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Chilean Section
II Annual Meeting
June 30 and July 1, 1989
Valparaiso, Chile

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- 1 CANINES REPRESENTATION IN THE CEREBELLAR VERMIS OF CATS.
Palazzi, C. and Adrián, H. Department of Physiology and Biophysics, Faculty of Medicine, University of Chile.

Coordination of muscular activity is a major function of the cerebellum. Chewing, swallowing, phonation and suckling are partially coordinated and controlled by the cerebellum. In order to perform these functions the cerebellum must have a great amount of information from the receptors of the stomatognathic system, and among these receptors are the periodontal ones. As far as we know little is known about their functional projection to the cerebellum.

Twelve cats anesthetized intraperitoneally with alpha-chloralose were used. The vermis of the cerebellum was surgically exposed. The four canines were stimulated by touching them in bucco-palatine and palato-buccal direction for the superior ones, and linguo-buccal and bucco-lingual for the inferior ones. Evoked potentials were recorded with a fifty micron tip stainless steel electrode.

Twenty evoked potentials recorded from each point explored, were amplified, displayed in an oscilloscope and averaged in a LINC computer. Latencies and amplitudes were measured.

Averaged potentials were recorded from the surface of lobule VIII where groups of neurones respond to the movement of a particular canine showing a specific response to the direction of the applied stimulus.

In summary in the surface of the vermis of the cerebellum there is a representation of the periodontal receptors of each canine; there is a topical projection for the direction in which the canines are stimulated and there is a larger projection of the upper canines.

- 3 Actinic cheilitis in artisan fishermen of Valparaíso (Chile): its prevalence and histopathological aspects. S. NICOLINI, C. ASCORRA, C. GUZMAN, A.V. LATIFE (Dept. Oral Surgery and Oral Pathology, Faculty of Dentistry, Univ. of Valparaíso, CHILE):
- The actinic cheilitis is a precancerous condition resulting from the chronic exposure to sunlight that is almost exclusively seen in the lower vermilion border. It is most commonly observed in people with outdoor occupations, like farmers, sailors and fishermen. The purpose of this investigation was to study the occurrence, degree of severity and histopathology of this lesion in a sample of 566 artisan fishermen of Valparaíso. The condition was found in 43% of the sample, being the degree of severity 8% for the acute expression and 35% for the chronic type of the disease. The patients between 16 and 45 years old was the group most severely involved and a direct relationship between the number of years to sun exposure and the severity of the vermilion alterations was found. The prone complexion was the fair one, a finding similar to the data reported in the literature. The prominent histological features of the lesion were a marked basophilic degeneration in the connective tissue, a chronic inflammatory infiltrate arranged in a diffuse or perivascular pattern and an endothelial hyperplasia. The striking features of the epithelial surface was a marked parakeratosis and the presence of epithelial dysplasia, which was identified in 16% of the samples. This last finding reinforces the precancerous character of this lesion and calls for the adoption of adequate preventive measures in this high risk group of patients.

- 5 CONTRIBUTION TO HUMAN MECKEL'S CARTILAGE STUDY.
Paredes E, Montenegro MA. Dpt. Exp. Morphology. Medical and Dental Schools, Univ. of Chile.

Meckel's cartilage (MC) role in human embryogenesis has been contradictory throughout time, and its dynamic study is only held in laboratory animals specially rats and mice.

To describe possible differences in the MC's evolution between laboratory animals and human and its relation to neighbour structures, this morphological study has made in 25 human fetuses.

Histological techniques for microscopic study in some specimens and transpermentation and staining with Alcian blue and/or Alizarine for macroscopic study in some other specimens were made, covering different embryological states from 6 weeks to 6.5 months of gestation.

MC reaches maximum development between 8 and 10 weeks. Both MC's anterior region stay separated not constituting the rostral process described in animals. MC's incisors and canine zones suffers ossification getting involved with mandible bone. An independent and isolate cartilage appears in symphysis between months 4 and 6, not suffering ossification. From 3.5 months of gestation, MC suffer involution at the time temporo-maxillary joint consolidates. Involution process consist on a slow diminishing of cartilage diameter and alteration of histological characteristics. At 6.5 months, cartilage still persist, but just as a thin fibrous cord.

Human MC present a particular and characteristic morphological pattern and it's different from other studied animals.

Supported by FONDECYT-CHILE grant 0801-89

- 7 HIGH INCIDENCE OF CLEFT LIP OR CLEFT PALATE IN THE JUAN NOE HOSPITAL OF ARIKA, CHILE.
Palomino H, Beltrán R and Montenegro MA. Faculty of Medicine, Univ. of Chile and Hospital Juan Noe, Arika.

High rates of cleft lip and/or cleft palate have been reported in Santiago, Chile ($\pm 1.6 \times 1000$ liveborns), therefore Chile can be considered among high risk countries in this respect.

To determine the existence of different areas of susceptibility or temporary variations and to evaluate their causes, we have registered the clefting rate incidence among the liveborns of the Juan Noe Hospital from Arika, during 8 years (from 1978 to 1981 and from 1984 to 1987).

Over 25582 liveborns, a rate of 2.03 x 1000 (1 cleft by 492 liveborns) was found, without differences between both periods. The rate for cleft lip with or without cleft palate was 1.486, and for isolate cleft palate was 0.547. These rates are the highest ones registered in Chile, being then Arika a high susceptibility area. Greater indigeneity, altitude or water trace elements could explain this higher rates. An important segment of the population comes from the highlands or rural areas to Arika maternity, where the indigenous component is high. The water contains diferent metallic elements over the normal standards. The high incidence of isolated cleft palate, is what principally explains the differences observed with the rates reported in Santiago.

Supported by FONDECYT-CHILE GRANT 0801-89

- 2 Lysozyme and IgAs as molecular markers in incipient periodontal disease. M.F. CATALAN (*), N. ADRIAZOLA (**), (**Dept. of Periodontics, Faculty of Dentistry; (***)Dept. of Bioquimistry, Faculty of Medicine, Univ. of Valparaíso, CHILE):

Searching for molecular markers that could be useful for the precocious diagnosis of incipient periodontal disease, the concentrations of lysozyme and IgAs were determined in the saliva of 89 patients affected with this lesion and in 29 volunteers with healthy gums. The patients were grouped according to the degree of inflammation in: minor, intermediate or mayor intensity. The quantitative analysis of salival lysozyme was accomplished by means of the Smolelis and Hartsell's modified turbidimetric method (1970) and the one for IgAs, employing the Mancini's Radial Immunodiffusion technique (1964), modified by Fahey et al (1965). The results of this study showed statistical significant differences in the lysozyme concentration of the volunteers and that of the group affected with inflammation of mayor intensity. The direct relationship found between the degree of inflammation and the concentration of lysozyme in saliva, suggests that this enzyme could be a suitable molecular marker for the precocious diagnosis of incipient periodontal disease.

- 4 IgM Quantification in Grevicular Fluid (CF) and in the Protective Periodontium (PP) as Indicative of the Pathology or Evolution of Chronic Periodontal Disease (CPD). Mery, C.; de la Sotta, R.; Pizzi, T. and Plaza, J.C. (Univ. of Chile, Schools of Dent. and Medic. Santiago, Chile).

The presence of IgM in CF and PP in CPD is an established fact. In 7 patients with CPD the concentrations of Ig A and Ig G in CF were assessed by Mancini's radial immunodiffusion test. In gingival biopsies of 10 patients with CPD, counts were made of plasma cells displaying immunoglobulins (PDI) Ig M, Ig A and Ig G in PP by mean of a cuadrilaterated ruled microscopic ocular, and using immunoperoxidase avidin - biotin technic. A clear rise was found in the Igs levels in the CF and the number of PDI in PP in patients with CPD was established. As compared with normals, the CF from patients showed a clear increase from 1.2 to 11.5 mgrs% of Ig M; from 6.9 to 15.1 of Ig A and from 40.5 to 65.5 of Ig G. The percentages of PDI in the patients were of 3.2% for Ig M; 38.4 for Ig A and 52.6 for Ig G. The large increase in Ig M levels in the CF and small percentage of PDI of the same class in PP, suggests that Ig M present in the CF of the patients has a primarily systemic origin. Contrarily, Ig A and Ig G are probably produced chiefly in the PP. Considering the high molecular weight of Ig M and its preferent intravascular ubiquity the rise in the CF of patients with CPD should be the result of the increased vascular permeability, due to the inflammatory process. Therefore, this parameter may prove to be useful for assessing the pathology and evolution of CPD.

Supported by Fondecyt and Duralon.

- 6 CINEFLUOROGRAPHIC ANALYSIS OF EXTRAPRANAL SWALLOWING IN CHILD.
Zúñiga, A. Department of Physiology and Functional Anatomy of Stomatognathic apparatus. René Descartes University, Paris V.

Department of Comparative Anatomy of the National Museum of Natural History, Paris, France.

We analyzed the phases of extrapranial swallowing proceeding the esophagus stage in 7 children randomly selected between 5 and 12 years old. Cinefluorographic register were conducted at a velocity of 60 frames per second. The pathway described for 6 references points was analyzed and the cranean, mandibles and hyoidael velocities and accelerations were calculated. The movements and deformations of swollen or elastic organs (soft palate, tongue, posterior wall of the pharynx and esoglottis) were also described.

The cinefluorographic and kinetic analysis permit us to admit the active role of the cranium and muscles of the nape of the neck in deglutition (cervix-cephalic extension's movement). Furthermore, the mandible's and tongue's kinetics are relatively independent one of each other. Finally, the oral and pharynx phases are not temporally consecutive, but they are partially mixed; and this occurs during a short interval called isthmus phase.

- 8 ETHNICITY, SOCIOECONOMICAL LEVEL AND FACIAL CLEFTING SUSCEPTIBILITY
Palomino HM, Cauvi D. and Palomino H. Medical and Dental Schools, University of Chile.

Chile, especially Santiago, its capital, has very heterogeneous population groups from etnical, socio-cultural and geografic points of view. In the private health system concur the people of the better socioeconomical level and these private health centers have different ABO and Rh blood groups frequencies than the population that is attended in public health system.

To establish the socioeconomical and etnical factors in the facial clefting incidence, the rates of clefting liveborns of 3 private maternities of Santiago was registered to compare with 2 public hospital rates of clefting.

An indigenicity index was calculated, based on ABO and Rh blood groups and socioeconomical levels of each one of the hospital population.

A high correlation was found between these 3 parameters. The maternities with the higher socioeconomical level population (I - II) have 11.7% of amerindian genes and clefting rate of 0.72 x 1000. The hospitals with lowest socioeconomical level population (IV - V) have 46.7% of amerindian genes and a facial clefting rate of 1.45 x 1000.

The facial clefting rates found in the private clinics of higher socioeconomical levels are even lower than the european or U.S. registers for caucasian populations, suggesting an important socio-cultural factor involved in this lower incidence.

SUPPORTED BY GRANT 0801-89 FONDECYT, CHILE.

9 DENTAL TREATMENT REQUESTED BY SCHOOLCHILDREN IN SANTIAGO. Fernández, B., López, N.J., Cumsille, F. (SS. Metropolitano Oriente, U.de Chile). A survey was done using the WHO's method to determine the demands for dental treatment in schoolchildren in Santiago. A stratified random sample of 2,449 schoolchildren with an age range of 6 to 18 years was used. 54.5 % of the schoolchildren received some type of DT during the last 12 months. 81 % of the children from the upper class, the 52 % of the children from the middle class, and 48 % of the children from the lower class, received DT. ($p < 0.0001$). The DT more frequently requested were as follows: restorative dentistry, relief of pain, and check up. 42 % of the females requested treatment because of caries and 25.5 % for relief of dental pain. 35.4 % of the males requested treatment because of caries and 31.3 % for relief of dental pain. In the 6 year-old group the most frequent reason for requesting DT was dental pain, and the percentage of children that demanded treatment because of pain, increased with age. The most frequent reason for demanding DT in middle class children (43 %) and in upper class children (37.5 %) was caries. Relief of pain was the main reason for requesting DT in lower class children. ($p < 0.0001$). The most frequent reasons for not demanding DT were as follows: no having dental problems (29.9 %), unknown reasons (29.4 %), lack of interest (17.8 %), and lack of money (11.4 %). There were significant differences between sexes, age and socioeconomic status. Fear, as a reason for not demanding DT, was most frequent in females. Lack of money and not having interest were more frequent in middle and lower classes. The lowest demand for DT was associated to lower and middle classes, in which the prevalence of dental diseases is higher.

10 EFFECTS OF WATER FLUORIDATION DURING PREGNANCY AND BIRTHS. Gómez, S.; Weber, A. and Medina, H. Preventive Dentistry - University of Valparaíso. There are arguments about possible correlations between water fluoridation and pregnancy and or births defects. The purpose of this study was to establish any statistical significance between ten medical parameters in births occurred before and during water fluoridation in Valparaíso, Chile. A review was performed of 2,405 controlled pregnancy and births occurred in the Naval Hospital of Valparaíso during both periods. The results were analysed statistically by mean significance test ($\alpha = 0.05$). Data analyses indicated no statistical significance in any of the medical parameters, as follows: (1) No difference was established between normal births percentages (gestational age) and prematures, spontaneous or cesarean percentages. (2) In contrary to other studies, no difference were determined between births weight mean and births length mean, by sexes, before and after fluoridation. (3) Finally, no congenital malformations (Down's syndrome, intraventricular septal defects and cleft lips) were associated with fluoridated water.

11 in vitro evaluation of the Mc Spadden obturation technique. G. ZAMORA, E. SANTAMARÍA (Faculty of Dentistry, Univ. of Valparaíso, CHILE): The aim of this study was to compare the radiographical quality of the root obturation between the Mc Spadden technique and the lateral condensation. The parameters evaluated were: homogeneity of the gutta percha mass, fitting to the walls of the root canal and apical adjustment. Thirty extracted human teeth with straight and curved roots were submitted to biomechanical preparation and after, twenty of them were obturated by means of both techniques. The others, were obturated using a main cone disadjusted in length or in width, to evaluate the condensing ability of the instrument over the gutta percha. The specimens were radiographically evaluated in lateral and anteroposterior views. The analysis of the parameters in study showed that: 1.- The Mc Spadden technique offers better results than the lateral condensation and, 2.- the thermo condenser instrument has an adaptive property of the plastic gutta percha to the walls of the root canal.

12 Root canal preparation with a sonic system. G. ZAMORA, F. VERGARA. (Faculty of Dentistry, University of Valparaíso, CHILE): The use of the sonic energy in the root canals preparation has been recommended. In order to evaluate the ability of a sonic system (Endostar 5) in getting a good reaming, removing of detritus, making a good biomechanical instrumentation and the work time employed, fifty extracted human teeth (anterior and bicuspids) with straight roots, without caries, restorations neither fractures, were evaluated. Twenty five teeth were instrumented with the sonic system and the remainders with the manual conventional instrumentation. Once accomplished, the teeth were longitudinally sectioned, and then observed through a stereoscopic microscope M-5 with a 25 magnification. The examiners did not know which technique was employed on each specimen. Each root was divided in thirds in order to be evaluated separately. In the comparative analysis of the results, the sonic system demonstrate to be lightly superior, even though no statistical significant differences with the conventional manual instrumentation was found.

13 Odontometric in Diaguitas indian skulls. C. CAMPUSANO, B. LAZO. (Department of Biology, Faculty of Medicine, University of Valparaíso, CHILE): Through odontometrics it is possible to detect numerous morphological traits that can be studied and which permit the characterization of populations, recognize their "genetic flow" and provide knowledge of their microevolution. More so, odontometric can be carried out in present populations and also in archaeological remains. Studies on Chilean primitive populations showed that these populations were composed by various indigenous groups, one of which are the Diaguitas, whose territory extended from the Copiapo river to the Choapa river. Little is known of their origin but it is believed that they remained isolated for about 500 years between the VIII and XIII century, later being conquered by the Incas and finally by the Spanish. In the present paper 9 skulls were studied from an indigenous cemetery discovered in July 1985, on the farm # 24 of Peñuelas, Coquimbo, Chile. The mesiodistal diameter were measured in the first and second superior and inferior molars. The purpose of this measurements were to contribute to the knowledge of human microevolution. The average values found were the following: superior molars: M1=10.36; M2=10.10; inferior molars: M1=11.05; M2=11.26. These values contribute to increase and clarify the present information in respect to this group of natives.

14 Evaluation of two techniques for removing needles from Carpule syringes. M. HERNÁNDEZ (Dept of Oral Surgery, Faculty of Dentistry, Univ. of Valparaíso, CHILE): The recommendation for the prevention of accidents from puncture of needles, consists in avoiding the recapping technique (RT), since it is in these moments when most accidents occur. Being the needle and the Carpule syringe structurally different for others and since the odontological staff receives instructions on fine psychomotricity, our working hypothesis was: in the removal of needles from the Carpule syringe, the use of RT beings more security than the clamps technique (CT). The students of the fourth grade attending to Surgery in our Faculty, were grouped in G1=12 and G2=11. G1 was instructed to employ only the RT and G2, only the CT during one month; they also had to register the number of accidents in this period. After this time, the students were interviewed. A total of 321 techniques were performed (RT=189; CT=132). There were 2 accidents in G1 and 0 accidents in G2 ($p=0.3459$). The 95.24% found CT harder and 4.76% found no trouble in any of them. The 77.43% found more dangerous CT, 14.29% found more dangerous RT and 14.29% found both techniques dangerous. Though there were no significative differences and the amount of accidents, the operator feels insecure and finds CT harder than the RT. The number of accidents seems to be independent from the used technique ($p>0.05$). It seems advisable to recommend the RT for disarming the Carpule syringes and to continue this study for a longer period, so as to get more valid conclusions.

15 Electrochemical Behavior of Cu-Al Alloys. E. ORELLANA, C. RICHTER (*); J. BASUALTO and C. BARCELO (**). (Dept. of Biomaterials, Faculty of Dentistry, Univ. of Valparaíso. ** Dept. of Materials Science, Univ. of Federico Santa María, CHILE): Based on metallurgical characteristics and market analysis, Cu-Al alloys have been qualified as a good low-cost alternative for dental restorations. Their corrosion resistance is the main requirement that has to be met. In order to analyze the electrochemical behavior of these alloys, anodic polarization curves were traced, taking Ag-Pd and Cu-Zn as comparative or control alloys. Artificial saliva (Fusayama modified) was used as electrolyte. The Tacussel equipment was employed. In order to compare kinetic and electrochemical behavior, the galvanic serie of the alloys under evaluation and the corresponding kinetic parameter i_{ap} (critical current density) are shown in the following table:

Alloy	Order	E_0 (V/ECS)	i_{ap} (mA/cm ²)
A: Ag-Pd, (EUL-GOLD G, RFA)	1	+ 0.011	0.16
B: Cu-Al, (NPG, USA)	2	- 0.024	11.10
C: Cu-Al, (IDEALLOY, Brasil)	3	- 0.027	12.90
D: Cu-Al, (GOLDCAST, USA)	4	- 0.029	13.10
E: Cu-Al, (ORCAST, Argentina)	5	- 0.030	15.40
F: Cu-Zn, (ORDEN, Japan)	6	- 0.226	-----

This results are indicative of significant differences in the electrochemical behavior among these alloys. The sample A has the behavior of a noble alloy. All Cu-Al alloys, samples B to F, show similar behavior among them. However, sample F has a more negative behavior than the former Cu-Al alloys. Finally, sample G shows a very negative behavior, with permanent corrosion signs, indicative of incompatibility with clinical use.

16 Influence of fixed and postural head position in cephalometric analysis for orthognatic surgery. E. VALENCIA, P. BORZONE, D. CASANOVA. (Faculties of Dentistry and Medicine, Univ. of Valparaíso, CHILE): Cephalometric analysis is an important tool in the diagnosis, prognosis, follow up and communication for the maxillofacial surgeon and the orthodontist while treating dentomaxillofacial deformities. Most of the cephalometric analysis are based on standardized head films with the head fixed in a standard position, but some recommend the use of a postural position. In a project where we study different problems of the cephalometric analysis related to surgery, a study was designed to evaluate the differences between the one made on a head film taken in a postural position compared with another in a fixed position. Twenty five orthognatic adults were submitted to two head films taken one with the head on the fixed and another in the postural position. Tracings were made and 43 different parameters were analyzed: 25 for hard tissues, 13 for soft tissues, and 5 for cervical column. We concluded that there are not clinical or statistical significant differences between the values obtained. We also compared the north american standards with a latin american sample, and the reliability of the postural head position. This project was financed by the Research Division of the University of Valparaíso: U.V. 8-86-A.

17 IgG, complement (C') and lactoperoxidase (LPO) as molecular markers in incipient periodontal disease. M.F. CATALAN, N. ADRIAZOLA (Dept. of Periodontics and Dept. of Biochemistry, Faculties of Dentistry and Medicine, Univ. of Valparaíso, CHILE):
IgG, C' and LPO concentrations and the activity of this enzyme were determined in the saliva of 96 patients classified according to the degree of gingival inflammation, sex and age. IgG and C' were isolated from normal human serum with the procedure of saline precipitation and adsorption to Zymosan, respectively. With the isolated proteins and a standard LPO, an antiserum against IgG, C' and LPO was obtained. The RDI assay was employed to quantify IgG, C' and LPO and an adapted spectrophotometric technique to evaluate the LPO's enzymatic activity. A salivary biochemistry profile was accomplished in each patient. By means of the cluster analysis and taking in account the clinical variables, the results obtained showed statistically significant differences between the profiles classified as healthy and those with higher degree of inflammation, for both sexes. This results suggest that IgG could be a good molecular marker in incipient periodontal disease

18 ULTRASTRUCTURAL STUDY OF THE DENTAL CUTICLE IN TEETH WITH PREPUBERTAL PERIODONTITIS.
N.J. López and N. Sabag (Univ. de Chile) Grant FONDECYT 89-0837 .

A study of the ultrastructure of the dental cuticle in 3 teeth extracted from 3 children (siblings) with generalized prepubertal periodontitis (PP) was performed. The 3 teeth were processed for electron microscopy as previously described. A dental cuticle in the dentoepithelial interface and covering all the exposed cementum, thicker than the one described in healthy teeth was found. The cuticle was laminar and made up of an electrodense, finely granular and homogenous material in the dentoepithelial interface as well as in the root portion close to the bottom of the pocket. The thickness of the cuticle gradually increase from apical until it reached 6 μ m in the coronal end of the junctional epithelium. The epithelial cells attached to the cuticle showed secretory vesicles which poured into the epithelium - cuticle interface, a material which structurally resembled the substance of the cuticle.

Toward the coronal portion of the pocket the cuticle was lobular and its thickness reached 34 μ m. The cuticle covering the exposed cementum had an internal zone that was higher electrodense and thicker than the external one. The results suggest that the cuticle of teeth with PP appears to be a product from secretion of epithelial cells, and as the cuticle become exposed is incremented by the adsorption of proteins from the inflammatory exudate. A coat of protein covering the root surface may modulate the microbial colonization of crevice.

19 PREVALENCE OF JUVENILE PERIODONTITIS IN STUDENTS 14-20 YEARS OLD IN SANTIAGO CHILE. N.J. López, V. Ríos, M.A. Pareja and O. Fernández (Univ of Chile, S. Salud M. Oriente). Grant FONDECYT 89-0837 .
An epidemiological study for determining the prevalence of juvenile periodontitis (JP) was done. A sample of 2595 of a school population with an age range of 14-20 years was used. The sample was stratified according to the age and the socioeconomic level and was compound of 1355 (52.5%) males and 1240 females (47.8%). A two-stage diagnostic procedure was used, whereby subjects were screened initially by assessment of probing depths around the incisors and first molars. A mirror and WHO 621 pattern probe were used for this examination. Any subject with two or more teeth with 5mm scores was invited to attend for a radiographic dental examination. Positive subjects were then diagnosed definitively by full clinical and radiographic examination. 27 subjects had a tentative diagnosis of JP. Of these subjects 10 were male and 17 were female. Eleven of these subjects refuse further examination and were lost of the survey. Five subjects were diagnosed as JP. The age range of these subjects was 15-18 years old. Four subjects had localized JP and one had a generalized form of the disease. Four subjects belonged to poor families and one belonged to a middle socioeconomic family. The prevalence of JP was 0.192% and the female : male ratio was 4:1 .

20 Characteristics of the lateral epithelial limits of the Oral Mucosa squamous cell carcinoma. Gigoux, C., Nicolini, S., Peñafiel, C., Canales, M.L. Instituto de Referencia de Patología Oral, Facultad de Odontología-Universidad de Chile. Facultad de Odontología-Universidad de Valparaíso.

Only two publications have described the maturation of the epithelium adjacent to the squamous cell carcinoma of the oral mucosa (Wright and Shear, 85; Nicolini, 86). The limits between these two areas has not been analysed. Eighty one biopsy specimens were selected, and representative 6 micron sections stained with Hematoxylin and Eosin were studied. The selection criteria was the presence of epithelium beside the invasive lesion. The characteristics of the limits and the differentiation patterns were described. It was found three types of limits: sharp, in which there is a clear cut separation, gradual, in which the epithelium showed increasing changes in its maturation towards the invading epithelium, and, diagonal, in which there is an oblique transformation from the basal cells of the neighbouring epithelium to the surface. It is interesting the analysis of these limits, because of the possibility to relate them with the invasion modalities of the squamous cell carcinoma of the oral mucosa and with some possible inhibitor effects of its growth by the underlying epithelium. It was concluded that there are different types of limits between the invading and the adjacent epithelium.