

The Need for Multidisciplinary Handling of Orofacial Pain and Temporomandibular Disorders in Children and Adolescents

Amal Al-Khotani^{1,2*} and Nikolaos Christidis^{1,2}

¹Orofacial Pain and Jaw Function, Department of Dental Medicine, Karolinska Institutet, Huddinge, Sweden

²Scandinavian Center for Orofacial Neurosciences (SCON)

Keywords: Orofacial pain; Temporomandibular disorders; Chronic pain; Children; Adolescents

Short Communication

Childhood is the most crucial period in human life. From childhood on, children grow with their dreams and wishes and struggle their entire lives to reach their goals. However, an overabundance of fears and threats may negatively influence a child's well-being. One such threat is a pain, which is a common experience in childhood that can be caused by trauma, serious accidents, psychological distress, diseases, or medical/dental treatments. Unfortunately, it is a common health problem that affects many aspects of function for millions of people around the world. Adolescence, on the other hand, is a transitional stage between childhood and adulthood that corresponds not only with the growth and development of the craniofacial region and other parts of the body but also of psychological and social perspectives. Studies report that pain in temporomandibular joint (TMJ) and associated orofacial structures are responsible for more than three-quarter of dental appointments among adolescents. Further, besides the consequences of physical stress, impaired learning ability, psychological suffering, broken social relationships, and absence from school arising from acute untreated cases that have unfortunately become chronic, society bears an economic burden that is vital to consider.

This short communication is intended for medical and dental caregivers to increase awareness of managing orofacial pain and temporomandibular disorders (OFP/TMD) in children and adolescents. This issue should be taken into consideration in order not only to minimize the suffering of pain, but also to avoid the associated psychosocial consequences. Furthermore, it clarifies why dentists (pediatric dentists in specific) should cooperate with other specialties to reduce expected consequences from continuing to adulthood.

Orofacial pain and temporomandibular disorders (OFP/TMD) is a term that describes multiple conditions affecting the orofacial region. These conditions could be due to myogenic, vascular, and/or neuropathic factors, and could also be of dental origin which tends to drive unnecessary use of medication and overuse of various healthcare services [1]. However, several epidemiological studies among children and adolescents have investigated a wide range of prevalences of TMD; TMD associated signs and symptoms, as well as risk factors for developing TMD [2,3]. This wide range of reported TMD prevalences might be due to the extensive variety of differences in methodology such as the sampling approaches, the validity of the method used, and the cultures of participants in research studies. Several studies are reporting TMD prevalences in children and adolescents, but only four of them report the prevalence of TMD diagnoses according to the validated, standardized examination protocol Research Diagnostic Criteria for TMD (RDC/TMD) [4]. In Mexico, the reported prevalences of TMD diagnoses reached up to 46.1% in young adults [5], while in Saudi Arabia, 27.2% of the children and adolescents had at least one TMD diagnosis [6]. Moreover, the prevalences of TMD diagnoses among adolescents in Germany and China reached 13.0% and 14.9% respectively [7], whereas in Brazil it is reported 6%.

A recent study indicated that painful TMD diagnoses are associated

with depression, anxiety, aggressive behavior and thoughts problems when compared to children and adolescents with no-pain related to TMD [8]. Several previous studies also have reported similar findings while raising the importance of further investigations in the field of OFP/TMD in children and adolescents [9]. Another important factor is that the negative impact on the psychosocial situation in children with painful TMD tends to continue to the adulthood leading to a risk of a chronic impaired quality of life [10]. Taking the rather high prevalences of TMD into consideration, it is further necessary to elaborate the field of OFP/TMD in children and adolescents. In addition to focusing not only on diagnosing and treating TMD signs and symptoms, but also on evaluating the associated biopsychosocial implications.

Recently published papers indicate that there is a significant lack of knowledge in this area both regarding etiology, diagnosis and treatment of children and adolescents with OFP/TMD [11]. This lack of awareness among caregivers, even dentists, in combination with the high prevalences of TMD, and when taking the biopsychosocial implications into consideration is unfortunate. With this in mind, one could suggest that the modern dental and if possible medical education includes the field of OFP/TMD in their curricula, both in the undergraduate and postgraduate levels. In turn, this will lead to not only increase the knowledge in this area but also to a better caregivers' performance [12]. Moreover, OFP/TMD management, which includes medication therapy, splint therapy, physical therapy (such as jaw exercise, iontophoresis, and massage) and behavior therapy, necessitates a multidisciplinary approach. Nevertheless, the collaboration between caregiver should be arranged to provide joint efforts between general and pediatric dentists, orofacial pain specialists, physiotherapists, psychologists and also pediatric physicians. In sequence, this could minimize the biopsychosocial consequences and allow children and adolescents to return to their activities and normal life.

References

1. Okeson J P (2014) Temporomandibular joint pains. In Bell's Oral and Facial Pain. (7th edn). USA: Chicago, IL; Quintessence Publishing
2. Carra MC, Huynh N, Morton P, Rompré PH, Papadakis A, et al. (2011) Prevalence and risk factors of sleep bruxism and wake-time tooth clenching in a 7- to 17-yr-old population. *Eur J Oral Sci* 119: 386-394.
3. Egermark I, Carlsson GE, Magnusson T (2001) A 20-year longitudinal study of subjective symptoms of temporomandibular disorders from childhood to adulthood. *Acta Odontol Scand* 59: 40-48.

*Corresponding author: Amal Al-Khotani, Section for Orofacial Pain and Jaw Function, Department of Dental Medicine, Karolinska Institute, Box 4064, Huddinge, SE-14104, Sweden, Tel:4670-0374-967; E-mail: aalkhotani@yahoo.com

Received May 23, 2016; Accepted May 31, 2016; Published June 03, 2016

Citation: Al-Khotani A, Christidis N (2016) The Need for Multidisciplinary Handling of Orofacial Pain and Temporomandibular Disorders in Children and Adolescents. *J Pain Relief* 5: 249. doi:10.4172/2167-0846.1000249

Copyright: © 2016 Al-Khotani A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

4. Dworkin SF, LeResche L (1992) Research diagnostic criteria for temporomandibular disorders: review, criteria, examinations and specifications, critique. *J Craniomandib Disord* 6: 301-355.
5. Casanova-Rosado JF, Medina-Solis CE, Vallejos-Sanchez AA, Casanova-Rosado AJ, Hernandez-Prado B, et al. (2006) Prevalence and associated factors for temporomandibular disorders in a group of Mexican adolescents and youth adults. *Clin Oral Investig* 10: 42-49.
6. Al-Khotani A, Naimi-Akbar A, Albadawi E, Ernberg M, Hedenberg-Magnusson B, et al. (2016) Prevalence of diagnosed temporomandibular disorders among Saudi Arabian children and adolescents. *J Headache Pain* 17: 41.
7. Wu N, Hirsch C (2010) Temporomandibular disorders in German and Chinese adolescents. *J Orofac Orthop* 71: 187-198.
8. Al-Khotani A, Naimi-Akbar A, Gjerset M, Albadawi E, Hedenberg-Magnusson B, et al. (2016) The associations between psychosocial aspects and TMD-pain related aspects in children and adolescents. *J Headache Pain* 17: 30.
9. List T, Wahlund K, Larsson B (2001) Psychosocial functioning and dental factors in adolescents with temporomandibular disorders: a case-control study. *J Orofac Pain* 15: 218-227.
10. Hofstra MB, Van Der Ende J, Verhulst FC (2001) Adolescents' self-reported problems as predictors of psychopathology in adulthood: 10-year follow-up study. *Br J Psychiatry* 179: 203-209.
11. Al-Khotani A, Naimi-Akbar A, Björnsson O, Christidis N, Alstergren P, et al. (2016) Professional knowledge among Swedish and Saudi healthcare practitioners regarding oro-facial pain in children and adolescents. *J Oral Rehabil* 43: 1-9.
12. Al-Khotani A, Björnsson O, Naimi-Akbar A, Christidis N, Alstergren P (2015) Study on self-assessment regarding knowledge of temporomandibular disorders in children/adolescents by Swedish and Saudi Arabian dentists. *Acta Odontol Scand* 73: 522-529.