A Study on the effects of the active pulmonary tuberculosis to the several oral environmental factors.

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ABSTRACT.

The authous had studied the oral environmental changes by salivary salivarypH, amount, periodontal Index in patient with active pulmonary tuberculous patients.

Among the subjects, The experimental group was consisted of 100 patients (50 males and 50 females) of 20~29 years and 100 persons of control group (50 males and females) of 20~29 years.

The measurement of salivary amount was performed with wide mouthed plastic (2 In ches) bottle for avoidance of Ionization of SiO_2 by using of glass bottle and salivary pH was checked by pH meter 27 radiometer Copenhagen. The resuls are as follows:

1. The salivary pH does not appear to be characteristic of tuberculous paticents.
2. The obtained salivary amount indicated no significant to the tuberculous patients ascompared to the obtained supposedely wealthg individuals.
3. The Russel Index was found higher and there had found more periodontal involvement (3 times than normal) in the experimental group.

INTRODUCTION

The paucity of scientific articles on the role of the dentist in detection and the control of the tuberculosis is indicative of the fact that this subject has been neglected in dental literature. In order that practicing dentists may not be attected from dental patients who are in tuberculosis and have essential information on this subject

readily available through this little meager paper. Tuberculosis is an infectious disease caused by several species of mycobacteria. The most common form of tuberculosis in man is a chronic infection of the lungs, but virtually every organ of the body may be involved. The relationship of oral environment in cases of pulmonary tuberculosis is generally considered to be low. Still it is a frequent cause of death; particulary in infants and young adults. It attacks whole of the body. when in skin, causing Lupus Vulgaris, when vertebrae there appears Pott's disease, when Adrenal cortex, it is Addison's disease and Scrofula of lymph node are well known diseases. Because of the paucity of cases in the literature and the lack of information in the standard textbooks, this study of the subject is accomplished very poor amount of cases and a new series of statistical study is aleady reported.

Case Sellection

patiects had pulmonary tuberculosis in duration for months to ten years. Whole of the patients had the diagnosis may within the past 3 months. 100 patients (50 males and 50 Females) were examined ranging in 20~29 years. all of the patients were of the middle or lower socioeconomic class and ever class 5 years or more in the large cities before inwarding.

Method.

1. There had been used specially designed wide mouthed plastic bottle for salivary collection and paraffin wax for chewing for 3 minutes.
2. National survey chart was used for the observation and No.5 mirrors, No.7 and 17 explorers.
3. PH meter 27 Radiometer Copenhagen was used for dietrect pH checking.
4. Normal control growp were consisted of 20 to 29 years of dental patients, dent al and nursing, studants and it were 100 (50 males and 50 females) persons free from tubercul- osis or other systemic diseases.

Results.

1. Salivary PH.

Salivary pH was checked by direct pH meter for the avoidance of Co_2 Ionization and grouped by sex for comparative study..

For attaining of normal saliva, The anthor. had sejected 2 hours after lunch time and avoided the complicated patient. i.e. diabetus mellitus etc. The pH of saliva was as follows.

TABLE Ⅰ. **Salivary PH of Pulmonary Tuberculosis patients& control group.**

Classification	Experimental group.	Control group
male pH±S. D.	7. 74±0. 59	7. 75±0. 33
Female pH±S. D.	7. 98±0. 52	8. 03±0. 30
Average pH±S. D.	7. 86±0. 54	7. 89±0. 31

There has found no significant differences between experimental and control groups. Male and female chifference was 0. 25, but the social environment, customn, habit effects on this little difference. only 0. 03 has'nt any meaning or importance between experimental group and control groups.

2. Salivary amount

Salivary amount was checked slight in 59 per cent of the cases; 29 per cent had a moderate amount; 12 per cent, a large or abundant plus excessive in experimental group. In contrast to normal control group slight group to moderate group difference were in 9%. It only reaches to two standard deviation.

The state of salivary amount in itself hasn't any importance in gloss finding

This can be seen from the data in table Ⅱ.

TABLE Ⅱ. **Salivary amount**

	Slight	moderate	Abundaut plus Excessive
Experimental group	59%	29%	12%
Control group	46%	35%	15%

In slight group, 13% of number may be remarkable but It only has numberal significancy. There has'nt found any difference between male and female, for it only 1 or 2 per cents.

3. Russel Index.

To simplify the study, Russel Index was used. The result was 1, 109 in Experimental group and 0. 392 in control group. The index was greatly diferent from the control gr oup in contrast to experimental group. The results varies in the sex and groups. followings are the results:

TABLE Ⅲ. **Russel Index of sexes and groups.**

	Experimental group	Control group
male	1, 224	0. 314
Female	1, 041	0. 451
Average	1, 109	0. 392

Above calculation was performed by the rule of

$$\text{Russel Index} = \frac{\text{Sum of Individual Scores}}{\text{Number of TeethPresent.}}$$

and individual scores checked as 0, 1, 2, 6, 8.

4. Summary and conclusion.

A study of salivay pH, amount and periodontal changes in 100 aduts are a of little value. Related data reported in the J.K.D.A. (1973. 1) by the auther had significant caorrelation. but the quick method of evaluation of pulmonany tuberculosis in dental clinic may be available, a little or not. followings are the results:

1. The salivay pH does not appear to be characteristic of tuberculous patients.
2. The salivay amount obtained indicated no significancy in tuberculous patients as compared to that obtained in supposedly healthy individuals.
3. The Russel Index was found higher and there was more periodontal involument (3 times higher than normal).

In as much as so mary cases were examined, there can't found any significant differencies between normal and experimental group except periodental Index. As for periodontal Involulvement, there remaines much considerable problems of study.

Comments.

Salivcay Viscosity, DMFT Rate, Exofoliative cytology, Class Ⅴ cavity or cervical

caries number, Gingival recession and Black Sordid teeth number in relation to pulmonary tuberculous patients are stadied in JKDA, **11**:21, 1973.

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