



## The Study of Role of Stress in Children with Behavior Disorders and Orofacial Lesions

RK Baad, Kiran Jagtap

### ABSTRACT

**Aim:** (1) To study the behavior disorders in children between 5 to 15 years. (2) To study the role of stress in causing behavior disorders. (3) To interpret the orofacial findings in children with behavior disorders. (4) Correlate the orofacial findings with behavior disorder.

**Materials and methods:** Ninety children with behavior problems between age of 5 to 15 years along with their parents who visited the Department of Child-Guidance Clinic, BYL Nair Charitable Hospital, Mumbai. Intraoral examinations were conducted. Behavioral disorders and factors predisposing to those disorders were recorded.

**Results:** Behavior disorders with orofacial lesions was more common in age group of 8 to 10 years. The children were continuously under stress, which manifested in the form of various orofacial disorders or oral lesions. Most common orofacial condition was bruxism.

**Conclusion:** Awareness of behavior disorders in dental treatment should guide the pediatric dentist to seek child psychiatric consultation for behavioral disorders to enable early evaluation of the underlying disorder.

**Clinical significance:** The present study suggested that orofacial and behavior characteristics can serve as markers to diagnose children with behavioral disorders. It also serves as a guide to dental clinicians to refer such children to psychiatrists or pediatricians for early identification, prevention and treatment.

**Keywords:** Behavior disorders, Stress, Orofacial lesions, Behavior management.

**How to cite this article:** Baad RK, Jagtap K. The Study of Role of Stress in Children with Behavior Disorders and Orofacial Lesions. *J Contemp Dent Pract* 2012;13(4):559-561.

**Source of support:** Nil

**Conflict of interest:** None declared

### INTRODUCTION

The oral mucosa is highly reactive to psychologic influences and in some cases oral diseases may be a direct expression of emotions while in other instances lesions of oral mucosa may be indirect result of an emotional problem.

Psychosomatics is relatively new term which has been defined as relating to or involving the influence of emotional stress or conflict on a somatic area, organ or bodily system.<sup>1</sup>

Children classified with behavioral disorders were rated by their parents as significantly more aggressive, more demanding of parental time exhibiting more non-compliance, less socially skilled and less acceptable to change in routine.<sup>2</sup>

Children with behavioral disorders exhibit a higher caries prevalence, higher degree of dental anxiety and have more behavior management problems.<sup>3</sup>

Orofacial findings associated with patients of behavioral disorders include long lower face, steep palatal vault, fissured/geographic tongue.<sup>4</sup> Fissured tongue, deep palatal vault, attrition facets and enamel opacities are the common findings in the psychosomatic disorder patients. Higher prevalence of oral habits is also detected.<sup>5</sup>

A high prevalence of tooth ache, bruxism, bleeding gums and oral trauma is reported in the children with behavioral disorders. No significance is reported in relation to the demographic characteristic, such as age, gender, residence, ethnicity and income.<sup>6</sup> There is a dearth of literature regarding the role of stress in children with behavior disorders and orofacial lesions.

### AIMS AND OBJECTIVES

- To study the behavior disorders in children between 5 to 15 years.
- To study the role of stress in causing behavior disorders.
- To interpret the orofacial findings in children with behavior disorders.
- Correlate the orofacial findings with behavior disorder.

### MATERIALS AND METHODS

Study comprised of 90 children between age of 5 and 15 years who visited the Department of Child-Guidance Clinic,

BYL Nair Charitable Hospital, Mumbai, along with their parents for evaluation of behavior problems. A team of pediatrician, psychologist, social workers, play therapist, speech therapist evaluated the child's behavior problem by subjecting the children and parents to thorough case history.

Behavior disorders evaluated were nocturnal enuresis, scholastic backwardness, stammering, encopresis, hyperkinesis, temper tantrum, anxiety, overprotective, tongue biting, thumb sucking, abdominal pain and sternal chest pain.

Intraoral examination involved a visual assessment of teeth, periodontium and oral mucosa for changes in color, shape, surface texture and size of lesions. Orofacial findings included, lichen planus, aphthous ulcers, recurrent herpes labialis, bruxism thumb sucking, geographic tongue, traumatic ulcers, cheek biting.

Above cases were proved with help of clinical pictures and case history. Biopsy was carried out and confirmed histopathologically in case of lichen planus.

## RESULTS AND OBSERVATIONS

Through our study an attempt was made to find various causes of stress, leading to behavior problems in children taking into consideration his family status, school record, economical status which has lead the behavior problems. The effect of this behavior problems and stress on body defense mechanism, the immunity and interpretation through organ language in the form of orofacial lesions and correlating their interrelationship, so that this orofacial lesions will be diagnostic features in diagnosing behavior problems in children, who are unable to express their feelings, their emotions or talk out their tensions, who are always burdened under the umbrella of stress of their parents or environment but talk through behavior problems initially and orofacial lesions latter which are mirror images of their internal emotions.<sup>7-9</sup>

Following were the observations made:

### Behavior Disorders

- Behavior disorders with orofacial lesions was more common in age group of 8 to 10 years.
- Children living in chawl (single room) had behavior disorders with orofacial findings due to overcrowding, poor housing and antisocial activities in the neighborhood.
- Children sleeping away from parents, produced situation that frightened or disturbed his sleep leading to bruxism, sleep walking, sleep talking, night terrors or screaming and shouting during sleep.
- Children who had changed the school suffered with scholastic backwardness due to difficulty in coping with language, teaching style and examination patterns.

- Children living in single family became easy prey to stresses of various types like, death, financial losses and immigration in comparison to joint family.
- Children's whose fathers were full time workers had behavior disorders because of the child neglect and lack of parental love, dependence and security.

### Orofacial Disorders

According to Selye's 'general adaptation syndrome' continuous stress produced degenerative changes in all organs of the body, the first reaction being adaptation and defense followed by pathologic alteration in the tissues.<sup>10</sup>

In our study, the children were continuously under stress, which manifested in the form of various orofacial disorders or oral lesions, as a form of adaptation, defense or expressed through oral lesions. The common findings are as follows:

<i>Lesions/manifestations</i>	<i>No. of cases</i>
• Bruxism	7
• Recurrent herpes labialis	6
• Recurrent aphthous ulcers	4
• Oral manifestations due to thumbsucking	5
• Tongue biting	1
• Lichen planus	2
• Cheek biting	1
• Geographic tongue	2
• Traumatic ulcers	2

## DISCUSSION

Behavior disorders with orofacial lesions was more common in age group of 8 to 10 years. The children were continuously under stress, which manifested in the form of various orofacial disorders or oral lesions.

According to us, our study bridges the gap between child psychiatry and pediatric dental disciplines. Awareness of behavior disorders in dental treatment should guide the pediatric dentist to seek child psychiatric consultation for behavioral disorders to enable early evaluation of the underlying disorder. Once the gap of knowledge between the two professions is filled, collaboration will definitely serve to the betterment of these children with behavioral problems.

Although we could not correlate between specific type of behavior disorder and corresponding orofacial lesion, we earnestly recommend further studies to be done on larger scale, so that this orofacial lesions will be diagnostic features in diagnosing specific behavior disorders of psychological origin.

The behavioral characteristics of attention deficit/hyperactivity disorder (ADHD) children can determine the success or failure of a dental appointment, thus the pediatric dentist must be aware of the situations and recognize the problem easily in order to establish a stable environment, so that appropriate treatment plan can be used to minimize or stabilize the symptoms instead of aggravating them.

Techniques like TSD and positive reinforcement proved to play a significant role in moderating the behavior of children. These techniques can also stimulate behavior that is more cooperative and amenable to treatment in all children. The findings of Felicetti et al<sup>11</sup> supported the above statements. From this it appears that multimodal techniques are useful when interacting with children who have behavioral disorders.

## CONCLUSION

Behavior disorders with orofacial lesions was more common in age group of 8 to 10 years. The children were continuously under stress, which manifested in the form of various orofacial disorders or oral lesions. The oral mucosa is highly reactive to psychologic influences and in some cases oral diseases may be a direct expression of emotions while in other instances lesions of oral mucosa may be indirect result of an emotional problem.

## CLINICAL SIGNIFICANCE

Dentist caring for children with behavior disorders need to be familiar with the manifestations as well as have a sound and thorough knowledge about the basics of the disorder. Increased awareness will definitely improve the health and well-being of children with behavioral disorders. As it is difficult to manage these children it is prudent to assess their behavioral characteristics, so that appropriate technique can be implied to moderate their behavior.

## REFERENCES

1. Bakwin H. Behaviour disorders in children (4th ed). Philadelphia, WB Saunders.
2. De Wolfe NA, Byrne JM, Bawden HN. ADHD in preschool children: parent-rated psychosocial correlates. *Dev Med Child Neurol* 2000;42:825-30.
3. Blomqvist M, Holmberg K, Fernell E, Ulla E, Dahllof G. Oral health, dental anxiety and behavior management problems in children with attention deficit hyperactivity disorder. *Eur J Oral Sci* 2006;114:385-90.
4. Waldman BH, Swerdloff M, Perlman SP. Behavior – you may be treating children with mental retardation and attention deficit hyperactive disorder in your dental practice. *J Dent Child* 2000: 241-45.
5. Atmetlla G, Burgos V, Carrillo A, Chaskel R. Behavior and orofacial characteristics of children with attention deficit hyperactivity disorder during a dental visit. *J Clin Pediatr Dent* 2006;30(3):183-90.
6. Bimstein E, Guelmonn M, Primosch R. Oral characteristics of children with attention deficit hyperactivity disorder. *Spec Core Dentist* 2008;28(3):107-10.
7. Ballieuy RE. Impact of mental stress on the immune response. *J Clinical Periodontol* 1991-18;6:427-30.
8. D'Souza Alan. Textbook of Child Psychiatry.
9. Jaykar AV. Behaviour problems in children. *Indian J Clin Prac* 1997 Jan:22-25.
10. Selye H. The general adaptation syndrome and the diseases of adaptation. *J Clin Endocr* 1946;6:117-231.
11. Felicetti DM, Julliard K. Behaviors of children with and without attention deficit hyperactivity disorder during a dental recall visit. *J Dent Child* 2000:246-49.

## ABOUT THE AUTHORS

### RK Baad (Corresponding Author)

Professor and Head, Department of Oral Pathology, School of Dental Sciences, KIMSDU, Karad, Satara, Maharashtra, India, Phone: 9823145900, e-mail: rajendrabaad@yahoo.com

### Kiran Jagtap

Professor and Head, Department of Oral Pathology, Yashwantrao Chavan Dental College, Ahmed Nagar, Maharashtra, India