

Foreword: Collected Papers Relative to Dental Health

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In this special contribution to the Bulletin, the author presents the Foreword to his Collected Papers Relative to Dental Health.

After retirement in 1940, from my position as Dean and Professor of Experimental Medicine at Tulane University School of Medicine, and after a year or two required to dispose of my pecan farm in Mississippi and to wind up all other outside interests, I took up intensive study and research relating to the cause and prevention of the loss of teeth.

My decision to devote myself to this field was influenced largely by experiences back in 1914 at which time I was especially interested, for a time, in the ameba, *Entameba gingivalis* (*Endameba buccalis*) found in "pyorrhoea" lesions. I had occasion, at that time, to look into the mouths of many different persons and to observe the appalling unhygienic and pathological conditions around their teeth, the previous loss of many and the serious crippling and impairment of function of many of those still present. These conditions are far worse than anyone could realize from casual observation. The serious disease conditions involving the supporting tissues around the teeth could be fully appreciated only by one employing, as I was doing then, necessary microscopic laboratory techniques and methods. Recalling so vividly the important, almost universal, health and welfare problem that I had seen more than 25 years previously, after my retirement I decided to devote the rest of my time and all the talent and research ability I still retained to intensive study and research relative to the cause and prevention of the principle diseases involved, viz. caries and periodontoclasia.

Each of these diseases is practically universal in this country. Everybody has them sooner or later. Therefore, prevention of further advancement of existing lesions also is of great importance for practically every individual, in addition to prevention of the origination of new lesions.

I had had long experience in teaching clinical laboratory diagnosis and in research on such diseases as hookworm, other parasites, malaria, typhoid, diphtheria, amebiasis, bubonic plague, etc., involving much work with microscopic pathological conditions. Thereby I had acquired techniques and methods which enabled me more successfully to pursue study and research in this field.

Each of these diseases is caused by microscopic organisms, the early lesions are microscopic in extent, they advance microscopically, the tissues involved are composed of microscopic elements and the destructive processes are microchemical. Microscopic studies and research were needed to learn the local etiological and pathological conditions in these two diseases.

First I thoroughly reviewed the available dental literature to find out what was known (not just believed) as to the specific cause of these diseases,

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the opinions of the authorities and the information upon which their opinions were based. It was evident that their opinions were based largely upon clinical observations, surveys and experiences and not upon accurate personal knowledge of the etiological and pathological conditions involved.

I then took up intensive laboratory study and research to get the information needed in this regard. From my previous research experience I could know in advance that accurate information as to these two diseases would have to be secured largely through microscopic study of extracted tooth specimens. Employing appropriate methods and techniques and studying literally thousands of such specimens, I accumulated information as to the exact microscopic, etiologic, and pathologic conditions at the locations at which the lesions of each of these diseases originate and advance, and especially the composition of the etiological foreign material on the tooth at these locations.

Knowing and understanding these etiologic conditions anyone could predicate that to prevent both caries and periodontoclasia it would be necessary for the individual to clean his teeth effectively, *at the vulnerable locations*, at least once each day. While removal of remnants of food material from about the teeth is desirable and helpful, the important thing is to remove or cut off the filamentous type microorganisms that grow and accumulate at the particular locations. The harmful effects from maximum, continuous, undisturbed accumulation and retention of this material at these locations, and the fact that the lesions of these diseases do not originate or advance without it, have not been fully recognized heretofore.

Next, I carried out extensive investigation and experimentation to ascertain the most appropriate specifications for the necessary toothbrush and dental floss to do the job and the most effective method of using them for this purpose. Practically one hundred per cent of prevention and control can be secured by following this exact method, *but not without it*. It is different from, and in some vital particulars quite the opposite of methods taught in dental schools. The method which I designed and the information upon which it is based will have to be taught in the dental schools, sooner or later.

Much of the information from my work in the field of dental health is contained in 22 published papers as of November 1962. Three bound collections of these papers have been preserved. One of these is to be placed in the Rudolph Matas Medical Library; one is retained in my laboratory in the Oral Hygiene unit in the Department of Medicine; one is entrusted to my daughter Mrs. J. W. Hopkins, for such interest in it as she or other members of my family may have in the future.

LIST OF PUBLICATIONS

by

CHARLES C. BASS, SINCE 1941

1. Prevention of the Loss of Teeth. *The Mississippi Doctor*, 20:522, 1943.
2. A Demonstrable Line on Extracted Teeth, Indicating the Location of the Outer Border of the Epithelial Attachment. *J. Dent. Res.*, 25:401, 1946.
3. Habitat of *Endameba buccalis* in the Lesions of Periodontoclasia. *Proc. Soc. Exp. Biol. Med.*, 66:9, 1947.
4. The Optimum Characteristics of Toothbrushes for Personal Oral Hygiene, *Dent. Items Int.* 70:697, 1948.

5. The Necessary Personal Oral Hygiene for Prevention of Caries and Periodontoclasia, *N. O. Med. Surg. Jour.* 101:52, 1948.
6. The Optimum Characteristics of Dental Floss for Personal Oral Hygiene. *Dent. Items Int.* 70:921, 1948.
7. The Location of the Zone of Disintegrating Epithelial Attachment Cuticle in Relation to the Cemento-enamel Junction and to the Outer Border of the Periodontal Fibers on Some Tooth Specimens (With H. M. Fullmer). *J. Dent. Res.* 27:623, 1948.
8. The Relation of the inner Border of Bacterial Film on the Tooth within the Gingival Crevice to the Zone of Disintegrating Epithelial Attachment Cuticle. *O. Surg., O. Med., O. Path.*, 2:1580, 1949.
9. Some Facts Which Physicians Should Know About Maintenance of Dental Health. *Bull. Tulane Medical Faculty*, 9:12, 1949.
10. The Relation of the Inner Border of Subgingival Calculus to the Zone of Disintegrating Epithelial Attachment Cuticle. *O. Surg., O. Med., O. Path.*, 3:1125, September, 1950.
11. A Previously Undescribed Demonstrable Pathologic Condition in Exposed Cementum and the Underlying Dentine. *O. Surg., O. Med., O. Path.*, 4:641, 1951.
12. Some Important Facts Relative to Personal Oral Hygiene. *Phi Chi Quarterly*, 50:194, 1953.
13. An Effective Method of Personal Oral Hygiene. *Jour. La. State Med. Soc.*, 106:57-73 and 101-112, 1954.
14. The Problem of Dental Health. *Bull. Tulane Univ. Med. Faculty*, 13:145, 1954.
15. Responsibility of Dental Schools for the Dental Health and Welfare of the American People. Tulane University Printing Office, June, 1954. (Reprints may be obtained from the author).
16. *Leptothrix Racemosa* in Open Cavities. *J. D. Res.* 34:621, 1955.
17. Personal Oral Hygiene for Children. *Arch. Pediatrics* 72:295, 1955.
18. Some Important Developments Presently Influencing Dental Health. *J. Louisiana State M. Soc.*, 109:201, 1957.
19. Prevalence of Periodontoclasia. Published independently. Reprints available from the author.
20. Some Remarks Relative to Dental Health. *Mississippi Doctor*, 37:36, 1959.
21. Importance of Dental Health Service. *J. Louisiana State Med. Soc.* 113:157, 1961.
22. Personal Oral Hygiene; A Serious Deficiency in Dental Education. *J. Louisiana State Med. Soc.* 370:114, 1962.