



LETTER TO THE EDITOR

Management of phobic dental patients and conscious sedation with nitrous oxide in Chile.

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Dental care of children in Primary Health Care services (PHC) requires the work of general dentists trained in stress, anxiety and fear management that inherently occur during dental treatment. Dental care is considered an unpleasant and invasive experience because of situations such as the position of the patient on the reclining dental chair, the feeling of lack of control and specially the use of anesthesia or the use of sharp dental instruments should be excluded. Other aspects are related to specific personality traits of the pediatric patient either by bad past experiences, parental anxiety or shared cognitive factors commonly found in children.

Considering all of the above, the success of dental treatment in children requires a psychological and technical management that should be included in the training of general dentists. These techniques are referred to as non-pharmacological techniques. They provide support to reduce the child's anxiety during dentistry procedures, getting better adherence to the treatment. The Standard to Control Anxiety in Dental Care issued by the Chilean Ministry of Health¹ recommends the use of the Tell-Show-Do technique, voice control, distraction and attention, and breathing techniques, among others.

However, sessions at the dentist's office are often not successful or become excessively long due to the complexity of procedures. This situation is stressful and traumatic for patients and dentists, hindering the achievement of the objectives proposed in each session². Stress is associated with difficulties in the management of a patient. Many patients are frequently referred to pediatric dental centers or to regional hospitals, thereby increasing the waiting list for care and, at the same time, increasing the anxiety of parents and children. On the other hand, treatments that are complete, regardless of the problems in the management of patients with non-cooperative behavior, are not done within the desired time frame due to

the lack of adherence to treatment, affecting oral health indicators³. The above implies that in the short/medium term the dentist will have to repeat the treatment, involving higher costs for public service.

The number of pediatric patients with difficult management referred to specialty centers is currently unknown. This data could reveal the need to incorporate best tools, technology or capabilities in PHC, minimizing labor and economic cost involved in transportation, number of days lost from work of parents and school absenteeism of children; as well as reducing the demand for care from specialty centers and regional hospitals. In this context, we were given access to the register of 341 interconsultations for Pediatric Dentistry at the Dental Service of the Main Hospital in Valdivia registered between 2009 and 2013, after the approval by the Legal Committee and the Direction of the Dentistry Department. In the review done in September 20, 2015, we registered the place of origin, year, age, sex, and diagnosis or reason for the consultation of the patients. As a result, it was observed that 73.9% came from health centers that were located outside the city of Valdivia. Patients had a mean age of 6.2±3.1 years (range: 0-18) and 53.4% were men. Out of a total of 341 interconsultations, 43.7% of the patients were referred to a specialist center because they were difficult to manage. Of these, 80.5% needed treatment for caries (*multiple caries, baby bottle tooth decay, rampant caries*) and a 13.4% were patients with intellectual deficit.

To contextualize the data presented we should consider that difficult-to-manage pediatric patients are unlikely to be treated at a referral center in the public system, because in these centers the attention of patients with special needs and/or cleft lip and cleft palate is prioritized due to the extensive waiting lists. The Standard to Control Anxiety in Dental Care issued in 2007¹ recognizes sedation as a pharmacological method in children unable



to accept conventional treatment either by their level of uncontrollable anxiety using other non-pharmacological measures, or by being unable to adapt themselves to treatment; in patients reluctant to non-pharmacological management such as phobic or anxious patients; in those with movement disorders or physical or mental disability; in children with marked gagging reflex, and in the case of traumatic procedures that should be performed in patients with un-cooperative behavior.

Today dental care of phobic children in specialty centers requires sedation with general anesthesia administered in a central operating room. Procedure that has a high economic impact due to the additional costs that it entails. The cost-effective solution to this problem is ambulatory nitrous oxide sedation in the dental office. It has been found that the costs of staff and equipment for sedation using nitrous oxide are a third cheaper than those for general anesthesia, achieving a 98% success in therapy compared to children who are referred for general anesthesia⁴. Cost-effectiveness, combined with the high demand for care, taking into account the cost of transferring patients from one hospital to another, the loss of working days and school absenteeism, the multiple sessions required to meet the health goals set in the GES (Explicit Health Guarantees Program), are all good reasons to support the use of sedation with nitrous oxide as a

useful tool for providing care and treatment for difficult-to-manage children.

However, the administration of a drug that acts at the central nervous level requires highly trained and experienced professional staff. Today, Universidad de Valparaíso offers a postgraduate diploma in Nitrous Oxide Conscious Sedation for use in Dental Practice. In the same way, dentists working in PHC should receive training on conscious sedation to treat this group of patients. It is also necessary to use the resources provided by agencies that fund scientific research such as FONIS, CORFO, and FONDECYT, to evaluate this technology.

We hope that new generations of dentists and specialists in charge of the treatment of difficult-to-manage children include in their practice the use of conscious sedation with nitrous oxide. I make a call to health institutions and universities officially accredited in pediatric dentistry or related areas to commit themselves to the teaching of this technology. This will contribute to the comprehensive care of patients that today do not have equal access to dental care.

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