MDJ

Prevalence of Impacted Wisdom Teeth among Hawler Young People

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Abstract

Background: It is believed that the incidence of impaction is increasing in recent years due to the less functional activity of the Jaws.

Aim of the study: The objective of this study is to know the prevalence of impacted wisdom teeth among Hawler young population Also to know the factors that are associated with the state of impaction.

Material and Method: 1150 young people from college of dentistry were included from February to September 2005, age ranged between 17 -30 years old they were examined using special case sheet.

Results: Out of 1150 people examined (517male .and 633female), (219 male and 285 female) were found to have one or more impacted wisdom teeth (43.82%).

Only 73(32male and 41 female) had one or more congenitally missing third molar. A relation was found between impaction and habit of using chewing gum and singing, statistical relation were existed between impaction and type of food, tempromandibular joint (TMJ) trouble, emotional stress and fatigue.

Conclusion: A strong association was found between impacted wisdom teeth and type of food and habits among Hawler young population.

Key words: Impacted wisdom teeth, incidence, type of food and habits.

Introduction

Impacted wisdom teeth is considered to be one of the common problems in dentistry .It is believed that the incidence of impaction is increasing in recent years due to the less functional activity of the Jaws. The incidence of impaction may differ from one race to another due to the fact of genetically inherited factors and due to the type of food and habits which may have a role on the growth of the jaws[(1).]

The objective of this study is to know the prevalence of impacted wisdom teeth in Hawler population, however to my knowledge no similar study was conducted before on the same field. Also to study the correlation between impaction and type of food and habits that may have a role in reducing the prevalence of third molar impaction which become one of the most common problem in dentistry that in most situations surgical intervention is necessary to manage this problem.[(1-3).]

Materials and methods

1150 young people from college of dentistry were included from February to September 2005,the sample were collected from people come to dentistry for reasons other than

impacted teeth e.g. scaling and polishing of teeth, filling of teeth that has no any relation with impaction. Age ranged between 17 -30years old, special case sheet has been prepared to answer some more important questions related to this study. The former is attached to this research as appendix A. The data are collected and arranged in tables (1-11) as relevant.

For statistical analysis, Data were entered into a computer using the EPI 6 computer program. Chi square test of association was used, P value of ≤ was considered as statistically significant.

Results

Out of 1150 people examined (517male .and 633female), (219 male and 285 female) were found to have one or more impacted wisdom teeth (43.82%).Only 73person(35male and 38 female) had one or more congenitally missing third molar(6.35%) , so the total percentage of the total impaction is (50.17%) . The maximum number of impaction was found in the age group of (21-25) years as shown in(table 1)

No relationship was found between impaction and sex .323 female (51.02%) and 254 males (49.12%) had impacted wisdom teeth (Table 2).

A relation was found between jaws and impaction. Impaction in the mandible was higher than impaction in the maxilla.(Table3).

A relation was found between impaction and habit of using chewing gum.

A relationship was found between impaction and people who like to sing.

466 people that they have habit of singing among those people only 265 (56.86%) had impacted wisdom teeth. (Table 5).

Also relation ship between family History and impaction was found**.**

Relationship was found between crowding of anterior teeth and impaction .382 people had history of crowding anterior teeth, among these 208 people had impacted wisdom teeth. (Table 7).

Statistical analysis of the questioner indicated that statistical relation were existed between impaction and type of food and T.M.J. trouble, (Table 8,9).

No significant relation found between impacted wisdom teeth and emotional stress (Table 10).

No significant relation found between fatigue and impacted wisdom teeth (table11).

Discussion

The prevalence of third molars impactions after examining 1150 of young people in the college of dentistry of both sexes was 43.82%, this incidence of impaction was more than previous studies carried out on the other races by Dachi 17.5%[(1)] Mead 18.5%[(2)] Nanda and Chawla 20.5% [(3),] Morris 27.9%[(4)] and Sandhu and Kapila 26% [(5)] .

However, the prevalence of third molar impaction was found to be less than that reported by Kramer 47.44% done on population that is 95% Negro[(6).]

The Maximum number of third molar impaction (48.86%) was found to be in the age group of (21-25) years, this finding is in agreement with the study of Sandhu and Kapila they found nearly the same relation. (51.19%) were found in age group (21-25) years. Also the study revealed that the females (51.02%) have slightly more impactions than males (49.12%), this coincides with the study of Hellman [(7)] who found incidence of impacted third molars is higher in females (56.8%) than males (45.2%). And study by Nanda and Chawla found 9% more impacted third molars in

females than males and study of Sandhu and Kapila they found that incidence of impactions is higher in females (55.7%) than males (44.3%).

Hellman[7] ,Kramer et al[6] and Silling[8] they attributed these finding to the fact that the jaws of females stop growing at the time when third molars are just beginning to erupt, where as in males the growth of jaws continues beyond the time of eruption of third molars .

It was observed that mandibular impaction was (59.04%) of all the mandibular cases while (39.42%) was impacted in the maxilla, which is in agreement with the study of Nanda and Chawla (found among 265 cases of the mandible(normal eruption and impaction) 156 were impacted and the remaining109 were normally erupted. similarly of the 260 cases of the maxilla, 95 were impacted, and the remaining 165 were normally erupted, and study by Sandhu and Kapila they found (63.21%) mandibular teeth impacted (36.79%) maxillary teeth impaction.

However, the incidence among Hawler population is contrary to the study of Kruger who stated that the incidence of third molar impactions were higher in maxilla (62.57%) than the mandible (37.44%) [10].

The incidence of congenital absence of third molars in Hawler population was found to be (6.4%) in 1150 cases of Hawler population this finding was nearly similar to that observed by Sandhu and Kapila who found (5.78%) in 79 cases.

Although in the study it was found that type of food and it's nature has significant effect on impaction this could be explained that the people of Hawler Governorate are differ in habit of food and differ in life style which was discovered after data were collected.

It was found that impacted third molars has significant relation with T.M.J. dysfunction symptoms this is in agreement to the fact that T.M.J. dysfunction symptoms could be caused by impacted wisdom tooth[5] .

The interesting finding of this study was the significant effect between chewing gum and singing and impaction could be explained that due to these acts on the jaw movement and as a result of continuous jaw movement growth of the mandible is enhanced by apposition growth according to the study by Summers [11] have supposed that normal growth of the mandible is in response to growth of the tongue and masticatory muscles. It has supposed that the mandible grows by cartilaginous, periosteal and endosteal growth. Two areas of cartilage exist. One at the mandibular symphysis and the other forming a cap on the head of each mandibular condyle[12].

The fact that incidence of impactions were found to be more in the same family is expected due to the fact that the child inherit from his parents the size of jaw according to Moss's theory stated that the bone have an inherited potential to achieve their predetermined size and forms [9] .

Crowding of anterior teeth is also expected due to the fact that wisdom teeth tend to erupt with out adequate space will push the mesial teeth anteriorly [13]

Finally no significant relation was found between impaction and emotional stress and fatigue this is in agreement with the study of Siling that also found no relation between impaction wisdom teeth and emotional stress and fatigue[8].

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Table (1) Age Distribution of Hawler young population examined.

Age Group (years)	Total No.	Congenitally Missing third Molars	Impacted Third Molars	Normally erupted Third molars
17-20	490	22(4.5%)	212(43.3%)	256(52.2%)
21-25	562	42(7.5%)	269(47.9%)	251(44.6%)
26-30	98	9(9.2%)	23(23.5%)	66(67.3%)
Total	1150	73(6.4%)	504(43.8%)	573(49.8%)

Chi square: 26.04 p=0.00003

Table (2) Distribution of the sample by sex and impaction.

	Male	Female	Total
Normal eruption	263 50.87%	310 48.97%	573 49.82%
Impaction	254 49.12%	323 51.02%	577 50.17%
Total	517	633	1150

Chi square:0.408 no significant p=0.522

Table (3) Distribution of the sample by jaw and impaction .

	Maxilla	Mandible	Total
Normal eruption	315 (60.57%)	258 (40.95%)	573 (49.82%)
Impaction	205 (39.42%)	372 (59.04%)	577 50.17%
Total	520	630	1150

Chi square:43.88 p=0.0000

Table(4) Distribution of the sample by chewing gum and impaction .

	people not Liking chewing gum	people Liking chewing gum	Total
Normal eruption	259 (44.5%)	314 (55.28%)	573 49.82%
Impaction	323 (55.49%)	254 (44.71%)	577 50.17%
Total	582	568	1150

Chi – Square:.13.36 p=0.0002

Table(5) Distribution of the sample by habit of singing and impaction .

	people having No singing habit	People having singing habit	Total
Normal eruption	372 (54.38%)	201 (43.13%)	573 49.82%
Impaction	312 (45.61%)	265 (56.86%)	577 50.17%
Total	684	466	1150

Chi – Square: 14.04 p=0.0001

Table (6) Distribution of the sample by Family History and impaction .

	Students having No family history	Students having family history	Total
Normal eruption	432(52.81%)	141(42.46%)	573 49.82%
Impaction	386((47.18%)	191(57.53%)	577 50.17%
Total	818	332	1150

Chi – Square : 10.1 p= 0.001

Table (7) Distribution of the sample by crowding of anterior teeth and impaction

	Students without Crowding anterior teeth	Students with Crowding anterior teeth	Total
Normal eruption	399(51.95%)	174(45.54%)	573 49.82%
Impaction	369(48.04%)	208(54.45%)	577 50.17%
Total	768	382	1150

Chi square: 4.18 p= 0.04

Table(8) Distribution of the sample by type of diet and impaction .

	Students liking soft diet	Students liking hard diet	Students liking hard&Soft diet	Total
Normal eruption	247(38.83%)	188(66.9%)	138(59.22%)	573 49.82%
Impaction	389(61.16%)	93(33.09%)	95(40.77%)	577 50.17%
Total	636	281	233	1150

Chi square: 71.74 p=0.000000

Table (9) Distribution of the sample by T.M.J dysfunction symptoms and impaction.

	Students without TMJ dysfunction Symptoms	Students with dysfunction Symptoms	Total
Normal eruption	486(51.26%)	87(43.06%)	573 49.82%
Impaction	462(48.73%)	115(56.93%)	577 50.17%
Total	948	202	1150

Chi square:4.47 p=0.034

Table (10) Distribution of the sample by emotional stress and impaction .

	Students without Emotional stress	Students with Emotional stress	Total
Normal eruption	508(50.95%)	65(42.48%)	573 49.82%
Impaction	489(49.04%)	88(57.51%)	577 50.17%
Total	997	153	1150 100. 00%

Chi square: 3.81 p=0.051

Table (11) Distribution of the sample by fatigue and impaction .

	Students without Fatigue	Students with Fatigue	Total
Normal eruption	497(50.45%)	76(46.06%)	573 49.82%
Impaction	488(49.54%)	89(53.93%)	577 50.17%
Total	985	165	1150

Chi square: 1.09 p=0.295

Appendix A

Hawler Medical University
College of Dentistry
Questioner forma

1.Subject history:
A.name of patient
B.age
C.gender
D.family history of impaction: Yes -No
E.habits
-chewing gum: Yes No
-singing: Yes No
- type of diet: soft hard soft & hard
-fatigue: Yes No
2-Clinical examination
A.intra oral examination
-crowding of anterior teeth: Yes No
B.T.M.J problems: Yes No
3.Radiographic examination-
- OPG findings
- congenital missing third molor