



*University of Medicine and Pharmacy
“Victor Babes” Timisoara
Faculty of Dental Medicine
Discipline of Pediatric Dentistry*



MANAGEMENT OF ANXIETY AND PAIN

Assistant professor MD,PhD Mălina Popa



There are 2 ways of managing anxiety:

1. The non-pharmacological management
2. The pharmacological management

Non-pharmacological methods of managing anxiety and pain



1. The accommodation of the patient with the medical dentistry domain
2. Communication with the patient
3. The tell-show-do method
4. Acupuncture
5. Audio – analgesia
6. Hypnosis



1. THE ACCOMODATION OF THE PATIENT WITH THE MEDICAL DENTISTRY DOMAIN

The waiting room is the first contact the little patient has with the medical dentistry domain and it has to represent a relaxing and, in the same time, a stimulating environment; this room has to have a design tailored for children:

- coloured ceilings, that should remove the hospital like “white ceiling ” feeling;
- funny drawings done eventually by other children and connected to the dentist;
- animals that substitute children in the process of having a good dental hygiene;
- The spaces should be large to encourage freedom of movement, because it is known that children hardly accept constraints and they loose patience easily.



The dentist's office is another factor that contributes to the empathy between the child, the doctor and the medical act itself.

An office full of light and space, filled with points of interest (toys, funny posters) will have a positive effect on the little patient.

The doctor and the medical assistants should fit in and create an atmosphere of calm and trust.

Non-pharmacological methods of managing anxiety and pain

2. Communication with the patient



If the accommodation with the dental office has not been done yet, the pedodontist has to “mediate the meeting”. No matter if the child is a cooperative one or an anxious one, the doctor has to take over in order to accommodate the child to the new situation .

Conversation represents the easiest way of communication.

The pedodontist has to develop a so called “**second language**” adapted to the child that implies using some expressions that can reach the child’s level of acknowledgement and that represents the major objective in controlling the child’s behaviour.

The doctor has to possess some other qualities: availability to listen, tolerance and flexibility, empathy, the capacity to transpose in the parent’s role.

The non-verbal communication has great importance in the nature of the relationship between the doctor and the patient: physical aspect of the doctor, mimics(smile and face expression), body language (for e.g: leaning towards the patient leads to intimacy, hands near the body reflects distance).

Non-pharmacological methods of managing anxiety and pain

3. “Tell – show - do” Method



This method of diminishing anxiety is the most popular and it consists of the following steps:

- **Tell phase**
- **Show phase**
- **Do phase**



Tell phase

This implies an adequate explanation of the instruments, procedures and their utilisation, adapted to the patient's age :

- the turbine is associated to the police sirene by the boys and to the bee by the girls;
- the elbow piece with the plane or the balerina;
- the spray with "the easy wind" or "the shower".

Their action is meant to clean and brush the teeth, in order for them to be white and to not cause pain.

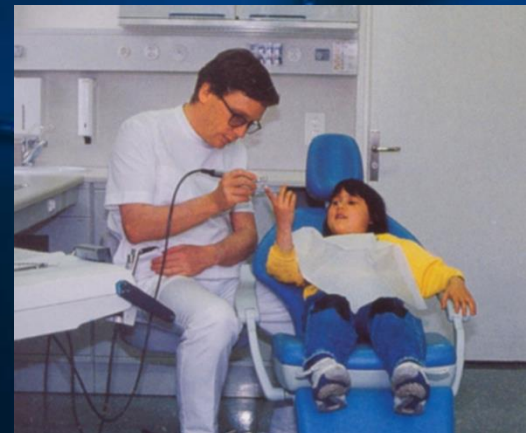
The used materials are associated with materials familiar to the child :

- the most common association is plasticine;
- in the case of amalgam obturations one can use "silver fill" (proved to be succesfull especially for girls);
- if one is in the orthodontic domain, the impression materials must have a pleasant smell and attractive colours, that should suggest tasty food(pudding, ice cream, chewing gum).

Show phase

In this phase a demo of the procedures involved in the therapeutical act is done; the instruments used will be shown, tested, and a demonstration to accomodate with the sounds, with the under pressure air and the water jet will be done.

As a result of these demonstrations, one can evaluate the reaction of the child (curiosity, indifferent attitude, fear, anxiety) and one can anticipate the reaction of the child during the treatment.



Do phase

It is practically initiated by the other 2 phases. To stay in control, *Weinstein and Nathan* suggested to offer children small choices: press buttons, choose the working gadget (turbine, elbow piece).



Non-pharmacological methods of managing anxiety and pain

Audio - analgesia

→ the attention of the patients is distracted through special acoustic signals.

This will lead to reducing the fear of anxious patients towards stomatological interventions



Pharmacological methods for managing anxiety and pain



- Local anesthesia
- Light sedation
 1. anxiolytic medication
 2. nitrous oxide sedation
- Moderate sedation
- Deep sedation
- General anesthesia

Local anesthesia



- **CONTACT ANESTHESIA (TOPICAL)**
- **ANESTHESIA THROUGH PRESSURE (“JET” INJECTION)**
- **PERIPHERAL TRONCULAR ANESTHESIA**
- **PLEXAL ANESTHESIA (PERIAPICAL, TERMINAL)**
- **INTRALIGAMENTARY ANESTHESIA**

Minimal sedation: Anxiolytic medication



When the non-pharmacological methods of managing anxiety and pain don't work -> an anxiolytic medication can be used

Anxiolytic agents = minor tranquilizers / have the primary effect of removing or lowering the anxiety.

The anxiolytic medication is mainly represented by **benzodiazepines** (Valium and Midazolan); although this type of medication had not been used in pediatrics, recent studies recommend it for children too.

Minimal sedation: Anxiolytic medication

Advantages

- Manageable;
- Economic (does not need equipment);
- Absence of toxicity.

Disadvantages:

- the different response of each patient to the appropriate dosage body weight;
- for toddlers, due to taste, may occur refusal to swallow it.



Minimal sedation : Nitrous Oxide sedation



This technique was introduced first in dentistry by **Horace Wells** in **1844**.

Nitrous oxide (N_2O) = inorganic gas, colorless, with slightly sweet taste, not explosive and does not burn. It is not metabolized in the human body and do not chemically bond to tissues.

Conscious sedation → removes the anxiety of patient and increases the doctor choices to approach the patient.

Minimal sedation : Nitrous Oxide sedation



The mixture of nitrous oxide gas with oxygen produces a **sedative and euphoric state** to the patient ;

-> the appropriate mixture (nitrous oxide 40% and oxygen 60%) produces, in the same time :

- relaxation (sedation),
- memory loss (amnesia)
- decreased perception (analgesia).



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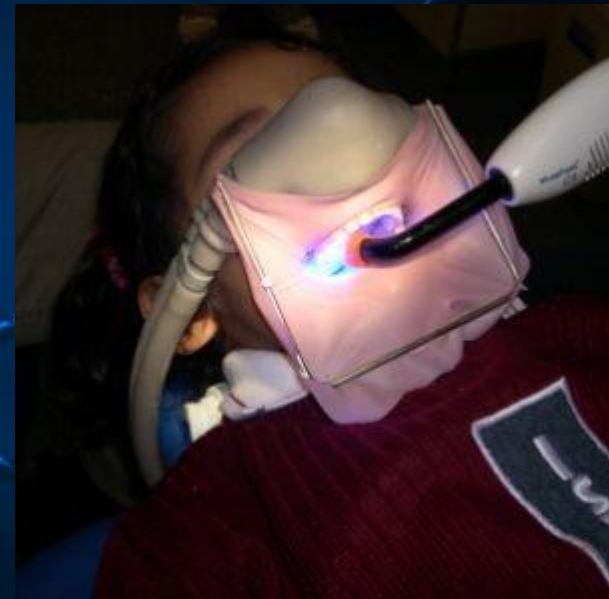


Minimal sedation : Nitrous Oxide sedation



Indications:

- decreasing the anxiety related to the dental office and, in particular, “**needle phobia**”;
- creating a hypnotic state;
- enhancing tolerance to prolonged dental procedures;
- increasing the tolerance threshold to pain.



Minimal sedation : Nitrous Oxide sedation

Counterindications:

(no absolute counterindications but only relative):

- chronic obstructive pulmonary diseases
- upper respiratory tract infections;
- otitis media;
- multiple sclerosis;
- severe emotional disturbances;
- cardiac diseases;
- epilepsy;
- asthma.



Moderate sedation



- it is used most frequently to obtain conscious sedation;
- it consists of co-administration of multiple pharmacological substances

Goal = achieve a balance between sedation, analgesia and amnesia, with minimal side effects.

Moderate sedation



Mixed moderate sedation - the most commonly used
= the combination of oral and nitrous oxide sedation

!!!!!! dosage is taken into account to not reach a point of too deep sedation.

Deep sedation



= *form of general anesthesia where the patient remains independent respiratory and with swallowing function intact.*

Indications:

- dental treatment requiring no more than 30 min;
 - patients who do not cooperate with minimal sedation;
 - patients not requiring general anesthesia with intubation
- It is obtained by the intravenous administration of pharmacological substances, the advantage of this method is that the amount of substances used can be titrated with greater accuracy.



General anesthesia



Indications:

- children with physical or motor disorders;
- intolerance to local anesthetics;
- children under 3 years;
- complex dental procedures.

= the method with the greatest risks and complications, because the patient loses consciousness and physiological functions (breathing, protective functions) are maintained artificially.



Preoperative steps

Hospitalization is a frequent source of anxiety for children → it is recommended that parents accompany their children and be present when they awaken from anesthesia.

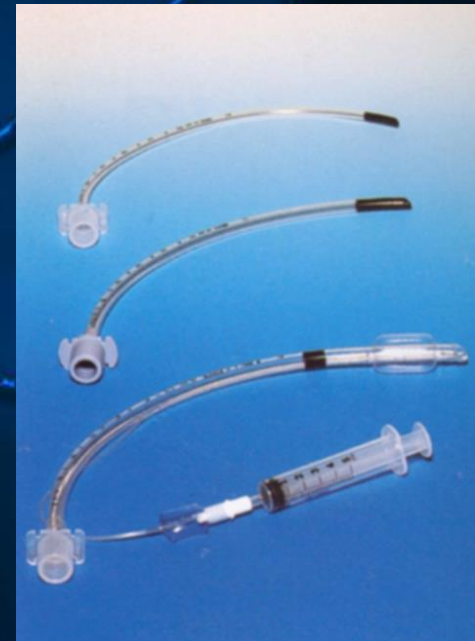
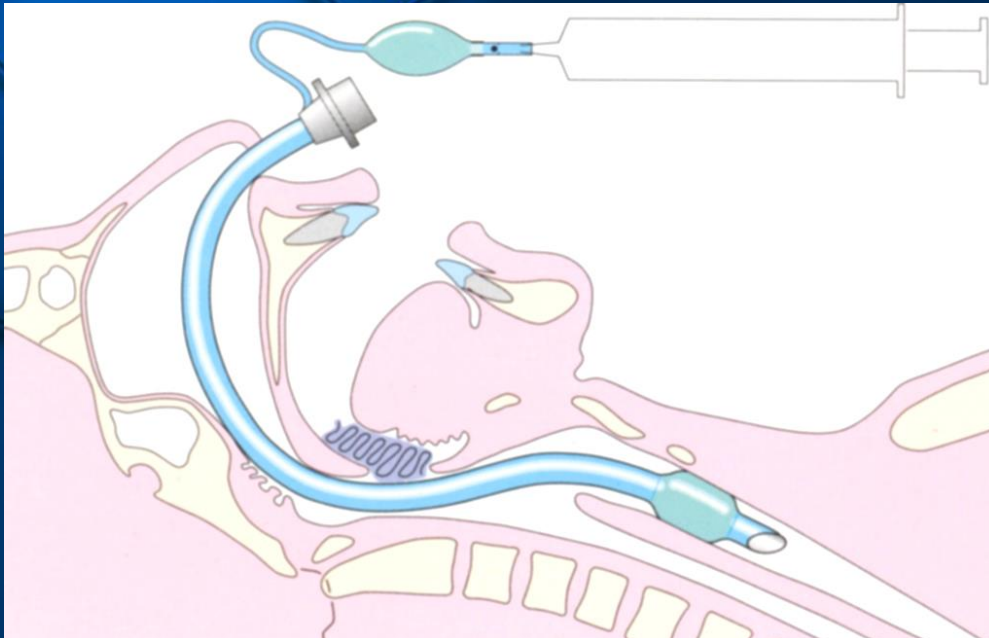
In the hall of intervention, the child's body is covered with a sheet to maintain a constant temperature; the head is also covered, the eyes are protected and only the mouth remains free. The mouth is cleaned by three compresses : the first compresse is saturated with a bacteriostatic agent, the second, with sterile water and third, with the alcohol. It is not a proper sterilization, but only a removal of debris.

Nasotracheal tube must be placed so that all connections to the rest of the device are easily handled.

The pharynx- palatal zone is blocked with a compress, which aims to prevent the possible "escape" of anesthetic agent and foreign bodies in the pharynx.



Intubation and intubation probes





Operative step

- rubber dam isolation
- as many as possible therapeutic procedures are recommended and choose those that have the greatest longevity (ex. preformed crowns in place of amalgam or composites).
- at the end of treatment , before removal the rubber dam, **topical fluoridation** is indicated.





Postoperative step

->After the intervention, the child is transported in the resuscitation room and the nurse is informed about the case. If extractions were done, the compresses should be replaced .

->The doctor checks once again breathing, vital signs, and discusses with the child parents about the treatment performed and about the time when the child can be transported home.



The way the dentist works and collaborates with the child patient will have a great influence on the success / failure of clinical therapeutic act.



Dental treatment should be tailored for each child.

