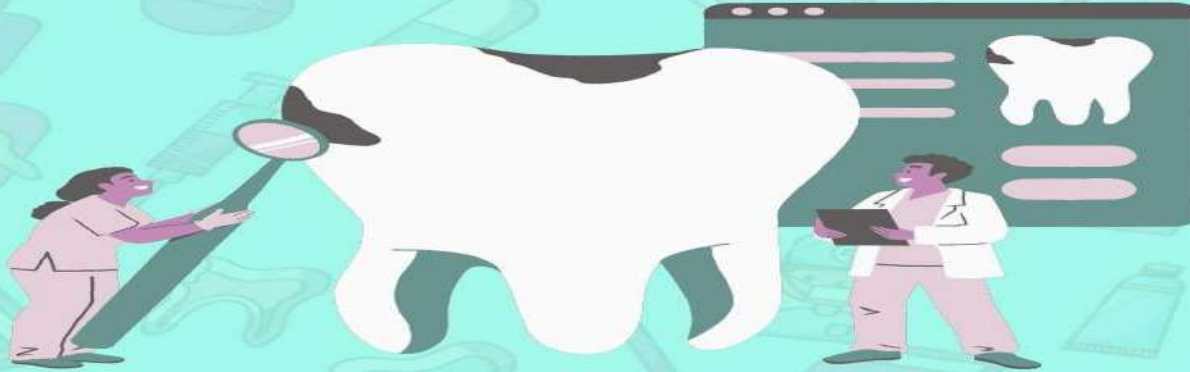




INTRODUCTION TO DENTISTRY



LEC NO. : _____

DONE BY : _____

Abdullah Abusaraya

وَقِيلَ لِرَبِّ زِدْنِي عِلْمًا



Introduction to Dentistry

Orthodontics & Pediatrics

Dr. Abdelrahman M. Galal



At the end of this lecture, the students will be able to:

- Define orthodontics and pedodontics
- Appraise the relation between orthodontics and other dental diseases
- Identify the demands for orthodontic treatment
- Recognize the possible disadvantages of orthodontic treatment
-

Table of contents

A. (Orthodontics)

01

Definition

03

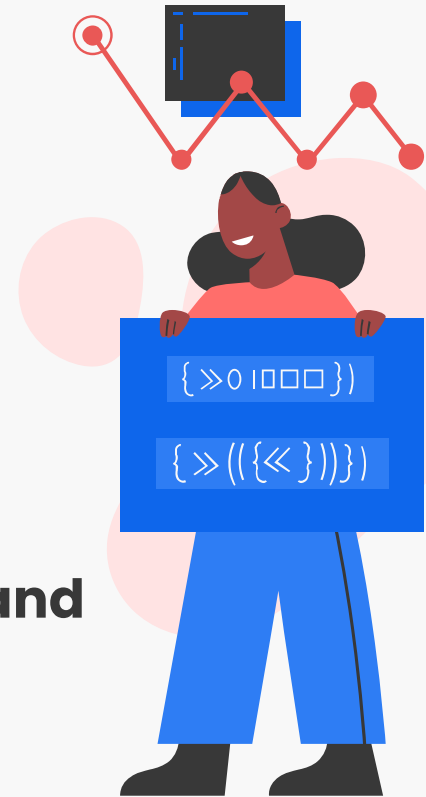
Demands for
orthodontic
treatment

02

Relations between
orthodontics and
other dental
diseases

04

The disadvantages and
potential risks of
orthodontic
treatment



A



01

Orthodontics





Orthodontics

تخصص

[]

A branch of dentistry concerned with facial growth, with development of the dentition and occlusion, and with the diagnosis, interception and treatment of occlusal anomalies.

علاج الأسنان

الاصناف

التدخل المبكر

حالات تشاؤمة من الخبايا



Malocclusion

يمكن سببها يكون مشكلة ب jaw نفسه، يمكن الفك ما صارله growth بشكل طبيعي او علاقة الـ upper jaw ب lower jaw مش مزبوطه

[]

Prevalence of malocclusion

UK child dental health survey 2003

8%

Children undergoing orthodontic treatment at the time of the survey

لحاجة علاج وبتعالجهم فعلا

26%

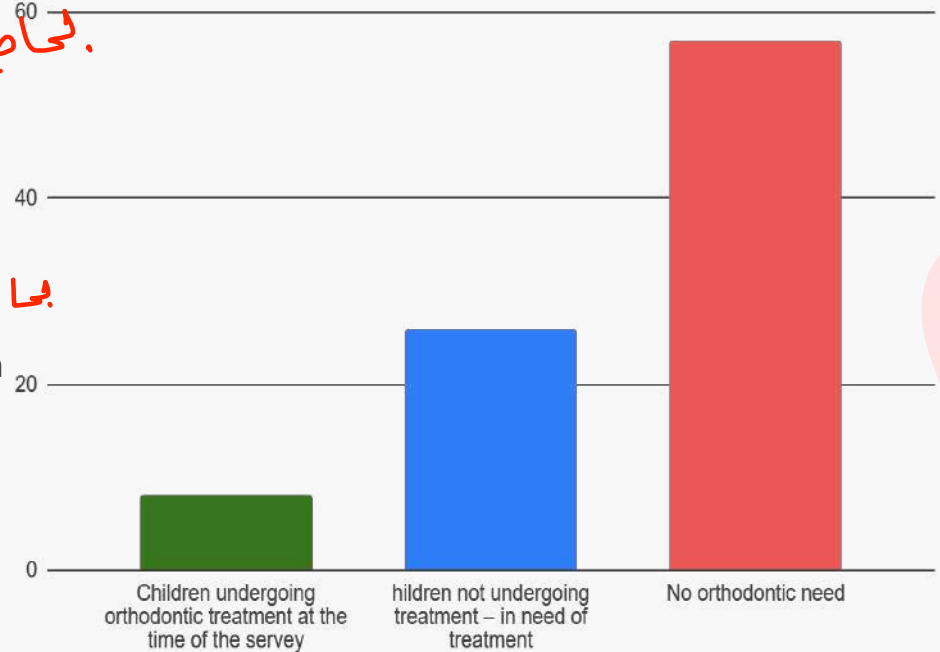
Children not undergoing treatment - in need of treatment

بحاجة علاج بس ما بتعالجوا

57%

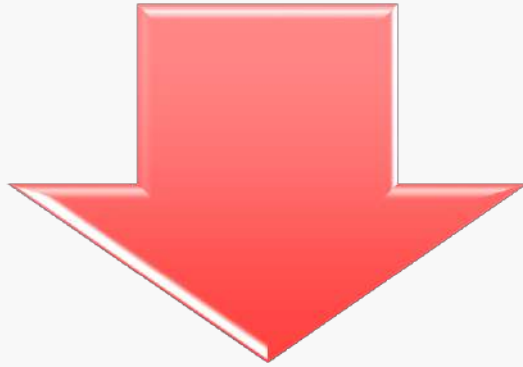
No orthodontic need

مشت بحاجة علاج



لا زعم فضل توازن بيت *benefits* للعريقت ١٣ لمشاكل التي يمكن تحصيله

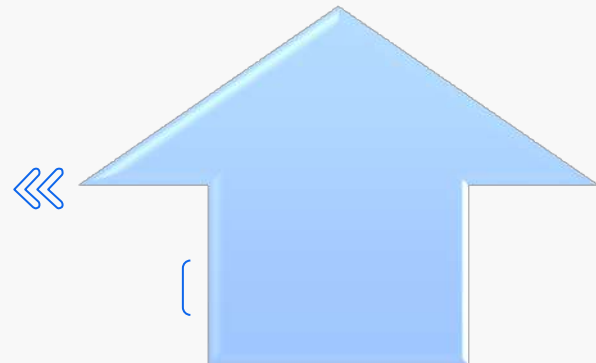
The need for treatment



Worsening of dental health (e.g. caries)
Failure to achieve aims of treatment



Improved function
Improved aesthetics
Psychological benefits



{ }



02

**Relations between
orthodontics and
other dental
diseases**

{ }

تسوي الأسنان

Dental Caries

« Children which have
سوء الاصطفاف
malalignment of teeth
possess reduced potential
for natural tooth-cleansing
and increase the risk
of caries



صحة الفم
باللغة

Periodontal diseases

« Good tooth brushers are motivated to brush around irregular teeth, whereas in the individual who brushes infrequently their poor plaque control is clearly of more importance.



Speech problems

« اتصال »
تَصَيِّفُ
If a patient cannot attain
contact between the incisors
anteriorly, this may
يساهم
contribute to the production
of a lisp (interdental
لَوْخَةُ
stigmatism).



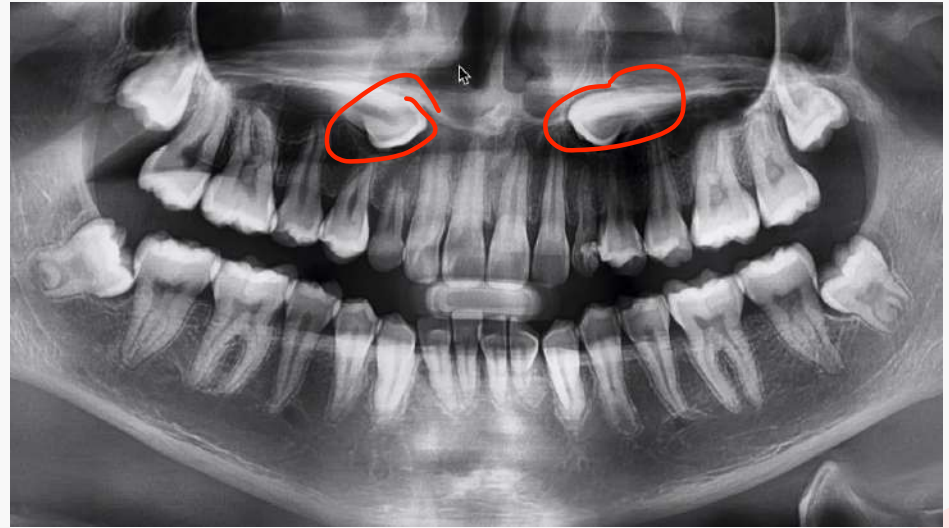
الاحتسار والسنان

يعني الأسنان بتضل جوا

ال done تبع ال saw

Tooth impaction

« Unerupted impacted teeth, for example maxillary canines, may cause resorption of the roots of adjacent teeth.



Psychological and social effect of malocclusion

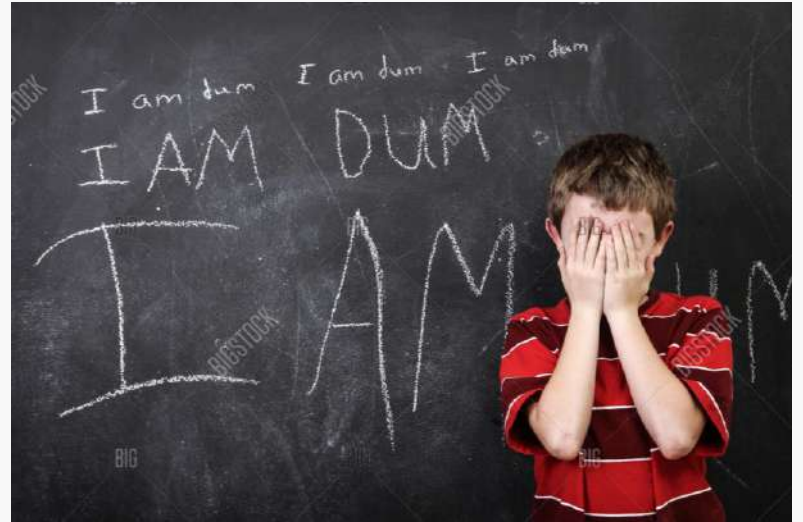
اجتهام الذات (ثقة بالنفس)

Self-Esteem

اجزاء
Individuals with malocclusion may experience lower self-esteem due to self-perceived appearance

Quality of life

Good oral health is associated with overall psychological and social well-being



Factors influencing the psychological impact of malocclusion

Severity شدة

The ^{التأثير} impact varies based
on the severity of
malocclusion



Factors influencing the psychological impact of malocclusion

Age, Gender, and
لغوة | Ethnicity

These factors influence
how malocclusion

affects an individual's
psyche **نفسية الشخص**



Factors influencing the psychological impact of malocclusion

الوضع الاجتماعي
**Socioeconomic
Status**

These factors influence
how malocclusion
affects an individual's
psyche



مثلا الناس اللي المستوى المعيشي تبعها اعلى اذا بواجه مشكلة صغيرة مباشرة بروح
وبعالجها، بينما اللي وضعهم المادي اقل ممكن ما يكثرث للمشكلة اصلا



03

Demands for orthodontic treatment



صينا لثو فاسا حيا به للتقويم



« The awareness of tooth alignment and malocclusion, and willingness to undergo orthodontic treatment, are greater in the following groups:

- Females
- Higher socio-economic families/groups
- In areas which have a smaller population to orthodontist ratio



→ الاماكن اللي بكون فيها عدد السكان قليل مقارنة باطباء التقويم



ارنفت
The demand for treatment has also been elevated by the increased availability of less visible appliances



{ }

04

The disadvantages and potential risks of orthodontic treatment

{ }

تآكل الجذور

Root resorption

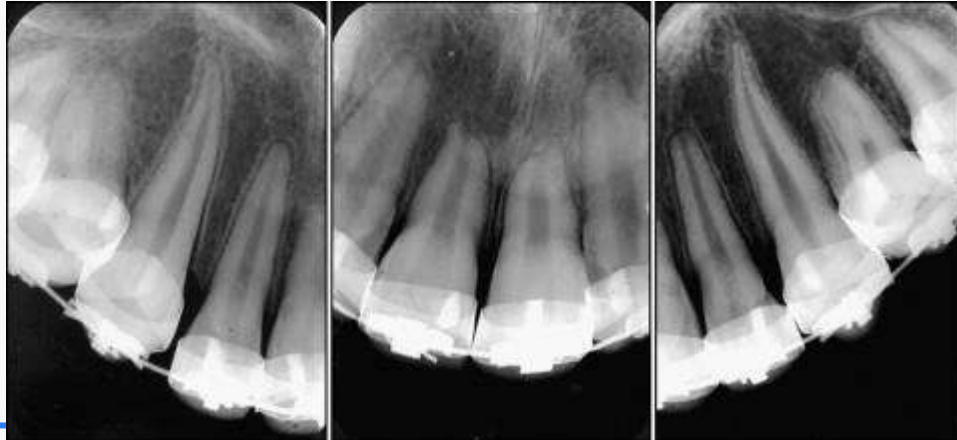
Patients appear to be more susceptible and undergo more marked root resorption:

- Shortened roots with evidence of previous root resorption
- Pipette-shaped or blunted roots
- Teeth which have suffered a previous episode of trauma

iatrogenic – use of excessive forces; intrusion; prolonged treatment

time

يحدث وأثناء العلاج ممكن
أخوب شيء ثاني



Loss of periodontal support

- Reduced access for cleansing following the placement of fixed appliances, leads to an increase in gingival inflammation.
- This normally reduces or resolves ^{كل} following removal ^{ازالة} of the appliance. ^{الابحارفة}
- In most patients this is minimal, but if oral hygiene ^{النظافة الفموية} is poor, more marked loss may occur.
- **Management of risk:** Improve oral hygiene. Avoid moving teeth out of alveolar bone



Demineralization

- Caries or demineralization occurs when a cariogenic plaque occurs in association with a high-sugar diet.
- The presence of fixed orthodontic appliances predisposes to plaque accumulation as tooth cleaning around the components of the appliance is more difficult.
- **Management of risk:** Dietary advice, improve oral hygiene, increase availability of fluoride.

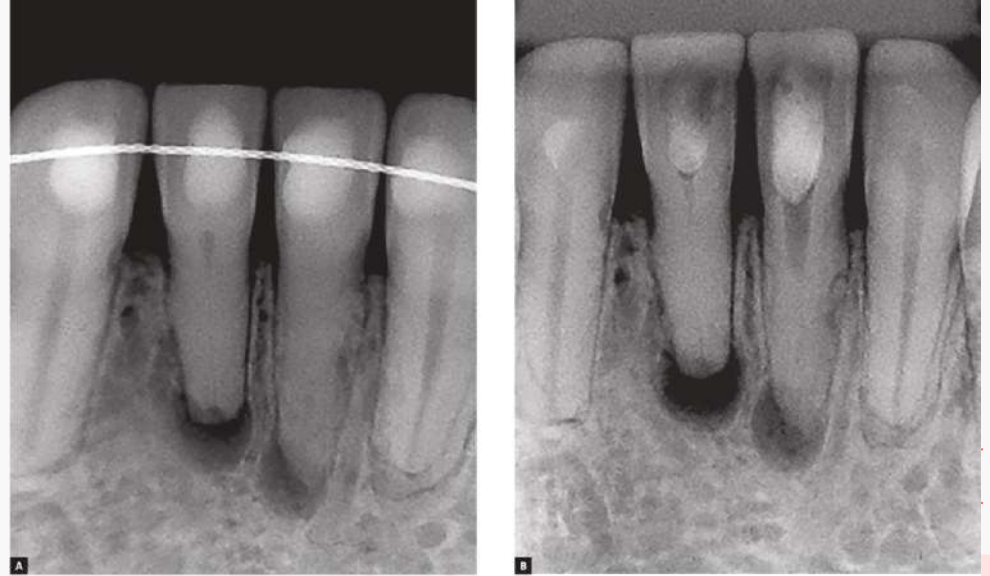


Pulpal injury

لو ضغطنا شوي زيادة عالسن ممكن يقطعلي ال blood supply عن السن

• An excessive amount of apical movement may result in pulpal mortality or a decrease in blood flow to the pulp.

Management of risk: If history of previous trauma to incisors, counsel patient



Failure to achieve treatment objectives

Operator factors	Patient factors
Errors of diagnosis	Poor oral hygiene/diet
Errors of treatment planning	Failure to wear appliances
Anchorage loss	Repeated appliance breakages
Technique errors	Failed appointments

Table of contents

B. (Pedodontics)

01

Definition

02

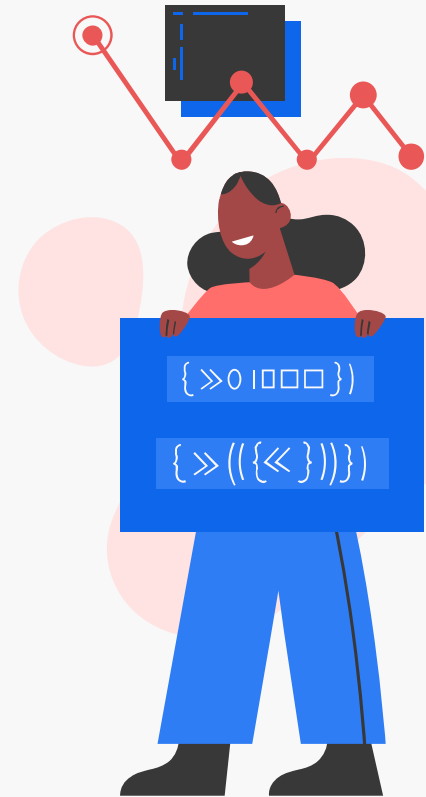
History of
Pedodontics

03

Importance of
deciduous teeth

04

Objectives of
Pedodontics



B



01

Pedodontics



Pedodontics (American Academy of Pediatric Dentistry)

An age-defined specialty that provides both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs (AAPD).

شاملة

وقائية / علاجية

علاجية

مرضية



02

History of Pedodontics



For read only

- 1737: Gerauldy wrote theories of teeth eruption and exfoliation
- 1763: Joseph Hurlock publishes a book about children's dentistry
- 1764: Robert Bunon (**Father of Pedodontics**) establish the importance of deciduous teeth
- 1865: The first children dental clinic was opened at Strasburg, Germany



ROBERT BUNON
1702-1748

- 1926: Detroit Pedodontics Study club started by Dr. Samuel D Harris (Father of children's dentistry organizations worldwide)
- 1947: American Academy of Pedodontics was established
- 1984: American Academy of Pedodontics was named American Academy of Pediatric Dentistry



03

Importance of deciduous teeth



{ }

Development of the Oral Cavity:

- Deciduous teeth help in the development of the oral cavity.
- They maintain the proper arch length within the jaw and provide a guide for the pathway of permanent teeth that begin to erupt.



Mastication

- They allow proper mastication, which is essential for digestion.



Space maintenance

- They maintain a place for the permanent teeth.
- Premature ^{فقوان سن} loss of deciduous teeth can lead to a lack of space, which is a significant ^{عام} factor in the development of malocclusion.



Facial Appearance

- Deciduous teeth contribute to forming the proper and normal face appearance.



Speech Development

- They ensure a clear speech pattern. The positioning of the teeth can affect the way sounds are formed.



04

Objectives of Pedodontics



Preventive

1. Early diagnosis and promote treatment

- Introduce and implement the ^{تنفيذ} *Growth of the jaw is completed at 20 years* principles of preventive dentistry for early diagnosis of any dental problem.
- Early diagnosis of developing malocclusion is essential to prevent complications and allow for early interception.



2. Observation of developing dentition

- The general practitioner should call the child for dental visit at regular intervals to monitor the development of oral structures and refers the child to specialist if needed.



3. Restoration of damaged teeth

- Restoration of damaged or lost teeth maintain the harmony between soft and hard tissues.

۱ نسجاً عم



4. Increase the dental health care knowledge

ممکن ہے کہ اس سے بچوں کی دانتوں کی دیکھ بھال کے بارے میں آگاہی بڑھے گی

- The dental visits in the childhood period would increase the child awareness about how to care of his/her teeth.



5. Management of special patients

اساتذت فحنان طبيب خفيف اللقاه مع املاء ت مابينة

- Managing the physically and mentally compromised children in an efficient way to avoid complications and maintain general health of the child. تسكرو



B

05

Patient assessment in Pedodontics

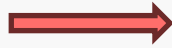


التاريخ

تقييم

Patient assessment in Pedodontics

History taking



Medical history

- Cardiovascular disease
- Central nervous system disorders
- Endocrine disorder (e.g. diabetes).
- Gastrointestinal tract (e.g. hepatitis).
- Respiratory tract disorder (e.g. asthma, bronchitis, upper respiratory tract infections).
- Bleeding tendencies (include family history of bleeding problems).
- Urogenital system (renal disease, ureteric reflux).
- Allergies.
- Past operations or treatment/medications

Patient assessment in Pedodontics

History taking

```
graph LR; A([History taking]) --> B[Dental history]; A --> C[Growth and development];
```

Dental history

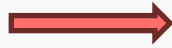
- Previous treatment (Child attitude).
- Eruption times and dental development.
- What preventive treatment has been undertaken previously.
- Methods of pain control used previously.

Growth and development

- Developmental milestones.
- Speech and language development.
- Motor skills.
- Socialization

Patient assessment in Pedodontics

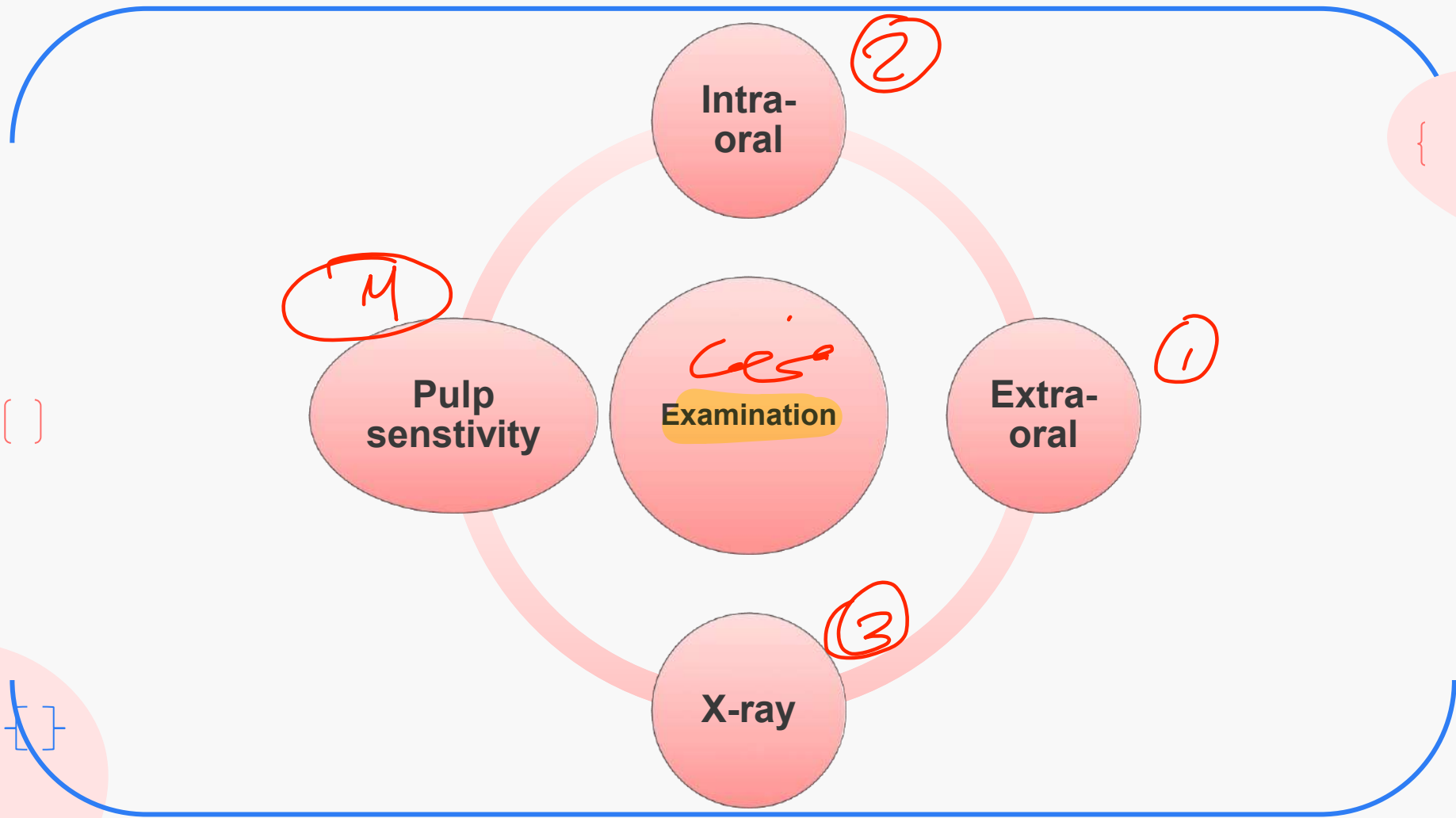
History taking



Family and social history

- Family history of serious illness.
- Schooling, performance in class.
- Speech and language problems.
- Pets/hobbies or other interests





Intra-oral

②

Pulp sensitivity

④

Examination

Case

Extra-oral

①

X-ray

③

{ }

{ }

{ }



Assessment of disease risk



تقييم

This assessment should be based on:



Past disease experience



Current dental status



Diet considerations



Concomitant medical conditions



- Three or more new lesions per year.
- Orthodontic treatment.
- Chronic illness or hospitalization.
- Medically compromised children.

- One or two new lesions per year.

- No caries present.
- Favorable family history
- Good oral hygiene.
- Access to community water fluoridation.

3 اسنان أو أكثر ممكن يصير فيهم

High risk

مشكلة بالسنه

3

واين سن أو اثنين ممكن

Moderate risk

يصلهم مشكلة بالسنه

2

Low risk of disease

1

فهمنا اننا لحدده مشكلة بالمستقبل قليله

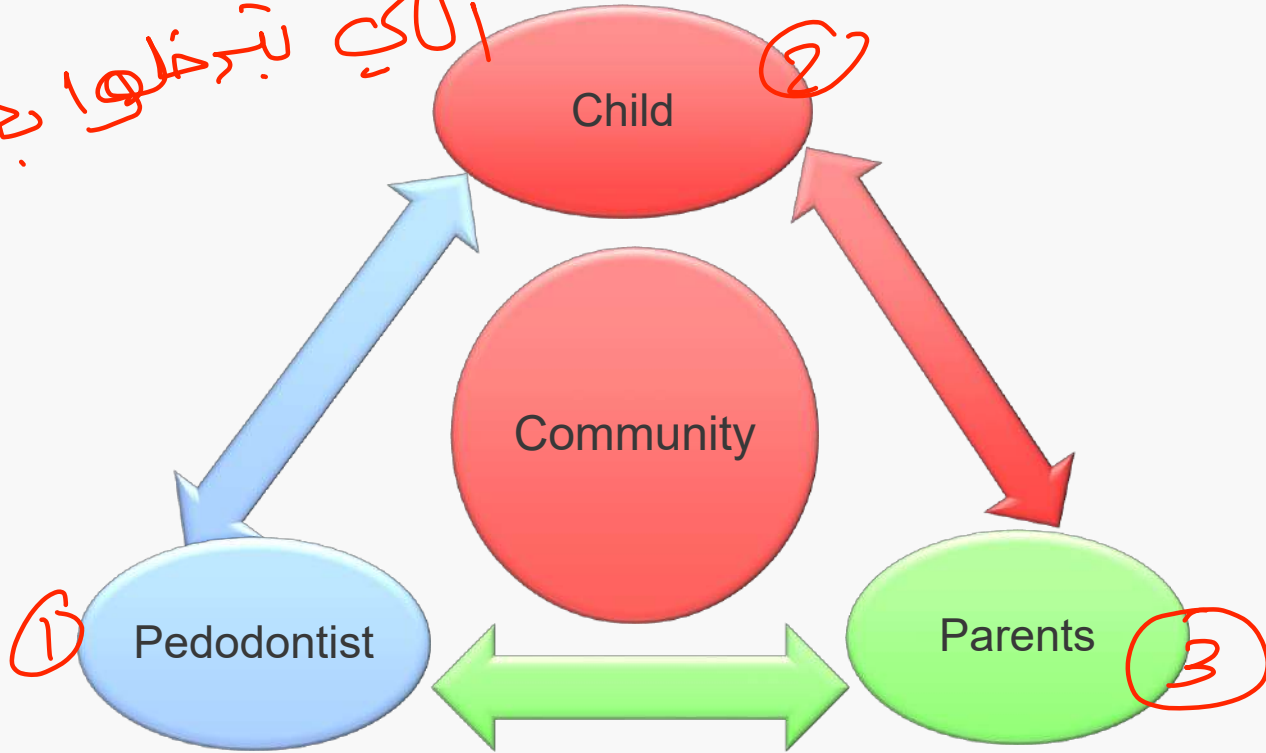


Pedodontics treatment triangle



Modified pedodontics triangle

اللي يتدخلوا بعلاج الطفل



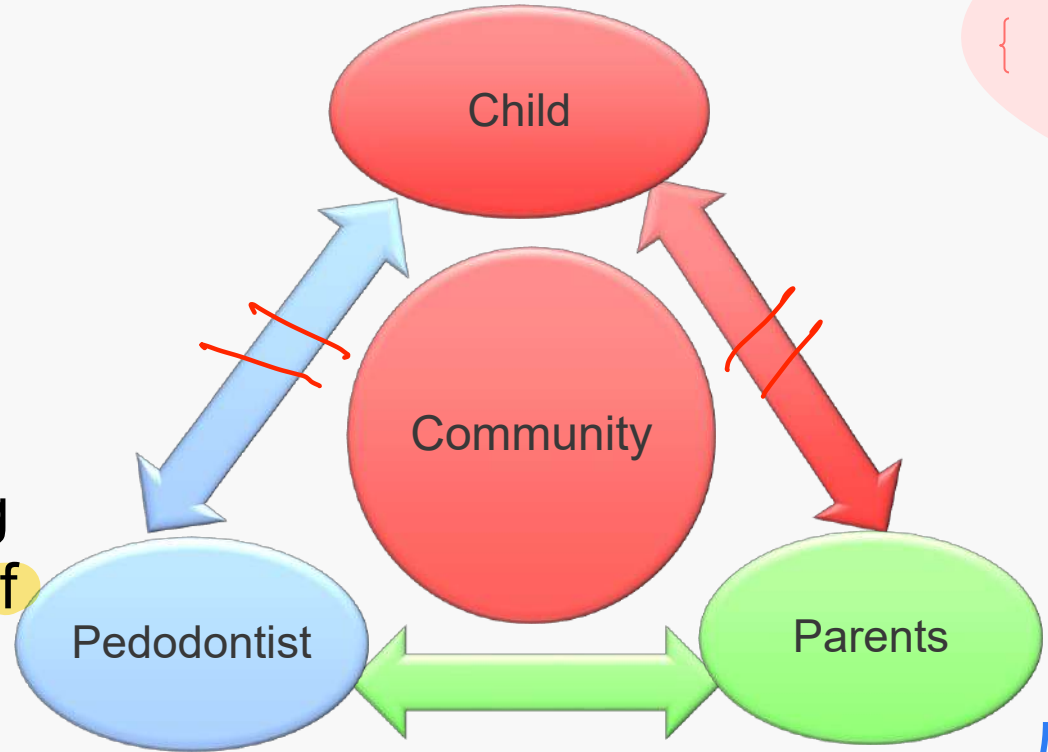
Modified pedodontics triangle

Authoritative parents

(Isosceles triangle)

The parent interfere ^{تدخل} in the conversation relation between the child and Pedodontist.

The parents are answering the questions on behalf of the child



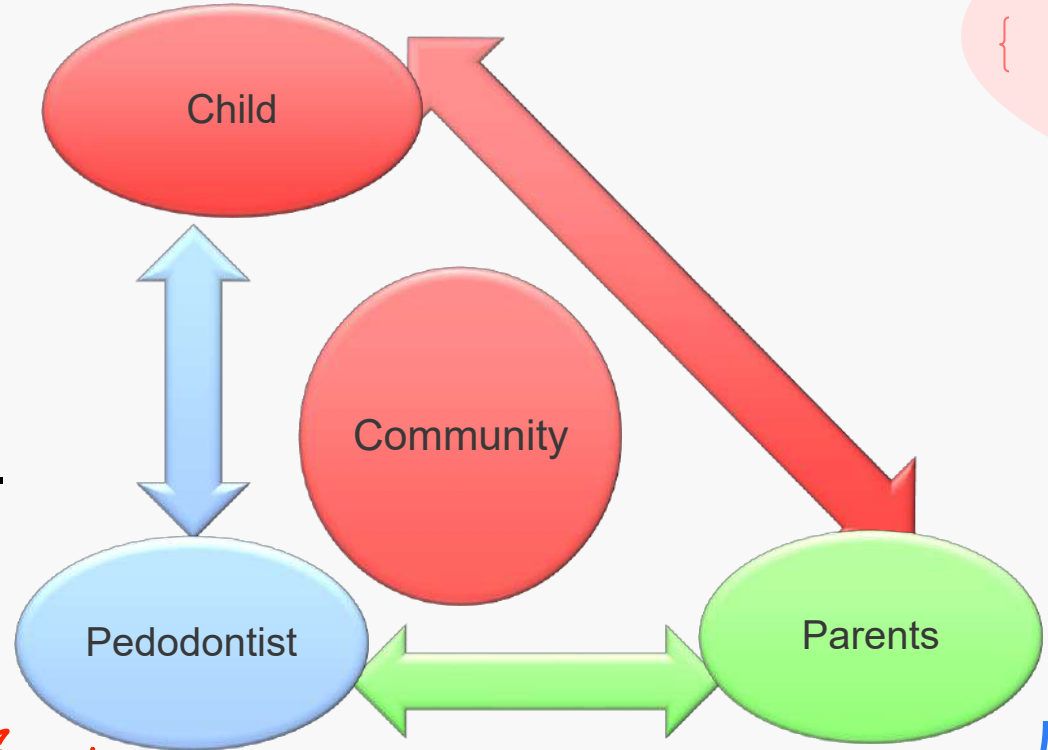
الكل يتدخل امين الطبيب والطفل و اجاب ووجه الطفل بناء على تصرفاته

Modified pedodontics triangle

**Neglecting parents
(Right angle triangle)**

Little, if any, parents'

[] interception between the
child and the Pedodontist.



[] يعني أصل نادر ما يدخلو بيت الدكتور والأهل



***Thank
you***

References

- Cameron AC, Widmer RP. Handbook of pediatric dentistry. 3rd ed. 2008, Mosby, Elsevier.
- Kotsanos, N., Sarnat, H., Park, K. (2022). Pediatric Dentistry: Past, Present, and Future. In: Kotsanos, N., Sarnat, H., Park, K. (eds) Pediatric Dentistry. Textbooks in Contemporary Dentistry. Springer, Cham. https://doi.org/10.1007/978-3-030-78003-6_1
- 1. Pedodontics | Definition & Practice. Encyclopedia Britannica, <https://www.britannica.com/science/pedodontics> (1998).