

***Editorial*****The Demand on Orthodontistry Needs to be Assessed for the Future Requirement in Bahrain**

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Bahrain has one of the best medical facilities in the Gulf region. The medical facilities in Bahrain are considered comparable to its counterpart in Europe and USA. Bahrain is aspiring to be the centre par excellence in medicine in the Gulf region, where it would attract medical tourism. The facilities in Bahrain are not without deficiencies and it is time for the medical leadership in the ministry and medical societies to look into those. One of those is the orthodontistry. They need to evaluate the service available now, is it sufficient or does it need to be expanded? Do we have a centre for training and is it sufficient for training young dentist for the future needs? Is there an equal opportunity for training in this subject? What is the approximate personnel need of Bahrain for the service now and in the future? We need to remember that the service is needed by many young people; therefore, why force them to go abroad with all the caveats of going abroad for such service. Finally, we need to address the question "Is orthodontistry a cosmetic procedure or in many instances it is functional?"

Orthodontistry is not something new as some would claim; it dates back to the VIII Century B.C. where Etruscans of the Pre-Roman Italy employed orthodontic bands to improve tooth alignment<sup>1</sup>.

Let us address the question of sufficiency. For one million people, the population of Bahrain, more than 50% of them are young, the service is not sufficient and it needs to be expanded. If Bahrain can afford Formula one, it can afford to build few centers for orthodontistry treatment. The young are the future of Bahrain.

The second question do we have a centre for training and is it sufficient for training young dentist for the future needs? Yes we have, but it is not sufficient for the future needs of young and growing population. Let us remember that Bahrain population of 50,000 has jumped to one million in fifty years. We need to spare our young people and their parents the suffering of going abroad with all its precautions, poor follow up and the complications that cannot be attended immediately.

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The third question the leaders need to address: is there an equal opportunity for training in the available orthodontistry center? Of course with one center on the island, it is not expected to have equal opportunity; rather it would be selective and on occasions may be biased because of its limited equipments, facilities and resources.

Medical leadership needs to estimate the approximate personnel need of Bahrain for the service now and in the future? What are the requirements of orthodontistry per 10,000 or per 100,000 people? We should not make the same mistake of the previous medical leaders by under estimating Bahrain needs, where in 1977, they thought that Bahrain does not need more than two ENT surgeons, four obstetric and gynecology surgeons, four internist and four general surgeons.

Finally, we need to address the question “Is orthodontistry a cosmetic procedure or in many instances it is functional?”

The improvement of facial and/or dental aesthetic, the preservation of the health and functioning of the dentition are the three main reasons routinely cited to justify the provision of orthodontic treatment, but certainly they are not all<sup>2</sup>.

Research shows that small jaws create small airways and increase the likelihood of life-threatening disorders, for life. Since the upper and lower jaw-bones form the gateway to the human airway, a new earlier orthodontic protocol and standard is warranted<sup>3</sup>. That research indicates that orthodontic treatment is not cosmetic, but it could be functional and life saving.

One of the functional indications is the malfunction of temporo-mandibular joint, where malocclusion may have a high probability of internal joint and muscles of mastication disorders<sup>4</sup>. Treatment of malfunctioning TMJ in adults is difficult and has many complications.

We need not to emphasize the importance of early treatment because delay of treating malocclusion may result into negative changes in dental, facial and skeletal pattern<sup>5</sup>.

Let us not to forget that there are psychological consequences of delayed treatment of malocclusion on children, which may reflect adversely in their adulthood.

In a study in Jordan, it was found that the demand for orthodontic treatment was found to be affected by gender and rural/urban areas of living<sup>6</sup>.

In another study, in Jordan, to assess the need and demand for orthodontic treatment among 12-14-year-old Jordanian school children, a total of 1002 students were randomly selected. The results showed that approximately one-third (34 percent) of the children examined had a definite need for orthodontic treatment. Severe contact point displacement of more than 4 mm was the most common occlusal feature in the definite

treatment need group, followed by impeded eruption of teeth, hypoplasia of a single tooth and increased overjet of more than 6 mm but less than or equal to 9 mm<sup>7</sup>.

It is said that modern orthodontics is far more multidisciplinary field than in the past, a structured collaboration and establishment of a team between the orthodontist, the oral physician, ENT surgeon and psychiatrist under one roof needs to be thought of in the future<sup>8</sup>.

In a study of a group of Nigerian adolescents, it was found that significant positive correlation existed between self-esteem and their orthodontic concern as well as between their dental aesthetic index scores and orthodontic concern<sup>9</sup>.

In a study by Spengler et al, the authors showed that pre-surgical nasoalveolar molding therapy has significant advantages in the treatment of bilateral cleft lip and palate patients. It improves the nasal asymmetry and deficient nasal tip projection associated with bilateral cleft lip and palate. It also forces the protruded pre-maxillary segment into alignment with the dental alveolar segments, improving the shape of the maxillary arch. As a result, the changes associated with pre-surgical nasoalveolar molding therapy help decrease the complexity of subsequent surgeries<sup>10</sup>.

In a study by Deng et al, utilizing pre-surgical orthodontic treatment of complete unilateral cleft lip and palate in infants showed repositioning the premaxillary segment, reducing the width of palate cleft, correcting the nasal deformities and facilitating surgical repair of cleft lip and palate<sup>11</sup>.

In another study of orthodontic treatment of children with cleft lip and cleft palate revealed that orthodontic interception at the time of the temporary dentition corrects the essence of the problem, the transverse insufficiency, but also addresses moderate maxillary retrusion. Cooperation with a speech therapist at this stage is essential<sup>12</sup>.

Twenty patients with unilateral cleft lip and palate were treated orthodontically and followed up until adult age. At adult ages, the patients with unilateral cleft lip and palate had acceptable facial profiles and acceptable alignment of the anterior dentition<sup>13</sup>.

In a systemic review of obstructive sleep apnea, the authors showed that oral appliances therapy used by orthodontist for obstructive sleep apnea is an effective modality of treatment compared to CPAP and UPPP<sup>14</sup>.

Other indications of orthodontic treatment include speech difficulties, gum diseases because of poor maintenance of oral hygiene.

The previous studies showed that orthodontic treatment is not only cosmetic procedure but also functional and on many occasions life saving procedure.

I was prompted to write this editorial by several calls from medical personnel who complained about the high cost of doing the procedure abroad or privately in Bahrain. If

such procedure is costly for medical personnel, then what it would be for the low income people?

In the end I would like to leave you with the following message: Bahrain is hoping to be a center for medical tourism; therefore, orthodontistry is an important service to project to its citizens and other Gulf nationals. I am sure the Minister of Health and the Undersecretary, Dr. Nada Hafadh and Dr. Aziz Hamza, are well aware and conscious of the recent advances in medicine and dentistry and they are trying hard to upgrade the services wherever it is needed and wherever it is possible.

If you have any comment, please write to:  
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