

Annamalai Orthodontist

B

Baalagopal

Dr. Varu

Joshua Stalin

Nivethitha Bhaskar

PA

Prema Anb arasu

Priyanga Ravi

RG

R Gokul raj

Saravanakumar Subramanian

Somya Wilson

Sriman Vishnu

SUSHMITHA RAM

Yamini Jeyaraj

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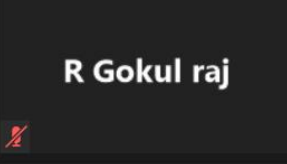

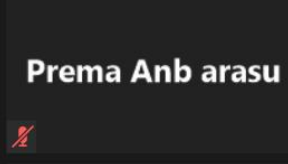

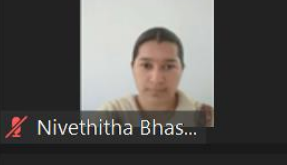
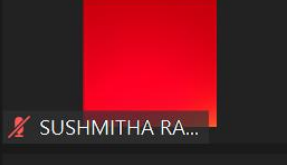
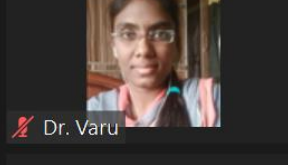


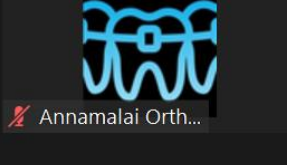
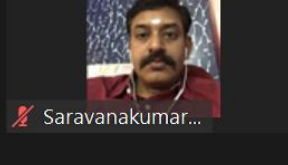
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 Sriman Vishnu	 Sagaya Mary	 Anitha Nallusamy	 Baalagopal
 Priya Darshini	 R Gokul raj	 Joshua Stalin	 Prema Anb arasu
 Priyanga Ravi	 Nivethitha Bhas...	 SUSHMITHA RA...	 Dr. Varu
 Yamini Jeyaraj	 Somya Wilson	 Annamalai Orth...	 Saravanakumar...

You are viewing Priya Darshini's screen

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## Macro and micro esthetics in orthodontics

Presenter – S.Priyadarshini



### Chettinad

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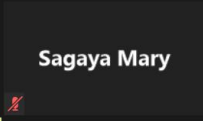
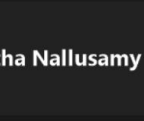
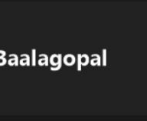

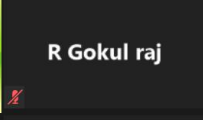

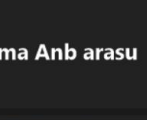

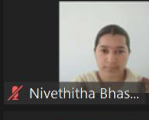





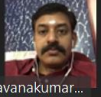
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Recording

- 2. examine dentition in relation to face



Mini esthetics

 Sriman Vishnu	 Sagaya Mary	 Anitha Nallusamy	 Baalagopal
 Priya Darshini	 R Gokul raj	 Joshua Stalin	 Prema Anb arasu
 Priyanga Ravi	 Nivethitha Bhas...	 SUSHMITHA RA...	 Dr. Varu
 Yamini Jeyaraj	 Somya Wilson	 Annamalai Orth...	 Saravanakumar...

Recording

You are viewing Priya Darshini's screen

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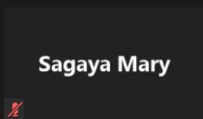
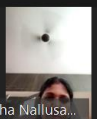
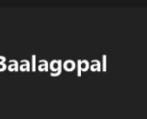

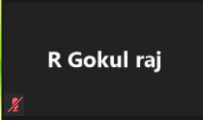

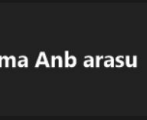

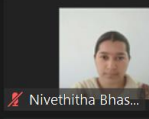






## Classification



Macro esthetics

Mini esthetics

Micro esthetics

 Sriman Vishnu	 Sagaya Mary	 Anitha Nallusa...	 Baalagopal
 Priya Darshini	 R Gokul raj	 Joshua Stalin	 Prema Anb arasu
 Priyanga Ravi	 Nivethitha Bhas...	 SUSHMITHA RA...	 Dr. Varu
 Yamini Jeyaraj	 Somya Wilson	 Annamalai Orth...	 Saravanakumar...

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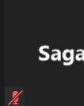






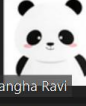
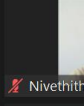








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Recording

Facial Proportion is important



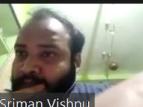



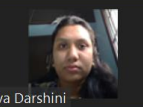


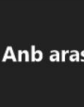


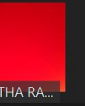





 Sriman Vishnu	 Sagaya Mary	 Anitha Nallusamy	 Baalagopal
 Priya Darshini	 R Gokul raj	 Joshua Stalin	 Prema Anb arasu
 Priyangha Ravi	 Nivethitha Bhas...	 SUSHMITHA RA...	 Dr. Varu
 Yamini Jeyaraj	 Somya Wilson	 Annamalai Orth...	 Saravanakumar...

Recording

Facial anthropometry used in olden days.



- The recent emphasis on soft tissue proportions has brought soft tissue evaluation back into prominence.

 Sriman Vishnu	 Sagaya Mary	 Anitha Nallusamy	 Baalagopal
 Priya Darshini	 R Gokul raj	 Joshua Stalin	 Prema Anb arasu
 Priyangha Ravi	 Nivethitha Bhas...	 SUSHMITHA RA...	 Dr. Varu
 Yamini Jeyaraj	 Somya Wilson	 Annamalai Orth...	 Saravanakumar...



Recording

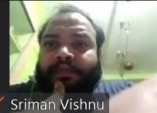
## Facial indices

TABLE 6-3 Facial Anthropometric Measurements (Young Adults)

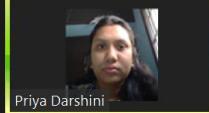
Parameter	Male	Female
Zygomatic width (zy-zy) (mm)	127 (4.3)	120 (5.3)
Orbit width (op-op)	57 (5.6)	51 (5.5)
Interorbital distance	33 (2.7)	32 (2.4)
Pragm-interorbital distance	33 (2.0)	31 (1.8)
Nasal base width	35 (2.8)	31 (1.9)
Mouth width	53 (3.3)	50 (3.2)
Face height (fh-gn)	121 (5.8)	112 (5.2)
Lower face height (faub-assale-gn)	72 (6.0)	66 (4.5)
Upper lip vermilion	8.9 (1.5)	8.4 (1.3)
Lower lip vermilion	10.4 (1.5)	9.7 (1.6)
Mandibular angle (degrees)	95 (5.0)	99 (5.7)
Maxillomental angle (degrees)	121 (5.1)	134 (1.8)

TABLE 6-4 Facial Indices (Young Adults)

Index	Measurements	Male	Female
Facial	m-gn/zy-zy	98.9 (5.1)	95.2 (4.6)
Mandible-face width	op-gn/zy-zy	70.8 (3.8)	70.1 (4.2)
Upper face	n-sto/zy-zy	54.9 (3.1)	52.4 (3.1)
Mandibular width	gn-gn/zy-zy	60.3 (5.0)	57.7 (4.8)
Face height	sto-gn/zy-zy	11.5 (5.2)	10.8 (4.5)
Lower face	ch-ch x 100/zy-zy	38.9 (2.5)	36.4 (2.8)
Lower face	an-gn/zy-zy	59.2 (2.7)	58.6 (2.9)
Face height	sto-gn/zy-zy	41.2 (2.3)	40.4 (2.1)
Mandible-face height	sto-gn/zy-zy	67.7 (5.3)	66.5 (4.5)
Lower face	sto-gn/zy-zy	69.8 (2.7)	69.1 (2.8)
Chin-face height	al-gn x 100/zy-zy	25.0 (2.4)	25.4 (1.8)



Sriman Vishnu



Priya Darshini



Priyanga Ravi



Yamini Jeyaraj

Sagaya Mary

R Gokul raj



Nivethitha Bhas...



Somya Wilson

Anitha Nallusamy



Joshua Stalin



SUSHMITHA RA...



Annamalai Orth...

Baalagopal

Prema Anb arasu



Dr. Varu



Saravanakumar...

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Remaining Meeting Time: 09:17

With the head in this position, note the relationship between two lines, one dropped from the bridge of the nose to the base of the upper lip, and a second one extending from that point down to the chin

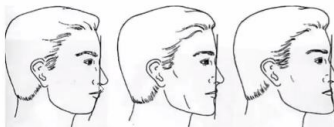
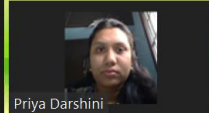


FIGURE 6-11 Profile convexity or concavity results from a disproportion in the size of the jaws, but does not by itself indicate which jaw is at fault. A convex facial profile (A) indicates a Class II jaw relationship, which can result from either a maxilla that projects too far forward or a mandible that is too far back. A concave profile (C) indicates a Class III relationship, which can result from either a maxilla that is too far back or a mandible that protrudes forward.



Sriman Vishnu



Priya Darshini



Priyanga Ravi



Yamini Jeyaraj

Sagaya Mary

R Gokul raj



Nivethitha Bhas...



Somya Wilson

Anitha Nallusamy



Joshua Stalin



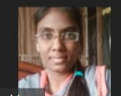
SUSHMITHA RA...



Annamalai Orth...

Baalagopal

Prema Anb arasu



Dr. Varu



Saravanakumar...



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Remaining Meeting Time: 02:55

**E-line (Ricketts)**  
Drawn from chin to nasal tip:  
• Upper lip is -4 to -6 mm  
• Lower lip is -2 to -4 mm

**H-line (Holdaway)**  
Drawn from chin to upper lip:  
• Lower lip -1 to +2 mm  
• Angle to facial plane:  
• 'Ideal' range: 7 to 15°

**S-line (Steiner)**  
Drawn from chin to mid-columella:  
• Lips should lie on this line

**Sn-Pog' line (Burstone)**  
Drawn from chin to subnasale:  
• Upper lip protrudes  $3.5 \pm 1$  mm  
• Lower lip protrudes  $2 \pm 1$  mm

**Z-line (Merrifield's profile line)**  
Drawn from chin to most prominent lip:  
• Lips approximately tangent to line  
• Z-angle: average  $80^\circ \pm 9^\circ$

**Riedel plane**  
Drawn tangent to both lips  
• Chin should be on this line

Sriman Vishnu

Sagaya Mary

SUSHMITHA RAM

Anitha Nallusamy

Baalagopal

Priya Darshini

Prema Anb arasu

R Gokul raj

Joshua Stalin

Priyanga Ravi

Recording

### Tooth proportions

- Smile reveals - maxillary anterior teeth
- Tooth width in relation to each other
- And height width proportion

Sriman Vishnu

Sagaya Mary

Priya Darshini

Anitha Nallusamy

Priyanga Ravi

Somya Wilson

Baalagopal

Saravanakumar S...

Annamalai Ortho...

Nivethitha Bhaskar

Dr. Varu

Gokul Dpm

Joshua Stalin

Prema Anbarasu

SUSHMITHA RAM




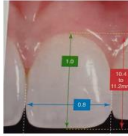


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Height width relationships

- Width of tooth must be 80% of its height.
- Note for any disproportion



Participants: 15 Chat Share Screen Record Reactions Leave



Grid of participants:

- Sriman Vishnu
- Sagaya Mary
- Priya Darshini (Active)
- Anitha Nallusamy
- Priyanga Ravi
- Somya Wilson
- Baalagopal
- Saravanakumar S...
- Annamalai Ortho...
- Nivethitha Bhaskar
- Dr. Varu
- Gokul Dpm
- Joshua Stalin
- Prema Anbarasu
- SUSHMITHA RAM

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# Conclusion

❖ Thus with better understanding of these concepts of esthetics , the orthodontist will be able to address the patients need in a better manner thus making the patient look more esthetically acceptable.



Participants: 16 Chat Share Screen Record Leave



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## DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

### E-Teaching/Learning sessions for Post Graduate

#### Post Graduate academic schedule

DATE	TOPIC	PRESENTER	PARTIPANTS
28.05.2020	Growth prediction	Dr.sagaya mary	16

 Zoom Meeting 40-Minutes




#### Mary's Zoom Meeting

Meeting ID 758 8355 8550

Host Sagaya Mary

Password 12345

Invite Link <https://us04web.zoom.us/j/75883558550?pwd=NWU4Q24xbTNFOE9FZ2ZzTXhiRjQ1QT09>

 Copy URL

Participant ID 250281

You are connected to the Zoom global network via a data center in the United States.



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Participants (16)

Find a participant

	Navin N (Me)		
	Sagaya Mary (Host)		
	Anitha Nallusamy		
	Annamalai Orthodontist		
	Dr. Varu		
	Joshua Stalin		
	Nivethitha Bhaskar		
	Priya Darshini		
	Priyanga Ravi		
	R Gokul raj		
	S.Baalagopal		
	Saravanakumar Subramanian		
	Somya Wilson		
	Sriman Vishnu		
	SUSHMITHA RAM		

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Participants (16)

Find a participant

	Sagaya Mary (Host)		
	Anitha Nallusamy		
	Annamalai Orthodontist		
	Dr. Varu		
	Joshua Stalin		
	Nivethitha Bhaskar		
	Priya Darshini		
	Priyanga Ravi		
	R Gokul raj		
	S.Baalagopal		
	Saravanakumar Subramanian		
	Somya Wilson		
	Sriman Vishnu		
	SUSHMITHA RAM		
	Yamini Jeyaraj		

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Zoom Meeting 40-Minutes

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Sagaya Mary	Navin N	Yamini Jeyaraj	Dr. Varu
R Gokul raj	Nivethitha Bhaskar	Joshua Stalin	Anitha Nallusamy
SUSHMITHA RAM	Sriman Vishnu	Somya Wilson	Priya Darshini
Priyanga Ravi	S.Baalagopal	Saravanakumar Subra...	Annamalai Orthodontist

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**GROWTH PREDICTION**  
**PART II**

Nivethitha Bh...	Navin N	Sagaya Mary
Yamini Jeyaraj	Dr. Varu	R Gokul raj
Joshua Stalin	Anitha Nallusamy	SUSHMITHA ...
Sriman Vishnu	Somya Wilson	Priya Darshini
Priyanga Ravi	S.Baalagopal	Saravanakum...
	Annamalai O...	

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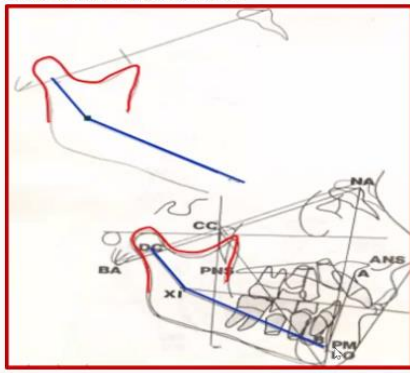


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## RICKET'S VTO MANDIBULAR GROWTH PREDICTION

### CORPUS AXIS

- Now corpus axis is drawn by superimposing old and new Xi point, the increments per annum are **2 mm** for PM.
- After new PM point is marked, trace the posterior border of ramus and lower border of mandible.



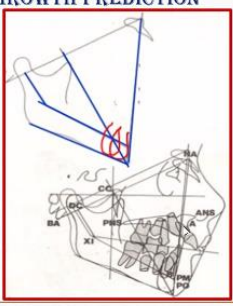
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Zoom Meeting 40-Minutes You are viewing Sagaya Mary's screen View Options 00:20:42 Speaker View

## RICKET'S VTO MANDIBULAR GROWTH PREDICTION

### Symphysis construction

- Tracing is slid back along the corpus axis superimposing the new and old PM points to trace the symphysis and mandibular plane.
- The facial plane is constructed from new Na to Pg
- Facial axis extended to new Gn



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Zoom Meeting 40-Minutes

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00:27:47 Speaker View

The slide displays the title "NON - CEPHALOMETRIC METHODS" in white text on a dark blue rectangular background, centered on a white paper with a wooden border.

A 4x4 grid of 16 participant video feeds. Sagaya Mary's feed is highlighted with a yellow border. Other participants include Anitha Nallusamy, Navin N, SUSHMITHA, Sriman Vishnu, Nivethitha Bh..., Yamini Jeyaraj, Dr. Varu, R Gokul raj, Joshua Stalin, Somya Wilson, Priya Darshini, Priyanga Ravi, S.Baalagopal, Saravanakum..., and Annamalai O...

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Zoom Meeting 40-Minutes

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View Options

00:35:44 Speaker View

The slide is titled "PROCEDURE" and describes the process of taking lateral cephalograms at 5 years (T1) and 18 years (T2). It includes three steps: Step 1 (fixing T1, tracing), Step 2 (superimposing T2), and Step 3 (marking profile). Diagrams illustrate the tracing and superimposition process.

A 4x3 grid of 12 participant video feeds. Sagaya Mary's feed is highlighted with a yellow border. Other participants include Anitha Nallusamy, Navin N, SUSHMITHA, Sriman Vishnu, Nivethitha Bh..., Yamini Jeyaraj, Dr. Varu, R Gokul raj, Joshua Stalin, Somya Wilson, Priya Darshini, Priyanga Ravi, S.Baalagopal, and Saravanakum...

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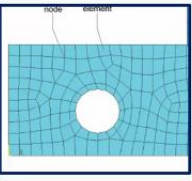
Zoom Meeting 40-Minutes You are viewing Sagaya Mary's screen View Options

Recording Remaining Meeting Time: 03:17 00:36:43 Speaker View

### FINITE ELEMENT ANALYSIS

A powerful computational technique for the solution of differential and integral equations that arise in various fields of applied science & engineering

The word 'finite' is used to describe the limited, or finite, number of degrees of freedom used to model the behaviour of each element.



Participants: 16 Chat Share Screen Record Reactions Leave

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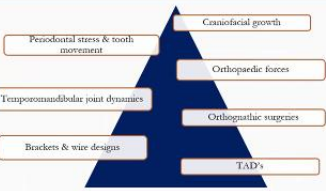
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### FEM IN ORTHODONTICS



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Zoom Meeting 40-Minutes

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Less than 1 minute

00:39:45

Speaker View

### FEM IN CRANIOFACIAL GROWTH

- According to **Moss**, FEM permits analysis of the skull at a scale significantly finer than previously possible, by considering cranial structure as consisting of a relatively large number of contiguous finite elements.
- According to **McIntyre et al**, FEM is a sensitive morphometric technique and it can estimate the shape change of the structure under examination, in all directions and at each every landmark which is not possible with Conventional Cephalometric Analysis
- Montegi et al**, in their study used FEM model by 3D surface measurement of rapid laser device from human dried skull and to analyze the changes of facial growth based on FEM by the volume and the direction of strain. The results indicate especially the growth change of mandible were predominantly showed in the early stages, and the direction of growth strain changed backward and above from mental area to condylar area.

Finite Element Method: A Research Tool in Orthodontics : J Res Adv Dent 2015

Anitha Nallusamy

Navin N

SUSHMITHA ...

Sriman Vishnu

Nivethitha Bh...

Sagaya Mary

R Gokul raj

Yamini Jeyaraj

Dr. Varu

Joshua Stalin

Somya Wilson

Priya Darshini

Priyanga Ravi

S.Baalagopal

Annamalai O...

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Zoom Meeting 40-Minutes

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00:08:30

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### STEPS IN FEM

1. Pre-processing.
2. Conversion of geometric model into finite element model.
3. Assembly/Material Property data representation.
4. Defining the boundary conditions.
5. Loading Configuration.
6. Processing.
7. Post-processing.

Finite Element Method: An Overview : (IOSR-JDMS) 2016

Sagaya Mary

Sriman Vishnu

Navin N

S.Baalagopal

Joshua Stalin

Annamalai O...

Priya Darshini

Yamini Jeyaraj

R Gokul raj

Priyanga Ravi

Anitha Nallusamy

Somya Wilson

Nivethitha Bh...

SUSHMITHA ...

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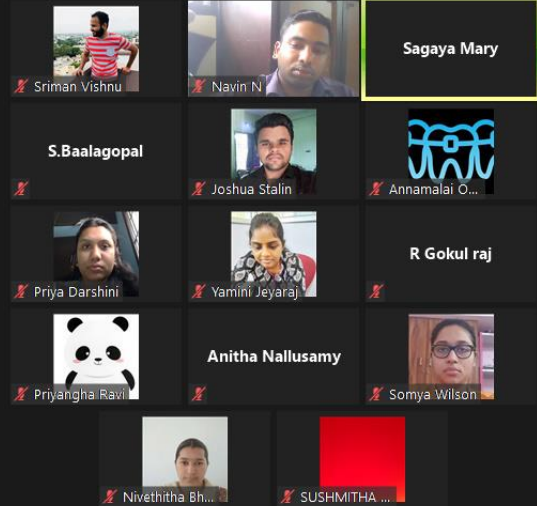
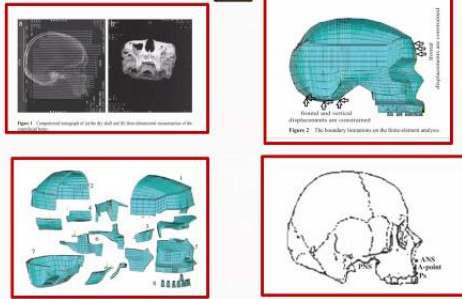
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00:10:18 Speaker View

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Zoom Meeting 40-Minutes

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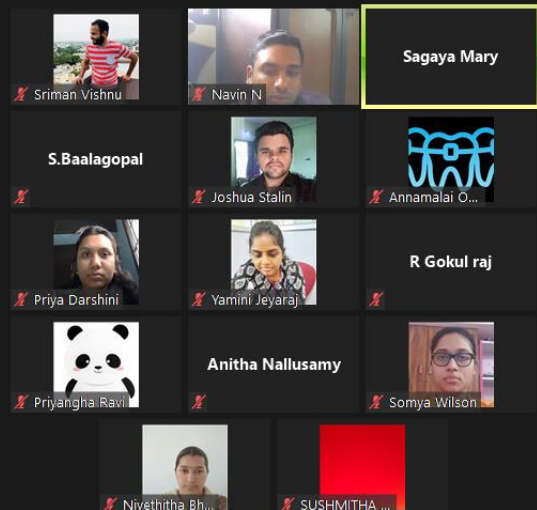
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Recording



## ADVANTAGES OVER RCM

- FEM descriptions are invariant and independent of any local reference frame
- Any point used can be reliably identified and that the coordinates of its location can be determined in 2d or 3D
- Provides an estimate of the growth of all points of the body and in all directions at all points
- RCM, we can describe and depict only the relative growth behavior of a series of discrete anatomic or material points, nothing is known of the growth behavior at the individual points in the continuum between the discrete points actually studied.



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Recording 00:14:00 Speaker View

### CONCLUSION

- Burstone has pointed out "the knowledge of prediction might best proceed by learning to predict untreated growing faces." The clinician must always wonder what effect his therapy is having on the patient and actual growth of one specific face.
- Various methods of growth prediction have been suggested ranging from the crudest form of clear acetate templates to the more sophisticated computer databasing, whichever the approach, the prediction would be reasonable in 'average growers' to 'abnormal growers'
- The Goal of growth prediction is to reduce the clinicians ignorance of the future, with the knowledge and better understanding of growth prediction, we can be skilled and better equipped to intervene during growth process

Participants: 14

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Participants: Sriman Vishnu, Navin N, Sagaya Mary, S.Baalagopal, Joshua Stalin, Annamalai O..., Priya Darshini, Yamini Jeyaraj, R Gokul raj, Priyanga Ravi, Anitha Nallusamy, Somya Wilson, Nivethitha Bh..., SUSHMITHA ...

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### References

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- Orthodontic cephalometry - Athanasios
- The Mesh diagram and cephalometrics : Moore's 1962
- A Principle of the arcial growth of mandible : Robert M. Ricketts 1975
- A simplified approach to prediction Lyale E. Johnston, AJODO, 1975
- The proportionate template as a diagnostic aid, Alex Jacobson, AJODO 1979
- Clinical orthodontics : volume 1: Charles H Tweed 1966
- A soft-tissue cephalometric analysis and its use in orthodontic treatment planning, Part II, Reed a holdaway : AJODO 1984
- Planning treatment on the basis of the facial pattern and an estimate of its growth, Ricketts:Angle Orthod. 27: 1957
- Logarithmic growth of human mandible: Moss and salemijn 1970
- Issues related to the prediction of craniofacial growths : Moss ; Am j orthod 1985
- Finite element method on remodelling craniofacial growths : Moss ; Am j orthod 1985
- Finite Element Method: A Research Tool in Orthodontics : J Res Adv Dent 2015
- Finite Element Method: An Overview : IOSR-JDMS 2016

Participants: 14

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Participants: Sriman Vishnu, Navin N, Sagaya Mary, S.Baalagopal, Joshua Stalin, Annamalai O..., Priya Darshini, Yamini Jeyaraj, R Gokul raj, Priyanga Ravi, Anitha Nallusamy, Somya Wilson, Nivethitha Bh..., SUSHMITHA ...





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Dental College & Research Institute




## DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

### E-Teaching/Learning sessions for Post Graduate


#### Post Graduate academic schedule

DATE	TOPIC	PRESENTER	PARTIPANTS
29.05.2020	Evolution of FA- Part 2	Dr.Varalakshmi	17
29.05.2020	Refined Begg- Guest lecture	Dr,Vasudevan. S.D	18

 Zoom Meeting 40-Minutes

 Recording

### Dr. Varu's Personal Meeting Room

Meeting ID	614 851 6030
Host	Dr. Varu
Password	welcome
Numeric Password (Telephone/Room Systems)	438136
Invite Link	<a href="https://us04web.zoom.us/j/6148516030?pwd=WFIFWDFJem1ISy9GUlZlelpGUGt0UT09">https://us04web.zoom.us/j/6148516030?pwd=WFIFWDFJem1ISy9GUlZlelpGUGt0UT09</a>  Copy URL
Participant ID	330817

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Participants (17)

Find a participant

	Navin N (Me)	Unmute	More >
	varalakshmi Dr (Host)		
	Anitha Nallusamy		
	Annamalai Orthodontist		
	Baalagopal S		
	Joshua Stalin		
	Nivethitha Bhaskar		
	Prema Anbarasu		
	Priya Darshini		
	Priyanga Ravi		
	R Gokul raj		
	Sagaya Mary		
	Saravanakumar Subramanian		
	Somya Wilson		
	Sriman Vishnu		

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	Annamalai Orthodontist		
	Baalagopal S		
	Joshua Stalin		
	Nivethitha Bhaskar		
	Prema Anbarasu		
	Priya Darshini		
	Priyanga Ravi		
	R Gokul raj		
	Sagaya Mary		
	Saravanakumar Subramanian		
	Somya Wilson		
	Sriman Vishnu		
	SUSHMITHA RAM		
	Yamini Jeyaraj		

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00:23:44

Speaker View

 Sriman Vishnu	 Navin N	 Dr. Varu	R Gokul raj	 Joshua Stalin
Baalagopal S	 Yamini Jeyaraj	Sagaya Mary	Anitha Nallusamy	 Saravanakumar Subra...
Nivethitha Bhas...	 Somya Wilson	 Priyanga Ravi	 SUSHMITHA RAM	 Annamalai Orthodontist
Prema Anbarasu		 Priya Darshini		

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


00:08:05

Speaker View

## EVOLUTION OF BRACKET SYSTEM- 2

K.R.VARALAKSHMI  
POSTGRADUATE STUDENT  
DEPT. OF ORTHODONTICS  
CDCRI



 varalakshmi Dr	 Navin N	 Sriman Vishnu	R Gokul raj
 Joshua Stalin	Baalagopal S	 Yamini Jeyaraj	Sagaya Mary
Anitha Nallusamy	 Saravanakumar ...	Nivethitha Bhas...	 Somya Wilson
 Priyanga Ravi	 SUSHMITHA ...	 Annamalai O...	Prema Anbarasu
 Priya Darshini			

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00:09:11


Speaker View


## MBT VERSATILITY APPLIANCE


The MBT Versatile+ Appliance System brings together current science and decades of orthodontic experience into one synchronized methodology.


The core aspects of diagnosis and treatment planning, accurate bracket placement, effective movement and quality fixed appliances are all essential to consistently achieve a quality result.





  
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Navin N


  
varalakshmi Dr


  
R Gokul raj


  
Joshua Stalin


  
Baalagopal S


  
Yamini Jeyaraj


  
Sagaya Mary


  
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
  
Saravanakum...


  
Nivethitha Bhas...


  
Somya Wilson

  
Priyanga Ravi

  
SUSHMITHA ...

  
Annamalai O...

  
Prema Anbarasu

  
Priya Darshini

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
00:10:18


Speaker View


Table 1: Tip Values


Tooth	Andrews' Norms	Traditional Pre-Adjusted Appliance	MBT® Versatile+ Appliance System
Upper Central	3.5°*	5°*	4°*
Upper Lateral	8.04°*	9°*	8°*
Upper Cuspid	8.4°*	11°*	8°*
Upper 1 <sup>st</sup> Bicuspid	2.7°*	2°*	0°*
Upper 2 <sup>nd</sup> Bicuspid	2.8°*	2°*	0°*
Upper 1 <sup>st</sup> Molar	5.7°*	5°*	0°*
Upper 2 <sup>nd</sup> Molar	0.4°*	5°*	0°*
Lower Central	0.53°*	2°*	0°*
Lower Lateral	0.38°*	2°*	0°*
Lower Cuspid	2.5°*	5°*	3°*
Lower 1 <sup>st</sup> Bicuspid	1.3°*	2°*	2°*
Lower 2 <sup>nd</sup> Bicuspid	1.54°*	2°*	2°*
Lower 1 <sup>st</sup> Molar	2.0°*	2°*	0°*
Lower 2 <sup>nd</sup> Molar	2.9°*	2°*	0°*


  
Sriman Vishnu


  
Navin N


  
varalakshmi Dr


  
R Gokul raj


  
Joshua Stalin


  
Baalagopal S


  
Yamini Jeyaraj


  
Sagaya Mary


  
Anitha Nallusamy


  
Saravanakum...


  
Nivethitha Bhas...


  
Somya Wilson

  
Priyanga Ravi

  
SUSHMITHA ...

  
Annamalai O...

  
Prema Anbarasu

  
Priya Darshini

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**Twin brackets (Diamond brackets)** are used on large, flat-surfaced teeth—maxillary central and lateral incisors.

The flat surfaces of maxillary centrals and laterals permit full archwire engagement in the twin brackets twin brackets on the incisors allow 5-6mm of interbracket width, which is sufficient for flexibility, rotational control, and torquing ability.

Twin brackets also allow additional handles for placing power chains, ligating anterior teeth together, and placing hooks for Elastics.

A final factor is patient comfort. Twin brackets are smooth and minimize irritation of labial tissue.

Joshua Stalin Navin N R Gokul raj  
Somya Wilson Sagaya Mary Prema Anbarasu  
Priyanga Ravi SUSHMITHA ... Sriman Vishnu  
varalakshmi Dr Nivethitha Bhas... Saravanakum...  
Baalagopal S Anitha Nallusamy Yamini Jeyaraj  
Priya Darshini Annamalai O...

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Recording

**MBT™ Versatile+ Appliance System**

10° Offset

0° Offset

Sriman Vishnu Navin N varalakshmi Dr R Gokul raj  
Joshua Stalin Baalagopal S Yamini Jeyaraj Sagaya Mary  
Anitha Nallusamy Saravanakum... Nivethitha Bhas... Somya Wilson  
Priyanga Ravi SUSHMITHA ... Annamalai O... Prema Anbarasu  
Priya Darshini

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Zoom Meeting 40-Minutes

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00:20:58

Speaker View

Microsoft PowerPoint - EVOLUTION OF FA 2 parts

### SELF LIGATING SYSTEM

Self ligating brackets: by definition these are brackets that have an in-built mechanism which can be opened or close to secure the archwire (Self ligation in orthodontics textbook by Theodore Eliades)

#### IDEAL REQUIREMENT OF A LIGATING SYSTEM:

- Be secure and robust.
- Ensure full bracket engagement.
- Exhibit low friction between bracket and archwires.
- Be quick and easy to use.
- Permit high friction when required.
- Permit easy attachment of elastic chains.
- Assist good oral hygiene & Be comfortable for the patient

Grid of participant video feeds:

- varalakshmi Dr
- Navin N
- Annamalai O...
- Saravankumar ...
- Joshua Stalin
- R Gokul raj
- Somya Wilson
- Sagaya Mary
- Prema Anbarasu
- Priyanga Ravi
- SUSHMITHA ...
- Sriman Vishnu
- Nivethitha Bhas...
- Anitha Nallusamy
- Priya Darshini

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00:14:10

Speaker View

C.A.T. Appliance

Suggested Values For Tip, Torque, And Rotation

	TIP	TORQUE	ROTATION
Upper			
1	5	7	0
2	9	3	0
3	11	0	0
4	2	-7	0
5	2	-7	0
6	0	-10	7
7	0	-10	7
Lower			
1	2	0	0
2	2	0	0
3	5	-11	6
4	2	-19	0
5	2	-19	0
6	0	-25	7
7	0	-30	7

Fig. 2. Suggested values for tip, torque, and rotation of CAT appliance.

Grid of participant video feeds:

- Joshua Stalin
- Navin N
- R Gokul raj
- Somya Wilson
- Sagaya Mary
- Prema Anbarasu
- Priyanga Ravi
- SUSHMITHA RAM
- Sriman Vishnu
- varalakshmi Dr
- Nivethitha Bhas...
- Anitha Nallusamy
- Priya Darshini
- Annamalai O...
- Yamini Jeyaraj

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## Guest Lecture - Refined Begg - Dr. Vasudevan

Meeting ID 745 0351 7463

Host Sriman Vishnu

Password 12345

Invite Link <https://us04web.zoom.us/j/74503517463?pwd=ZmdHNjJqWEs1czVwdnFiTjFIQTd1QT09>

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Participants (18)

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Navin N (Me)

Sriman Vishnu (Host)

Vasudevan S D

Anitha Nallusamy

Annamalai Orthodontist

Dr. Varu

Joshua Stalin

Nivethitha Bhaskar

Prema Anbarasu

Priya Darshini

Priyanga Ravi

R Gokul raj

Sagaya Mary

Saravanakumar Subramanian

Somya Wilson

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Participants (18)

Find a participant

Anitha Nallusamy

Annamalai Orthodontist

Dr. Varu

Joshua Stalin

Nivethitha Bhaskar

Prema Anbarasu

Priya Darshini

Priyanga Ravi

R Gokul raj

Sagaya Mary

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Yamini Jeyaraj

Baalagopal S

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Speaker View

 Annamalai Orthodontist	 Navin N	 Saravanakumar Subrama...	 Sriman Vishnu	R Gokul raj
Anitha Nallusamy	S.Baalagopal	Prema Anbarasu	 Dr. Varu	 Somya Wilson
 Joshua Stalin	 Vasudevan Seegavadi	 SUSHMITHA RAM	Priya Darshini	Nivethitha Bhas...
	 Priyanga Ravi	Sagaya Mary	 Yamini Jeyaraj	

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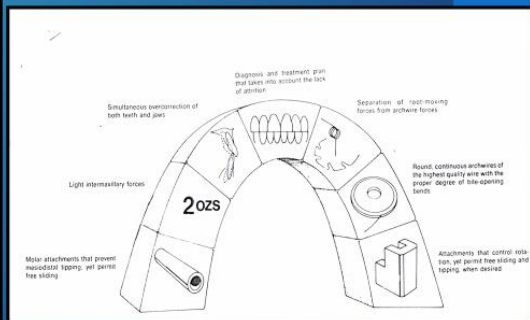
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00:03:58

Speaker View

## Synergism in Begg mechanotherapy



 Annamalai O...	 Navin N	 Sriman Vishnu	Sagaya Mary
 Priyanga Ravi	 Vasudevan S D	 Saravanakum...	Anitha Nallusamy
 Yamini Jeyaraj	R Gokul raj	 Dr. Varu	Prema Anbarasu
Nivethitha Bhas...	 SUSHMITHA ...	 Somya Wilson	 Joshua Stalin
	Priya Darshini	Baalagopal S	

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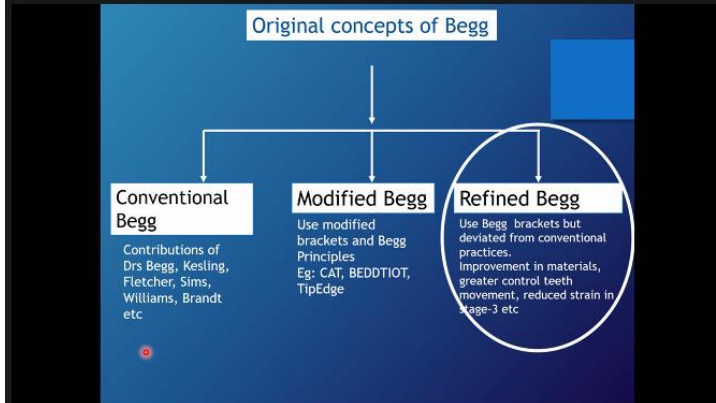
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00:08:41

Speaker View



			Sagaya Mary
			Anitha Nallusamy
	R Gokul raj		Prema Anbarasu
Nivethitha Bhas...			Joshua Stalin
Priya Darshini	Baalagopal S		

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00:11:51

Speaker View

Changes in concepts-Treatment Planning.

- Cookbook approach - discarded.

			Sagaya Mary
			Anitha Nallusamy
	R Gokul raj		Prema Anbarasu
Nivethitha Bhas...			Joshua Stalin
Priya Darshini	Baalagopal S		

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**Standard attachments**

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Participants:

- Annamalai O...
- Navin N
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- Priyanghai Ravi
- Vasudevan S D
- Saravanakum...
- Anitha Nallusamy
- Yamini Jeyaraj
- R Gokul raj
- Dr. Varu
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- Nivethitha Bhas...
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- Somya Wilson
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- Priya Darshini

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Recording    00:15:52    Speaker View

**Bracket with anti-rotation modification**

Participants: 17

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Participants:

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- Navin N
- Sriman Vishnu
- Sagaya Mary
- Priyanghai Ravi
- Vasudevan S D
- Saravanakum...
- Anitha Nallusamy
- Yamini Jeyaraj
- R Gokul raj
- Dr. Varu
- Prema Anbarasu
- Nivethitha Bhas...
- SUSHMITHA ...
- Somya Wilson
- Joshua Stalin
- Priya Darshini



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Dental College & Research Institute

Zoom Meeting 40-Minutes

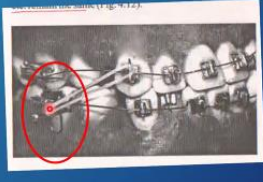
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00:27:00 Speaker View



Molar stops

Participants:

- Annamalai O...
- Navin N
- Sriman Vishnu
- Sagaya Mary
- Priyanga Ravi
- Vasudevan S D
- Saravanakum...
- Anitha Nallusamy
- Yamini Jeyaraj
- R Gokul raj
- Dr. Varu
- Prema Anbarasu
- Nivethitha Bhas...
- SUSHMITHA ...
- Somya Wilson
- Joshua Stalin
- Priya Darshini

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Zoom Meeting 40-Minutes

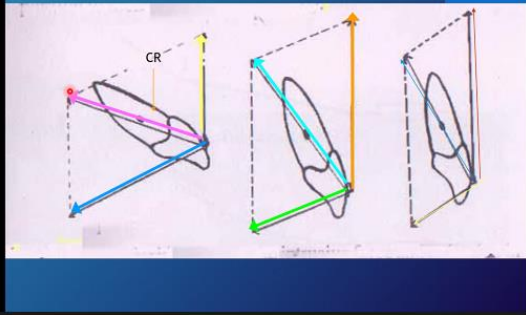
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00:30:37 Speaker View



CR

Participants:

- Annamalai O...
- Navin N
- Sriman Vishnu
- Sagaya Mary
- Priyanga Ravi
- Vasudevan S D
- Saravanakum...
- Anitha Nallusamy
- Yamini Jeyaraj
- R Gokul raj
- Dr. Varu
- Prema Anbarasu
- Nivethitha Bhas...
- SUSHMITHA ...
- Somya Wilson
- Joshua Stalin
- Priya Darshini

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Zoom Meeting 40-Minutes

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View Options

Recording

Less than 1 minute

00:34:56

Speaker View

## Development of MAA

- Mollenhauer -rectangles made in 0.010 " wire for reciprocal torque on adjacent incisors (SPECS)→ too heavy force

In 1984, on request of Mollenhauer , A. J. Wilcock made 0.009" supreme wire

" An Aligning auxiliary for ribbon arch bracket".

Participants: Annamalai O..., Navin N, Sriman Vishnu, Sagaya Mary, Priyanga Ravi, Vasudevan S D, Saravanakum..., Anitha Nallusamy, Yamini Jeyaraj, R Gokul raj, Dr. Varu, Prema Anbarasu, Nivethitha Bhas..., SUSHMITHA ..., Somya Wilson, Joshua Stalin, Priya Darshini

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00:03:50

Speaker View

## ADVANTAGES OF MAA

- simultaneous intrusion and retraction of incisors
- gentle forces
- Stable results
- Reciprocal of ... is possible

Participants: Sriman Vishnu, Navin N, Dr. Varu, SUSHMITHA ..., Anitha Nallusamy, Saravanakum..., Sagaya Mary, Baalagopal S, Vasudevan S D, R Gokul raj, Somya Wilson, Nivethitha Bhas..., Joshua Stalin, Prema Anbarasu, Priyanga Ravi

Unmute Start Video

Participants Chat Share Screen Record Reactions

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ENG IN 12:12 PM 5/29/2020





**Chettinad**  
Dental College & Research Institute

Zoom Meeting 40-Minutes

You are viewing Vasudevan S D's screen

















View Options

00:06:21

Speaker View

### Check list at the end of Stage I

- Incisors - edge to edge relation.
- Midlines matching.
- Molar & canines - class I.
- Upper and lower arch forms - matching.
- Molar rotations & BL displacement Corrected.

 Sriman Vishnu	 Navin N	 Dr. Varu	 SUSHMITHA ...
 Anitha Nallusamy	 Saravanakum...	 Sagaya Mary	 Baalagopal S
 Vasudevan S D	 R Gokul raj	 Somya Wilson	 Nivethitha Bhas...
 Joshua Stalin	 Prema Anbarasu	 Priyanga Ravi	 Priya Darshini

Unmute Start Video

Participants 16

Chat

Share Screen

Record

Reactions

Leave

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Zoom Meeting 40-Minutes

You are viewing Vasudevan S D's screen








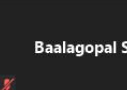



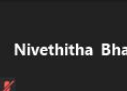

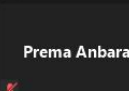

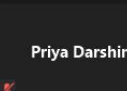
View Options

00:09:20

Speaker View

### Check list

- Spaces closed completely.
- Ant. edge to edge bite or +ve overjet in open bite cases.
- Canine & molar relations - CI I or super CI I

 Sriman Vishnu	 Navin N	 Dr. Varu	 SUSHMITHA ...
 Anitha Nallusamy	 Saravanakum...	 Sagaya Mary	 Baalagopal S
 Vasudevan S D	 R Gokul raj	 Somya Wilson	 Nivethitha Bhas...
 Joshua Stalin	 Prema Anbarasu	 Priyanga Ravi	 Priya Darshini

Unmute Start Video

Participants 16

Chat

Share Screen

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# Chettinad

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Zoom Meeting 40-Minutes

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View Options

00:16:25 Speaker View

Recording

Finishing/ Stage 4

Participants: 18

Chat

Share Screen

Record

Reactions

Leave

Unmute

Start Video

Type here to search

ENG IN 12:25 PM 5/29/2020

Participants:

- Annamalai O...
- Navin N
- Sriman Vishnu
- Dr. Varu
- SUSHMITHA ...
- Anitha Nallusamy
- Saravanakum...
- Sagaya Mary
- Baalagopal S
- Vasudevan S D
- R Gokul raj
- Somya Wilson
- Nivethitha Bhas...
- Joshua Stalin
- Prema Anbarasu
- Priyanga Ravi
- Priya Darshini
- Yamini Jeyaraj

Zoom Meeting 40-Minutes

You are viewing Vasudevan S D's screen

View Options

00:19:25 Speaker View

Recording

Alpha Ti wire in ribbon mode for finishing/torque

Participants: 18

Chat

Share Screen

Record

Reactions

Leave

Unmute

Start Video

Type here to search

ENG IN 12:28 PM 5/29/2020

Participants:

- Annamalai O...
- Navin N
- Sriman Vishnu
- Dr. Varu
- SUSHMITHA ...
- Anitha Nallusamy
- Saravanakum...
- Sagaya Mary
- Vasudevan S D
- R Gokul raj
- Somya Wilson
- Nivethitha Bhas...
- Joshua Stalin
- Prema Anbarasu
- Priyanga Ravi
- Priya Darshini
- Yamini Jeyaraj
- Baalagopal S



**Chettinad**

Dental College & Research Institute



## DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

### E-Teaching/Learning sessions for Post Graduate


#### Post Graduate academic schedule

DATE	TOPIC	PRESENTER	PARTIPANTS
30.05.2020	Blood markers on orthodontic root resorption	Dr.priyanga	16
30.5.2020	Servo system-Guest Lecture	Dr.Poornima	17

 Zoom Meeting 40-Minutes



### varalakshmi Dr's Personal Meeting Room

Meeting ID	555 637 7285
Host	varalakshmi Dr
Password	welcome
Numeric Password (Telephone/Room Systems)	994653
Invite Link	<a href="https://us04web.zoom.us/j/5556377285?pwd=RTRQMWhyWDRtVDFyTzBiV3Vrb3hTQT09">https://us04web.zoom.us/j/5556377285?pwd=RTRQMWhyWDRtVDFyTzBiV3Vrb3hTQT09</a>  Copy URL
Participant ID	389623

You are connected to the Zoom global network via a data center in the United States



# Chettinad

Dental College & Research Institute

Participants (15)

Find a participant

Navin N (Me)

Unmute More >

varalakshmi Dr (Host)

Unmute More >

BS Baalagopal S

Unmute More >

AN Anitha Nallusamy

Unmute More >

Annamalai Orthodontist

Unmute More >

Nivethitha Bhaskar

Unmute More >

PA Prema Anbarasu

Unmute More >

Priya Darshini

Unmute More >

Priyanga Ravi

Unmute More >

RG R Gokul raj

Unmute More >

SM Sagaya Mary

Unmute More >

Somya Wilson

Unmute More >

SUSHMITHA RAM

Unmute More >

Yamini Jeyaraj

Unmute More >

Sriman Vishnu

Unmute More >

Invite

Unmute Me

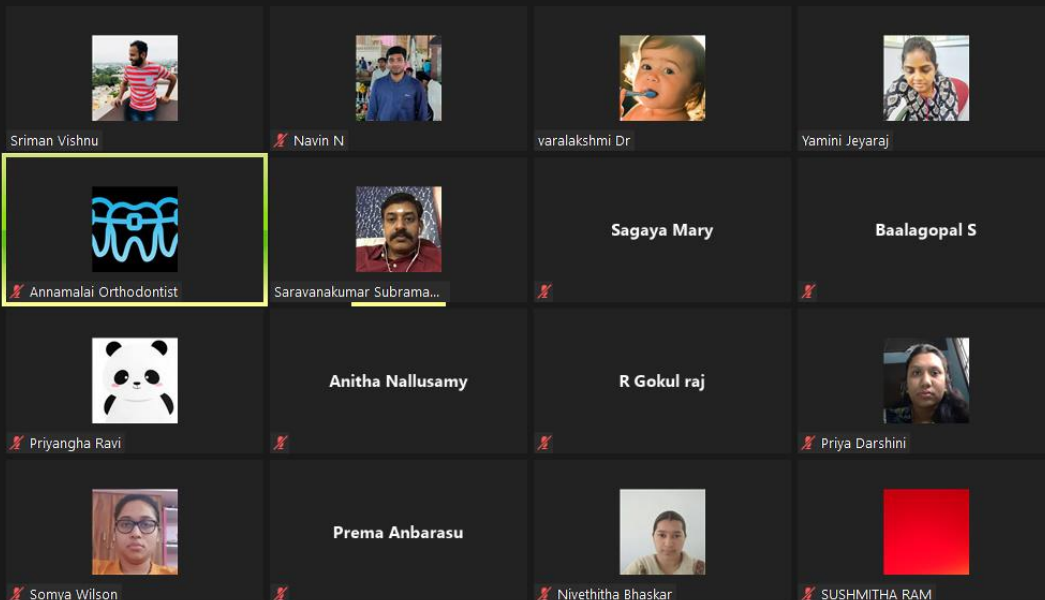
...

Type here to search



Zoom Meeting 40-Minutes

00:14:41 Speaker View



Unmute Start Video

Participants Chat Share Screen Share (Alt+S) Reactions

Leave

Type here to search







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Dental College & Research Institute

Zoom Meeting 40-Minutes

You are viewing Priyanga Ravi's screen

View Options

00:18:02

Speaker View

Chettinad Dental College & Research Institute

**MARKERS IN BLOOD AND SALIVA FOR PREDICTION OF ORTHODONTICALLY INDUCED INFLAMMATORY ROOT RESORPTION: A RETROSPECTIVE CASE CONTROLLED STUDY**

**YASHIN**  
Progress In Orthodontics (2017)

**R PRIYANGHA**  
Dept of Orthodontics  
CDCRI

Sriman Vishnu

Navin N

Annamalai O...

R Gokul raj

varalakshmi Dr

Priyanga Ravi

Anitha Nallusamy

Sagaya Mary

Priya Darshini

SUSHMITHA ...

Somya Wilson

Baalagopal S

Nivethitha Bh...

Yamini Jeyaraj

Prema Anbarasu

Unmute Stop Video

Participants Chat Share Screen Record Reactions

Type here to search

ENG 10:25 AM 5/30/2020

Zoom Meeting 40-Minutes

You are viewing Priyanga Ravi's screen

View Options

00:21:58

Speaker View

Chettinad Dental College & Research Institute

**ORTHODONTICALLY INDUCED INFLAMMATORY ROOT RESORPTION (OIIRR)**

- The level of alkaline phosphatase rises significantly in patients with OIIRR.
- Brennink et al. stated that consumption of alcohol during orthodontic treatment is related to hydroxylation and high risk of OIIRR.
- Collins and Sinclair showed that the number of mononuclear osteoclasts boosted following administration of vitamin D in the periodontal ligament of rats; this was associated with faster tooth movement and may be related to higher OIIRR.

Sriman Vishnu

Navin N

Annamalai O...

R Gokul raj

varalakshmi Dr

Priyanga Ravi

Anitha Nallusamy

Sagaya Mary

Priya Darshini

SUSHMITHA ...

Somya Wilson

Baalagopal S

Nivethitha Bh...

Yamini Jeyaraj

Prema Anbarasu

Unmute Stop Video (Alt+V)

Participants Chat Share Screen Record Reactions

Type here to search

ENG 10:29 AM 5/30/2020



Recording 00:24:03 Speaker View Exit Full Screen

You are viewing Priyangha Ravi's screen

The shared content is fit to your screen. To see the original size, click "Original size" in the menu.

### SAMPLES

- n = 35;
- Mean age : 23 + 2.9 years
- Six females (mean age 22+ 2.2 years)
- Three males (mean age 25+ 3.6 years)

Participants: 15 Chat Share Screen Record Reactions Leave

Recording 00:24:07 Speaker View Exit Full Screen

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The shared content is fit to your screen. To see the original size, click "Original size" in the menu.

### Assessment of OIIRR

LINGE AND LINGE (1991) :-

$$OIIRR = (r_1 - r_2) \times (C_1 / C_2)$$

Support OPG of a participant exhibiting moderate OIIRR of tooth No. 12 with regions used to assess the degree of OIIRR

Participants: 15 Chat Share Screen Record Reactions Leave

Recording You are viewing Priyangha Ravi's screen View Options 00:25:35 Speaker View Exit Full Screen

**Chettinad**  
Dental College & Research Institute

## STATISTICAL ANALYSIS

### CYTOKINE EXPRESSION ANALYSIS

- FI was the outcome measure for the cytokine expression.
- A two-way ANOVA was conducted for diagnosis on fluorescence; A one-way ANOVA was conducted to investigate the effect of diagnosis on blood and saliva cytokine.
- R Statistical Software (Foundation for Statistical Computing, Vienna, Austria)
- The statistical significance was set at the  $p < 0.05$  level.

Participants Chat Share Screen Record Reactions Leave

Participants: 15

Grid of participants (12 visible):

- Annamalai Ortho...
- Navin N
- varalakshmi Dr
- Priyangha Ravi (Active)
- Anitha Nallusamy
- Sagaya Mary
- Priya Darshini
- SUSHMITHA RAM
- Somya Wilson
- Sriman Vishnu
- Baalagopal S
- Nivethitha Bhaskar
- Yamini Jeyaraj
- Prema Anbarasu
- R Gokul raj

Zoom Meeting 40-Minutes Recording You are viewing Priyangha Ravi's screen View Options 00:29:17 Speaker View

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## DISCUSSION

- This study applied computations to estimate radiographical magnification differences (RMD)
- Radiographical judgemental errors (RGE) should not be seen in equating roots' length from the OPGs. RGE is the result of film-related factors and/or radiographical conspicuity.
- Conspicuity arose when there is presence of Incompletely developed roots or when anatomical structures obscured the root apices.

Participants Chat Share Screen Record Reactions Leave

Participants: 15

Grid of participants (12 visible):

- Annamalai O...
- Navin N
- varalakshmi Dr
- Priyangha Ravi (Active)
- Anitha Nallusamy
- Sagaya Mary
- Priya Darshini
- SUSHMITHA ...
- Somya Wilson
- Sriman Vishnu
- Baalagopal S
- Nivethitha Bh...
- Yamini Jeyaraj
- Prema Anbarasu
- R Gokul raj

Windows Taskbar: Type here to search, ENG IN, 10:37 AM, 5/30/2020



**Chettinad**

Dental College & Research Institute

 Zoom Meeting 40-Minutes



Recording

## Navin N's Personal Meeting Room


Meeting ID 942 393 2361

Host Navin N (You)

Password ortho

Numeric Password 770993  
(Telephone/Room Systems)

Invite Link <https://us04web.zoom.us/j/9423932361?pwd=N0VNSWplemo4ZXFjMIRJNEFvQTRjUT09>

 Copy URL

Participant ID 422781

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# Chettinad

Dental College & Research Institute

Participants (17)

Find a participant

- AN Anitha Nallusamy
- Annamalai Orthodontist
- BS Baalagopal S
- Dr. Varu
- Nivethitha Bhaskar
- PA Prema Anbarasu
- PD Priya Darshini
- Priyanga Ravi
- RG R Gokul raj
- SM Sagaya Mary
- Saravanakumar Subramanian
- Somya Wilson
- Sriman Vishnu
- SUSHMITHA RAM
- Yamini Jeyaraj

Unmute More >

Invite

Mute All

Unmute All

...

Unmute Start Video Security Participants Chat Share Screen Record Reactions

End

Participants (17)

Find a participant

- Navin N (Host, me)
- LM1602Poornima
- AN Anitha Nallusamy
- Annamalai Orthodontist
- BS Baalagopal S
- Dr. Varu
- Nivethitha Bhaskar
- PA Prema Anbarasu
- PD Priya Darshini
- Priyanga Ravi
- RG R Gokul raj
- SM Sagaya Mary
- Saravanakumar Subramanian
- Somya Wilson
- Sriman Vishnu

Unmute Start Video Security Participants Chat Share Screen Record Reactions

Invite

Mute All

Unmute All

...

Unmute Start Video Security Participants Chat Share Screen Record Reactions

End

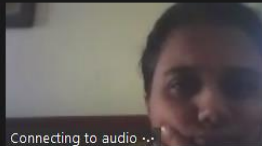


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Dental College & Research Institute

Zoom Meeting 40-Minutes

00:02:03

Speaker View



Connecting to audio



Navin N



SUSHMITHA RAM



Dr. Varu



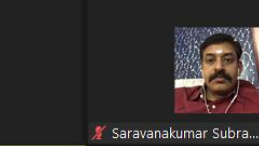
R Gokul raj



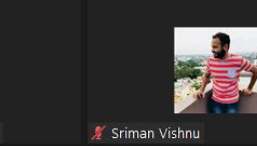
priyadarshini



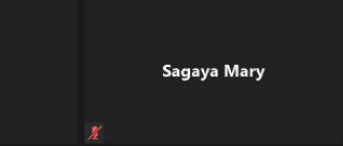
Nivethitha Bhaskar



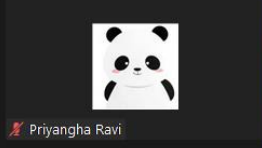
Saravanakumar Subra...



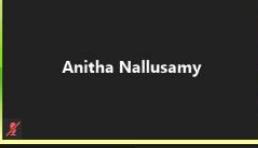
Sriman Vishnu



Sagaya Mary



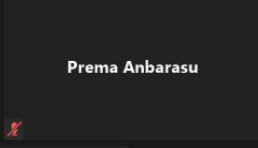
Priyangha Ravi



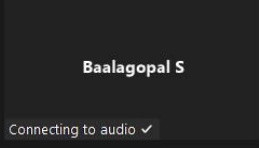
Anitha Nallusamy



Somya Wilson

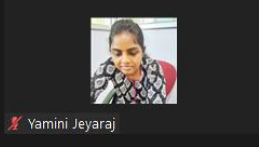


Prema Anbarasu



Baalagopal S

Connecting to audio



Yamini Jeyaraj



Annamalai Orthodontist

Unmute Start Video

Security Participants Chat Share Screen Record Reactions

End

Type here to search

Zoom Meeting 40-Minutes

You are viewing LM1602Poornima's screen

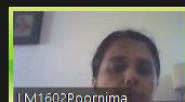
View Options

00:01:34

Speaker View

### Genetic theory

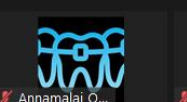
- Genes are responsible for the growth of the skeleton
- Every aspect of growth like increase in height, weight, and development like change in the facial form, profile, relationship of the jaws is determined by your genetic pattern
- Counterpoint: twin studies- show that environment also has a role to play



LM1602Poornima



Navin N



Annamalai O...



Saravanakum...



Anitha Nallusamy



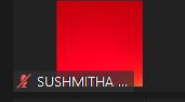
Sriman Vishnu



Navin N



R Gokul raj



SUSHMITHA ...



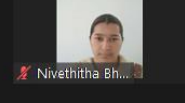
Priyangha Ravi



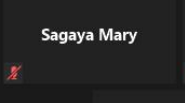
Dr. Varu



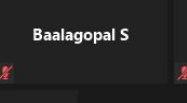
Somya Wilson



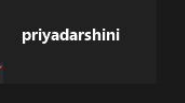
Nivethitha Bh...



Sagaya Mary



Baalagopal S



priyadarshini

Prema Anbarasu

Unmute Start Video

Participants Chat Share Screen Record Reactions

Leave

Type here to search

ENG 11:39 AM 5/30/2020



Zoom Meeting 40-Minutes

You are viewing LM1602Poornima's screen

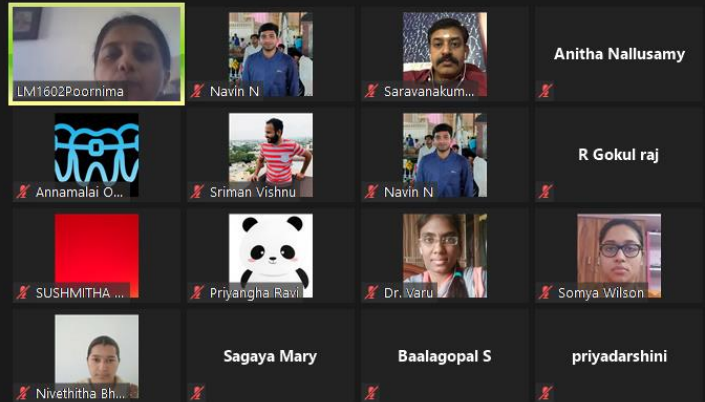
View Options

00:04:57

Speaker View

## Growth center vs growth site

- Growth center
- Inherent growth potential
- Exhibit tissue separating or suture splitting force
- Growth centers continue to grow when transplanted to distant sites like gut
- Eg: primary cartilage
- Growth site
- No such potential
- Doesn't exhibit tissue separating force
- Growth sites fail to grow when transplanted to distant sites
- Eg: secondary cartilage and sutures



Prema Anbarasu

Unmute Start Video

Participants 17

Chat

Share Screen

Record

Reactions

Leave

Type here to search

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Zoom Meeting 40-Minutes

You are viewing LM1602Poornima's screen

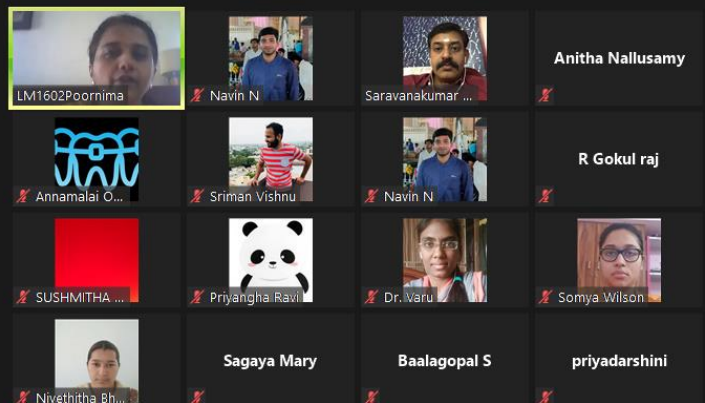
View Options

00:12:08

Speaker View

## FMH

- Form is decided by function
- Growth of the hard tissue is secondary, complimentary and mechanically obligatory to the growth and action of the surrounding soft tissues and its elements



Prema Anbarasu

Unmute Start Video

Participants 17

Chat

Share Screen

Record

Reactions

Leave

Type here to search

ENG 11:49 AM 5/30/2020



Zoom Meeting 40-Minutes

You are viewing LM1602Poornima's screen

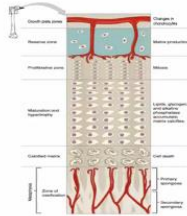
View Options

00:08:16

Speaker View

## Layers of cartilage

- Zone of growth
- Zone of maturation
- Zone of erosion
- Zone of endochondral ossification



Grid of participant video feeds:

- LM1602Poornima
- Navin N
- Saravanakum...
- Anitha Nallusamy
- Annamalai O...
- Sriman Vishnu
- Navin N
- R Gokul raj
- SUSHMITHA ...
- Priyanga Ravi
- Dr. Varu
- Somya Wilson
- Nivethitha Bh...
- Sagaya Mary
- Baalagopal S
- priyadarshini
- Prema Anbarasu

Unmute Start Video

Participants 17

Chat

Share Screen

Record

Reactions

Leave

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Zoom Meeting 40-Minutes

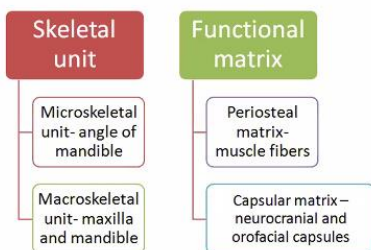
You are viewing LM1602Poornima's screen

View Options

00:13:39

Speaker View

## Parts of functional cranial component



Grid of participant video feeds:

- LM1602Poornima
- Navin N
- Saravanakum...
- Anitha Nallusamy
- Annamalai O...
- Sriman Vishnu
- Navin N
- R Gokul raj
- SUSHMITHA ...
- Priyanga Ravi
- Dr. Varu
- Somya Wilson
- Nivethitha Bh...
- Sagaya Mary
- Baalagopal S
- priyadarshini
- Prema Anbarasu
- Yamini Jeyaraj

Unmute Start Video

Participants 18

Chat

Share Screen

Record

Reactions

Leave

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ENG 11:51 AM 5/30/2020





Zoom Meeting 40-Minutes

You are viewing LM1602Poornima's screen

View Options

Recording

Remaining Meeting Time: 07:53 | Upgrade to Pro

00:19:12

Speaker View

## Regulator/ servo system

- Main input is a constant
- There is feedback from the comparator
- Disturbances in the system are detected by the comparator
- Main input is variable
- Feedback loops exist in this also

Grid of participant video thumbnails:

- LM1602Poornima
- Navin N
- Saravanakum...
- Anitha Nallusamy
- Annamalai O...
- Sriman Vishnu
- R Gokul raj
- SUSHMITHA ...
- Priyanga Ravi
- Dr. Varu
- Somya Wilson
- Nivethitha Bh...
- Sagaya Mary
- Baalagopal S
- priyadarshini
- Yamini Jeyaraj
- Prema Anbarasu

Unmute Start Video

Security Participants Chat Share Screen Record Reactions

End

Type here to search

ENG 11:56 AM 5/30/2020

Zoom Meeting 40-Minutes

You are viewing LM1602Poornima's screen

View Options

Recording

Remaining Meeting Time: 06:43 | Upgrade to Pro

00:20:22

Speaker View

## Cybernetic organization of craniofacial growth

Input  
orthopedic  
and  
functional  
appliances

Black box  
genetically determined  
and cybernetically  
organised growth  
Maxilla lengthening  
and widening  
mandibular  
lengthening and  
widening

Output  
correction of  
malocclusion  
& Intermaxillary  
relation

Grid of participant video thumbnails:

- LM1602Poornima
- Navin N
- Saravanakum...
- Anitha Nallusamy
- Annamalai O...
- Sriman Vishnu
- R Gokul raj
- SUSHMITHA ...
- Priyanga Ravi
- Dr. Varu
- Somya Wilson
- Nivethitha Bh...
- Sagaya Mary
- Baalagopal S
- priyadarshini
- Yamini Jeyaraj
- Prema Anbarasu

Unmute Start Video

Security Participants Chat Share Screen Record Reactions

End

Type here to search

ENG 11:57 AM 5/30/2020



Zoom Meeting 40-Minutes

You are viewing LM1602Poornima's screen

View Options

Recording

Less than 1 minute | Upgrade to Pro

00:26:10 Speaker View

### Reference input / Reference input elements

**Input**

- signal that is used as the standard of comparison
- Sagittal position of the upper dental arch

**Input element**

- Establish a relation / connect between command and reference input
- septal cartilage,, frenum, labionary muscles, premaxilla and maxilla

LM1602Poornima

Navin N

Saravanakum...

Anitha Nallusamy

Annamalai O...

Sriman Vishnu

R Gokul raj

SUSHMITHA ...

Priyanga Ravi

Dr. Varu

Somya Wilson

Nivethitha Bh...

Sagaya Mary

Baalagopal S

priyadarshini

Yamini Jeyaraj

Prema Anbarasu

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Zoom Meeting 40-Minutes

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00:27:02 Speaker View

### Control system

**controller**

- Between deviation and actuating signals
- CNS

**Controlled system**

- between actuating signal and controlled variable
- Inc blood flow in retrodiscalpad – cond growth

**Controlled variable**

- output
- Sagittal position of mandible

LM1602Poornima

Navin N

Saravanakum...

Anitha Nallusamy

Annamalai O...

Sriman Vishnu

R Gokul raj

SUSHMITHA ...

Priyanga Ravi

Dr. Varu

Somya Wilson

Nivethitha Bh...

Sagaya Mary

Baalagopal S

priyadarshini

Yamini Jeyaraj

Prema Anbarasu

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Zoom Meeting 40-Minutes

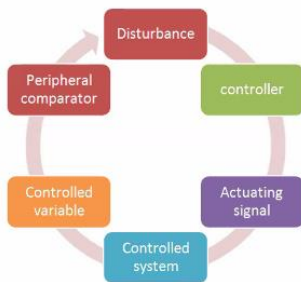
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00:05:14

Speaker View

## Control system/ performance



LM1602Poornima	Navin N	SUSHMITHA ...	Dr. Varu
R Gokul raj	priyadarshini	Nivethitha Bh...	Saravanakum...
Sriman Vishnu	Sagaya Mary	Priyanga Ravi	Anitha Nallusamy
Somya Wilson	Prema Anbarasu	Baalagopal S	Yamini Jeyaraj
Annamalai O...			

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Windows taskbar: e, 99+, Ps, 5/30/2020, 12:10 PM

Zoom Meeting 40-Minutes

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00:07:37

Speaker View

## Deviating and actuating signals

### Comparator and controller/ input to the controller

- Deviation in occlusion through PDL, TMJ, muscles

### Controller and controlled system/ output of controller

- Activity of LPM and retrodiscal pad/ try to correct the deviation

LM1602Poornima	Navin N	SUSHMITHA ...	Dr. Varu
R Gokul raj	priyadarshini	Nivethitha Bh...	Saravanakum...
Sriman Vishnu	Sagaya Mary	Priyanga Ravi	Anitha Nallusamy
Somya Wilson	Prema Anbarasu	Baalagopal S	Yamini Jeyaraj
Annamalai O...			

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Windows taskbar: e, 99+, Ps, 5/30/2020, 12:12 PM





**Chettinad**  
Dental College & Research Institute

Zoom Meeting 40-Minutes

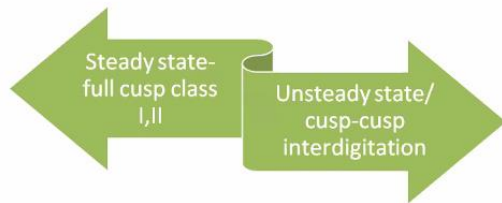
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00:15:13 Speaker View

Recording

## Attractor / repeller



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Zoom Meeting 40-Minutes

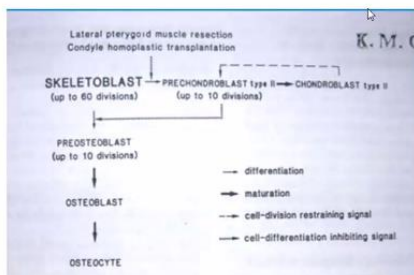
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00:36:54 Speaker View

Remaining Meeting Time: 03:16 | Upgrade to Pro

## Effect of resection of LPM



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Zoom Meeting 40-Minutes

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View Options

00:24:17

Speaker View

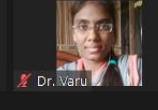
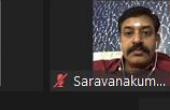
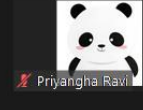
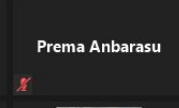
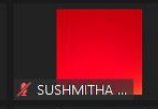
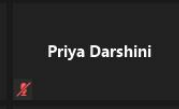
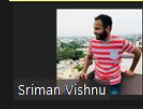
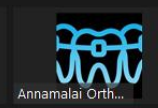
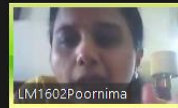
## Orthopedic/ orthodontic forces

### Light intermittent

- Less effects on local circulation
- Type I collagen is formed
- Light intermittent- class II elastics, LSU-activator, Frankel appliance,

### Heavy continuous forces

- Adverse effects on local circulation
- Type III collagen is formed
- Class II elastic – heavy force
- Edgewise therapy / PEA



Baalagopal S

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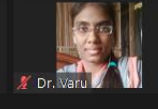
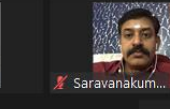
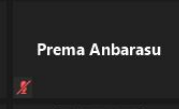
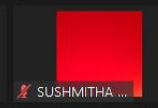
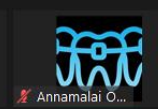
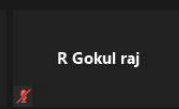
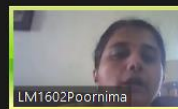
View Options

00:12:10

Speaker View

## Anterior vs posterior rotators

- Anterior rotation/counter clockwise rotation of mandible- increase subperiosteal activity and alveolar bone turnover.
- Posterior rotators: reduced subperiosteal activity and hence reduce condylar growth
- Anterior rotators respond better to functional jaw orthopedics



Baalagopal S

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