

Importance of Dental Health Service

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THE principal diseases affecting the teeth are caries and periodontoclasia ("periodontal disease"). It is estimated that less than 25 per cent of the loss of teeth in this country results from caries; more than 75 per cent from periodontoclasia.

Caries

The average 10 year old child has between 2 and 3 decayed, missing or filled (DMF) teeth. By 14 or 15 he has several more and by adult age still more. Almost every adult has already sustained more or less caries damage.

People in the more favorable and more fortunate circumstances receive dentist's diagnosis and treatment of their cavities. Many fillings sooner or later break down from time to time and have to be replaced with more extensive and more complicated restorations. At any time infection may reach the pulp and the tooth may be finally lost.

Treatment of caries—filling and repeatedly filling cavities and other restorations—composes a large part of dental practice at the present time. This is the dental service people want and are willing to pay for, and is what the dentist is trained best to do. It tends to retard the destructive disease process and to prevent or to postpone infection of the pulp and final loss of the tooth. Therefore, dental health service for this purpose, if for no other, is of great importance for human welfare.

Periodontoclasia

Periodontoclasia is a universal¹ disease of man, originating (as gingivitis) in childhood and continuously progressing

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until all the teeth are lost, if the person lives long enough. There is great variation in the rate of advancement of the disease about different teeth in the same mouth and in different individuals. This is influenced largely by the oral hygiene habits and methods of the individual.

Although some teeth are actually lost from this disease before the age of 35 or 40, total loss usually occurs during the age period of 40 to 60, in people who make inadequate, inappropriate or no oral hygiene effort. Under more favorable circumstances some of the teeth (rarely all of them) may be retained into the 70's or 80's or beyond.

If we take 70 years as a convenient figure for life expectancy at the present time it is apparent that the average person will spend his last ten to twenty years almost or entirely edentulous. Usually long before the last few teeth are lost others have already been lost from time to time. This means progressively increasing handicap, disadvantage and impairment of function and the consequences thereof, over a considerable period of years.

Periodontoclasia is treated, all too often by radical procedures and with limited success, mostly by a relatively small number of specialists in the field. Their attention and interest are directed chiefly to the advanced stages of the disease. Under existing circumstances only a small fraction of the total population with the disease now receive the services that are absolutely necessary to prevent and control it.

Relation of Some Systemic Diseases to Periodontoclasia

It is well known that blood cultures taken soon after operative procedures on

the teeth, such as extractions and periodontal treatment, show bacteremia in a large per cent of instances.²⁻³ Recently, use of improved technics has yielded⁴ positive cultures after 82 per cent of extractions and after 88 per cent of other periodontal operative procedures. Further refinement of blood culture technics can be expected to yield a still higher proportion of positives.

Heavy force applied to the teeth during mastication of food, or otherwise, especially to teeth involved in the advanced stages of periodontoclasia, can be expected to drive bacteria into the blood stream in the same way as operative procedures do, but, of course, to a lesser extent. Therefore, bacteremia can be expected to occur frequently, almost daily, during many years of uncontrolled advancing periodontoclasia.

Many of the micro-organisms found present in the lesions of advanced dental disease—both caries and periodontoclasia—and those found in blood cultures following dental operations are similar to those found in diseases in other parts of the body, such as endocarditis, myocarditis, pericarditis, pneumonia, osteomyelitis, etc. In most of these the infection can reach the location only through the blood stream. A considerable proportion of cases of bacterial endocarditis are traceable directly to recent previous dental operations.⁵⁻⁶

Orthodontic Needs

There are abnormalities or deformities in the dentitions of more than 25 per cent of adults, which could have been corrected or greatly improved by orthodontic treatment. In fact, many of them can still be greatly improved if the required services and skills were available. The unfortunate victim of such deformities is at a disadvantage, at many places in life, as compared with others with the valuable asset of normal good looking teeth and mouths.

Because of the small number of specialists in this field, and circumstances which tend to limit the availability of their services, only a small fraction of those who need help receive it. The rest go through

life thus handicapped; their opportunities and their attainments, in some respects at least, thus impaired.

Prevention

Both caries and periodontoclasia are caused by microscopic organisms. The lesions at first are microscopic in extent, they advance microscopically, the tissues involved are composed of microscopic elements and the destructive processes are microchemical. Therefore, the etiological and pathological conditions at the locations where the lesions originate and advance can be known only through microscopic research and study. Effective prevention must be based upon the facts, not just opinions, as to these conditions. Erroneous opinions obscure but they do not change scientific facts.

Based upon accurate information as to the essential local etiology, secured through adequate microscopic research, a method of personal oral hygiene has been designed⁷⁻⁸ by which, for all practical purposes, both caries and periodontoclasia can be entirely prevented. Not only are new lesions of these diseases prevented but further advancement of existing disease is greatly retarded—sometimes entirely prevented—by this same means. Briefly it consists of a method of effective cleaning of the teeth at the locations where the lesions originate and advance, every night before retiring. This means the occlusal pit and fissure areas and the approximal surfaces around the contact points, for caries; the entrance to, and within, the gingival crevices, for periodontoclasia.

A considerable number of dentists of the highest standing in their respective communities, some located in more than half of the states in the United States, have been taught, more or less adequately, this method of personal oral hygiene and are teaching it to their suitable patients. There are now literally many thousands of people following the method, some for several years, and enjoying far superior results over anything that could occur without it.

This method of personal oral hygiene and the basis for it will have to be taught in all the dental schools in this country. At present, the method is taught in only two of the 47 schools. This means that most dentists graduating now do not know that the principal diseases of the teeth are entirely preventable or how to maintain the highest degree of oral cleanliness and dental health in their own mouths.

Closing Statements

Countless millions of American people, in all walks of life, urgently need dental health service upon which some part of their potential health, happiness, welfare and longevity depends. This service must include instruction and guidance for an effective method (there is only one) of personal oral hygiene. This is absolutely necessary for prevention and control of the principal diseases of the teeth. At the present time, less than one-third of one per cent of the dentists in this country have learned and are prepared to teach this method to their patients.

It is a challenge to dental education to include effective personal oral hygiene in the undergraduate curriculum and to provide the necessary refresher courses for graduates who have not learned it previously.

It is a challenge to conscientious practicing dentists to be prepared to include in their services accurate and correct instruction as to the exact method of per-

sonal oral hygiene which is necessary for prevention of further damage from dental disease.

It is a challenge to individuals, agencies, institutions and organizations concerned with promotion of dental health-welfare, to get the facts as to prevention of dental disease for guidance in their activities.

The diseases of the teeth constitute humanity's most prevalent health problem—the most prevalent cause of long continued crippling, disfigurement and impairment of function to which man is subject.

Good dental health service constitutes one of the most important health needs of man.

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