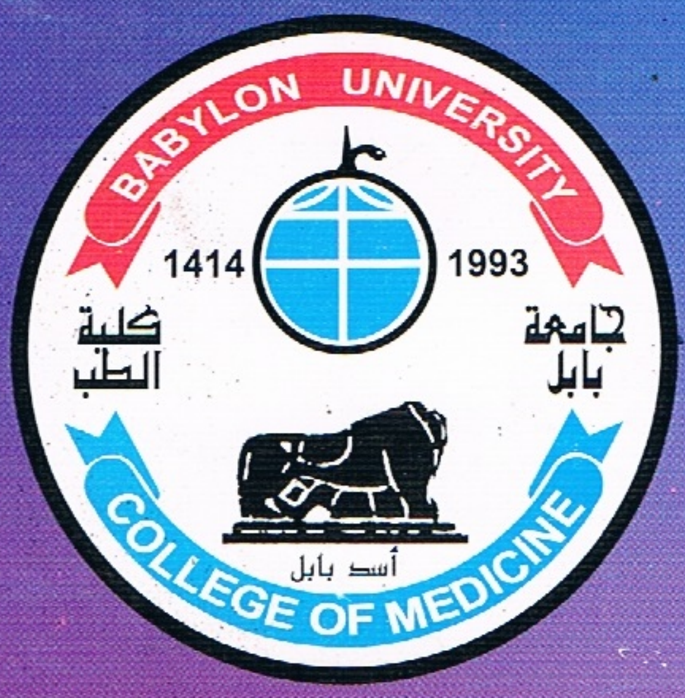
Ministry of Higher Education
& Scientific Research
University of Babylon
College of Medicine

ISSN:1812-156X



مجلة بابل الطبية

Medical Journal of Babylon

(M J B)

Volume: Five Number: two 2008

IRAQ - Babil - Babylon University - College of Medicine
P.O. box (473) E-mail: bab_med@hotmail.com

Evaluation of Dental Caries and Diagnosis types in Mixdention:
(In Vivo Study)

Ameer H.AL.Amiedy

Abstract

Dental cares is epidemic modern disease, patients in mix-dention stage age (6-11) years old and this cause difficulty to continue their normal life, eating, social behavior and the higher cost in there treatment, we collect (221) child there age between (6-11) years old in Hilla town, random sample selection, our examination applied to this samples according to (MOH) roles and after teeth perishing and bit wing radiograph technical for diagnosis together with clinical examination, also we applied case sheet for each sample for statistic purpose. According to this study the samples had (41.7%) caries teeth within age (6-11) years old had seen with the condition of this study and Clinical examination about(58.3%) highly sensitive and effective in diagnosis of teeth cavitations decay stage in correlation with radiographic examination which is about (57%) effective in getting early diagnosis of initial teeth decay and the extension of the decay within tooth tissue and its relation to the tooth tissue changes.

الخلاصة

تسوس الأسنان هو مرض عصري وباني يصيب المرضى ذوي الأسنان اللبنية والدائمة ضمن الفئة العمرية من 6 إلى 11 سنة ووجود السوس ضمن هذه الفئة العمرية تؤدي لهم الكثير من المشاكل الجانبية المصاحبة للسوس مثل استمرارية حياتهم بشكل غير طبيعي والآثار النفسية ومشاكل في الأكل وتؤثر في سلوكهم اليومي إضافة إلى ازدياد التكلفة المالية من اجل علاجهم.أعدت الدراسة ضمن سياقات الصحة العالمية لوضع استمارات الدراسة والإحصائية إل 221 طفل اختير بشكل عشوائي ضمن مدينة الحلة واختير الفحص العيادي والفحص ألشعاعي للأسنان ووجد ضمن ظروف الدراسة بان نسبة الأسنان المصابة (41.7%) وكما وجدت الدراسة باستخدام الفحص العيادي فقط هو حساس وبنسبة (58.3%) في تشخيص السوس في مراحله المتأخرة واعتماد الفحص والتشخيص بواسطة الأشعة السنية فقط وجد نسبة الدقة والحساسية في التشخيص السوس بنسبة (57%)في مراحله الابتدائية بالمقارنة مع التغيرات التي قد تحدث ضمن أنسجة السن.

Introduction:

Dental caries is epidemic modern disease, we directed our project to study in patient in mix-dention stage age (6-11) years old and this cause difficulty to continue their normal life, eating, social behavior and the higher cost in there treatment, in Iraq there are higher incidences for dental caries level in all childhood under 12years. Decay experience in a community is measured by evaluating the total effects of the carious process (past and present) up to the time of the examination. It is measured in terms of Decayed .Missing, or Filling Teeth or Surface, i.e. DMFT or DMFS .for permanent teeth capital letters are used while small letters are used for the primary dentition. These definitions (1) serve as reference for the following material. Epidemiological surveys indicate that the dental needs of young children are high. The results are presented by age groups. Before

any treatment is preformed, a thorough examination including appropriate radiograph is necessary to obtain diagnostic records. Also included should be a medical, familial and dental history, an assessment of the child's cooperative ability, the occlusion, and the oral home care. From the epidemiological surveys the clinician should direct particular attention to those areas which are commonly decayed in the respective age groups.

Aim of the study

1-Evaluation of dental cares in the mix-dent ion age.

2-compareseme between different diagnose tool of the dental cares.

Material and Method

Case of study collection: we collect (221) child there age between (6-11) years old in Hilla town, random sample selection, our examination applied to this samples according to (MOH) roles and after teeth perishing and bit wing radiograph technical for diagnosis together with clinical examination, also we applied case sheet for each sample for statistic purpose, and than take the stander deviation to the number of deciduce and permanent cares and filled tooth, with the number permanent teeth within the mouth sample as in table (1).

Discussion

Since the location and diagnosis of individual lesion are discussed in subsequent chapters, an outline only will be given here.Occlusal lesions in primary molars are more common than inter-proximal lesion in pre-school children (2). In these young children posterior contacts may not close until age 3 years, which may explain this observation: however, once posterior contacts close, the prevalence of inter-proximal lesions will increase. Second primary molars have more occlusal lesion than first primary molars, likewise the mandibular molars have more than the maxillary because of the depth and anatomy of the occlusal fissures. The labial and lingual surfaces of primary teeth seldom decay, except in the nursing bottle mouth syndrome. Mandibular primary incisors seldom decay, probably because of the spacing that occurs in the area and their close proximity to the duct of salivary sub-mandibular salivary gland, which means that they benefit from the diluting and buffering properties of saliva. The newly erupted first permanent molars and permanent incisors have morphologic areas which are susceptible to plaque retention and subsequent development of caries. These are the occlusal surface in

permanent molars, the lingual development pit and groove in mandibular permanent molars, and lingual pits in maxillary permanent incisors, notably the lateral incisor. Probably because of the depth and inclination of the occlusal fissure, the mandibular permanent molars decay more frequently than maxillary molars. In addition to these susceptible areas, the closing of posterior contacts will result in the development of class two lesions. A t age seven years, there will be more molar inter-proximal lesions than occlusal lesions; this prevalence is reversed at age nine years (2).

For discus dental caries areas there are two reasons for this:

A-More permanent molars will exhibit occlusal decay at age nine, and secondly, some primary molars will be exfoliated to reduce the prevalence of posterior inter-proximal lesion. In the mixed-dention the mesial surface of the first permanent molar is placed at risk if dental caries affects.

B- Primary molar. Also, the inter-proximal surface of maxillary incisors may be at risk in those children with closed anterior contacts and a high dental caries incidence.

The need for bite-wing radiographs to diagnose inter-proximal lesions cannot be overermphasized: Heennon et al. (1969) observed that 75%of these Class two lesions would be undiagnosed without bite-wing radiograph (3). When considering inter-proximal lesion in primary molars, the clinician must remember that the distance between external enamel surface and pulp is smaller in primary than permanent teeth .A Class two lesion into dentine on one primary molar surface is often accompanied by enamel decalcification on the adjacent primary tooth; such decalcifications, or radiograph etches of enamel, frequently exhibit histological carious penetration to the dentine(4).The presence of inter-proximal molar lesions in one quadrant should encourage the clinician to look critically for similar lesions in other quadrants (5).Even if they are not present, it is not uncommon for such lesions to become apparent clinically within a year if a truly effective preventive programmer is not implemented. When deciding on the need to restore incipient lesions, the clinician should assess the child's caries incidence (from previous

dental care), the snticipated response to preventive care, and the regularity of dental visits.

Analysis of these bite-wing radiographs are taken compared to the examination. I believe that many inter-proximal lesions therefore remain undiagnosed and that the real (dmft and DMFT indexes) would be higher than those reported in these publications .However, it can be said certainty that 75 % of the school-age children will exhibit dental caries, although this figure may indeed be closer to 100 per cent in un fluoridated communities (6),while according to this study we have 58.3% non caries teeth while 41.7%decay teeth within age (6-11) years old in Hilla town as see with condition of this study as seen in diagram number (4) .

Table (3) and Diagram (2-3-4-5) relation between clinical and radiographic dental decay diagnosis. as we can say that the correlation obtain in numbers of deep and cavitations decay during clinical examination(100+262),while the value of teeth number in radiographic examination (61+100)of this examine samples. So the clinical examination is more accurate and sensitive than radiographic examination. During clinical teeth cavitations decay examination in table number (4) the result was this study fined more sensitive than radiographic examination in diagnosis the distractive teeth decay.

From Table (4) the radiological view for all clinical stages in mixdention teeth and Table (3) and when we correlated between this tables and with exclude the normal diagnostic teeth (we use only clinical diagnose decay teeth only with radiographic diagnose normal and teeth decay), we found radiographic diagnose in early and initial dental decay is more perfect and sensitive. And diagram (4-5) we can conclude the perfect and effectiveness of the radiographic examination in diagnosis of the teeth decay than clinical examination especially initial teeth decay in relation to these diagrams and the table.

Conclusions

1-According to this study the samples had (58.3%) non caries teeth while (41.7%) caries teeth within age (6-11) years old had seen with the condition of this study.

2-Clinical examination helped in diagnosis of teeth cavitations decay

stage in correlation with radiographic examination which is more effective and sensitive in getting early diagnosis of initial teeth decay and the extension of the decay within tooth tissue and its relation to the tooth tissue changes than the clinical examination in early stage or initial dental decay.

References

1- Holloway P.J. Swallow J.N. And Slack G.L. (1969) Deciduous teeth and future caries experience. Child Dental Health. Bristal, John wright, P182. (2ed ed .1975. by Hollway P.J and Swallow J.N., P198).

2- Parfitt G.J (1956).Condition influencing the incidence of occlusal and interstitial caries in children. J.Dent.Child.23.31.

3- Heennon D.K.,Stookey G.K.and Muhler J.C(1969).Prevalence and distribution of dental caries in pre-school children . J.Am.Dent.Assoc.79.1405.

4- Dwyer D.M.,Berman D.S. and Silverstone L.M.1973. Asudy of approximal carious lesion in primary molar. J.Int.Assoc.Dent.Child.4, 41.

5- McDonald R.E. 1974.Dentistry for the child and Adolescent .2nd.ed.St.Louis, C.V.Mosby, chapters 1and2.

6-Kennedy D.B (1979).Pediatrics operative Dentistry, 2nd.ed.pag 5-10 .Bristal,the Dorset press, Dorchester.