How Bad Teeth Cause Heart Disease

Poisons from Decayed Roots and Sore Gums That May Be Carried to the Body's Vital Organs with Disastrous Results

An X-Ray Photograph of the Head—the Only Certain Method of Ascertaining Whether There Are Centres of Infection Hidden Away at the Roots of Your Teeth and Spreading Their Deadly Poisons Through the Whole System.

"To Watch the Mouth and Teeth Carefully and Have Recourse to a Dental Surgeon at the First Sign of Trouble May Be the Means of Saving You from Lifelong Misery and an Early Grave."

—By William Brady, M. D.

A DEAR old lady used to suffer acute seizures of what she and her family called "liver trouble." The attack generally began with a chill, which, regardless of weather or other circumstances, was clearly evidence that the patient had "taken cold again." Following the chill there was a severe nausea, intense headache, then a high fever and a profuse sweat. In a day or two the "cold on the liver" was over.

Now, in the good old days of divination it may have been fine practice for the doctor to agree, if not actually to suggest, that the patient had been careless and "caught cold." But nowadays when we encounter such a sequence of chill, fever and sweat, we look for infection somewhere.

This patient carried in her mouth some old stumps and the usual chronically inflamed gums that accompany neglected teeth. On examination, with each attack of "liver trouble," a pocket of pus was found in the gum about a decayed tooth. This pocket was emptied by a painless lancing. The drainage of the pus promptly relieved the "cold settled on the liver." But could we convince the patient that all her trouble was due to "those old stumps?" No, indeed. She had carried those old teeth for ever so many years, and a doctor who intimated that liver trouble could be produced by old teeth was crazy in the head!

To the ordinary reader the idea that heart disease may be caused by bad teeth seems rather far-fetched.

There are two reasons for this incredulity. First, the medical authorities a generation ago looked upon rheumatism and overwork as the usual causes of heart disease. And second, heredity was blamed for the sins of the children themselves. Grandfathers have been forced to shoulder responsibility for a good deal of the disease we bring upon ourselves.

Of course, any one whose reading extends beyond the almanac and the liniment advertisements knows that rheumatism is not a penalty of bad weather, exposure, dampness and other natural conditions, but just an infection of the joints or neighboring tissues with germs grown in some distant depot, in a tonsil or underneath a comfortable but unsanitary bridge or cap or filling, for instance.

That the germs from this septic focus occasionally lodge upon the membrane of a heart valve instead of lodging upon the membrane lining of a joint, is purely a matter of chance. But it explains why valvular heart disease has always been a frequent complication of inflammatory or articular rheumatism.

In examining candidates for life insurance physicians often detect a "murmur" or other indications of faulty heart function and the candidate is rejected or postponed much to his surprise or indignation. He is unaware of any heart trouble; perhaps he considers himself quite well. Yet the disease is there. How did it get there? Well, a carefully elicited history shows that, years ago, the candidate suffered frequent attacks of tonsilitis, or quinsy, or just sore throat.

These were trifling illnesses, as a rule. Recovery was always prompt and complete. Nevertheless, in one of those attacks the infection broke through the barriers of the tonsil or throat and reached the lining of the heart; there the germs set up the mildest little inflammatory reaction, which necessarily leaves a certain amount of scar tissue behind.

The scar tissue, like a scar anywhere else, slowly contracts, so that in months or years the part is distorted. If the delicate heart valve itself happens to be the seat of the infection, the distortion is likely to interfere with perfect closure, and so a leakage gradually develops. But if the seat of the infection happens to be the lining of the heart in a place apart from the valve, no permanent damage is done.

The doctors who used to look upon sore throats as "colds" pure and simple, naturally had little use for stethoscopes, microscopes and other instruments of precision. They just "pronounced" the case so and so, and the pronunciamento was final and authoritative. Some great authorities practised medicine fifty years ago. Their works are still read and quoted by amateur healers!

If a patient with a sore throat or tonsillitis developed an endocarditis (that is medicalese for inflammation of the heart lining), the patient said nothing about it, he felt nothing. The doctor therefore was unaware of it. The doctor seldom listened to the heart; when he did pretend to do so he usually clapped his ear down on the patient's shirt bosom and imagined he heard the heart beating. If it was still beating the patient was all right. Thus it happened that many a simple endocarditis escaped recognition, and the patient went blithely on for years and years before the damage was discovered, if at all.

With a heart valve damaged or distorted as a result of a low grade, painless, perhaps wholly symptomless infection secondary to an alleged simple sore throat or "cold," the victim is as often as not quite innocent of the state of his heart. It beats regularly. It gives no pain. His strength is in no wise diminished. His heart remains as efficient as ever. Why? Because the heart muscle is the most responsive of all muscles to functional demands.

So soon as a slight leakage begins, a trifling back flow of blood through the distorted valve at each contraction of the heart, there begins a process of increased muscular development in the heart wall, and this is maintained in pace with the increasing leakage, so that the heart pumps out a much larger amount of blood at each beat, and hence the portion which does leak back when the valve closes is never missed.

Of course there is a limit to this compensatory overgrowth or development of heart muscle, and as soon as this limit is reached, the patient becomes aware that his efficiency is falling off. He begins to be short of breath on slight exertion, perhaps to cough more or less, to be more easily fatigued by physical or mental work, to sleep less soundly, or to have more or less "stomach trouble" or dyspepsia. Not until the heart finally weakens under the strain does the patient experience irregularity, palpitation, dropsical swelling of the legs, possibly blood-streaked expectoration and other alarming symptoms of loss of compensation.

All of this is now well known to come from a comparatively trifling tonsillitis or quinsy or sore throat. In modern practice the physician urges the patient to go to bed or at least to remain at rest when nursing a sore throat or a tonsilitis. This is for the purpose of protecting the heart, just as rest is advisable in an attack of "rheumatism," even if nature doesn't enforce it.

The tendency for inflammatory or articular rheumatism or rheumatic fever to complicate or follow attacks of sore throat or tonsillitis is now pretty generally recognized, even outside of the medical profession.

It is not difficult to believe that, if infected or disased tonsils can produce heart disease, infected or diseased teeth and gums can do so, too. In short, we know that bad teeth of the cause of disease and probably much oftener than diseased tonsils.

For that matter, many of the leading throat specialists at present hold that decayed teeth are the primary cause of diseased tonsils. It is true that we rarely find a child with well preserved teeth and diseased tonsils. But, then, we rarely find a human mouth with well preserved teeth any way as no conclusions are drawn from association.

Familiarity is what breeds contempt for diseased teeth and gums and for foul conditions in the mouth. Because so many people have bad teeth, chronic inflammation of the gums (sore gums, spongy, bleeding "Riggs disease," pyorrhoea) and adenoid remains or diseased tonsils, it has long been the fashion to ignore these perfectly obvious factors and attempt to fasten common and serious ills resulting from oral sepsis upon the weather, exposure, overwork, heredity, uric acid and other imaginary causes.

Anemia is a strikingly frequent condition in persons who have diseased gums. So is obstinate dyspepsia. And so is nephritis, Bright's disease. There is probably an intimate relation between the oral sepsis and the other conditions. Not so much from the septic or poisonous material unconsciously swallowed all day and all night from the gums, but from the toxic material absorbed directly into the circulation.

This continual poisoning of the blood inevitably leads to the destruction of red corpuscles. The impoverished state of the blood contributes to the stomach trouble, for an organ nourished with weak, poisoned blood will not do good work. And of course the kidneys are under a continual strain and irritation filtering out the poisonous matter.

The whole cause of Bright's disease is toxemia—poison of one sort or another in the blood. When you remember how dangerous is a wound made by a man's teeth, and how difficult it is to heal wounds about the mouth, you will realize that the human oral cavity must be an unsanitary place.

There are certain essential conditions for the cultivation of disease germs. These are food, warmth and moisture; generally darkness is also favorable. In the neglected oral cavity the conditions are ideal. Particles of food remain clinging to the teeth to putrefy there and furnish a perfect medium for the growth of germs. Not only the germs which set up tonsilitis, quinsy, tooth decay and pyorrhoea, but also the germs that cause ordinary coryza (cold in the head), bronchitis and pneumonia.

We are now fully aware that certain strains of germs have a selective affinity for certain tissues. For example, the particular species, *Streptococcus viridans*, which often produces the infection about the roots of teeth or beneath unsanitary crowns or poorly placed fillings, usually a painless process and only demonstrable by X-ray photographs of the teeth, has a selective affinity for joint linings and heart lining—serous membrane.

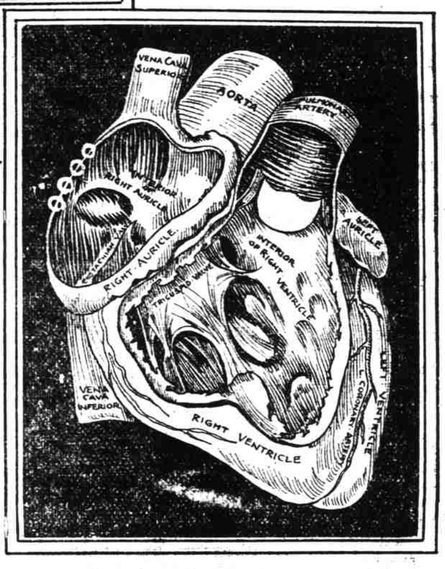
Another strain, producing low grade tonsil infections, has an affinity for mucous membranes, causing such secondary lesions as gastric ulcer, appendicitis, gallsac disease. Certain strains, perhaps grown in pockets in diseased gums, show an affinity for muscle tissue—cause so-called muscular rheumatism.

When a bacteriologist finds a peculiar type of bacteria present in the infected area about a bad tooth, and also in the lymph nodes near a "rheumatic" joint, and also in the lining of the joint itself—the old "rheumatic" joint, or maybe it is called rheumatoid arthritis, or arthritis deformans—he is justified in assuming that the portal of entry for the trouble was the original neglected or maltreated tooth decay.

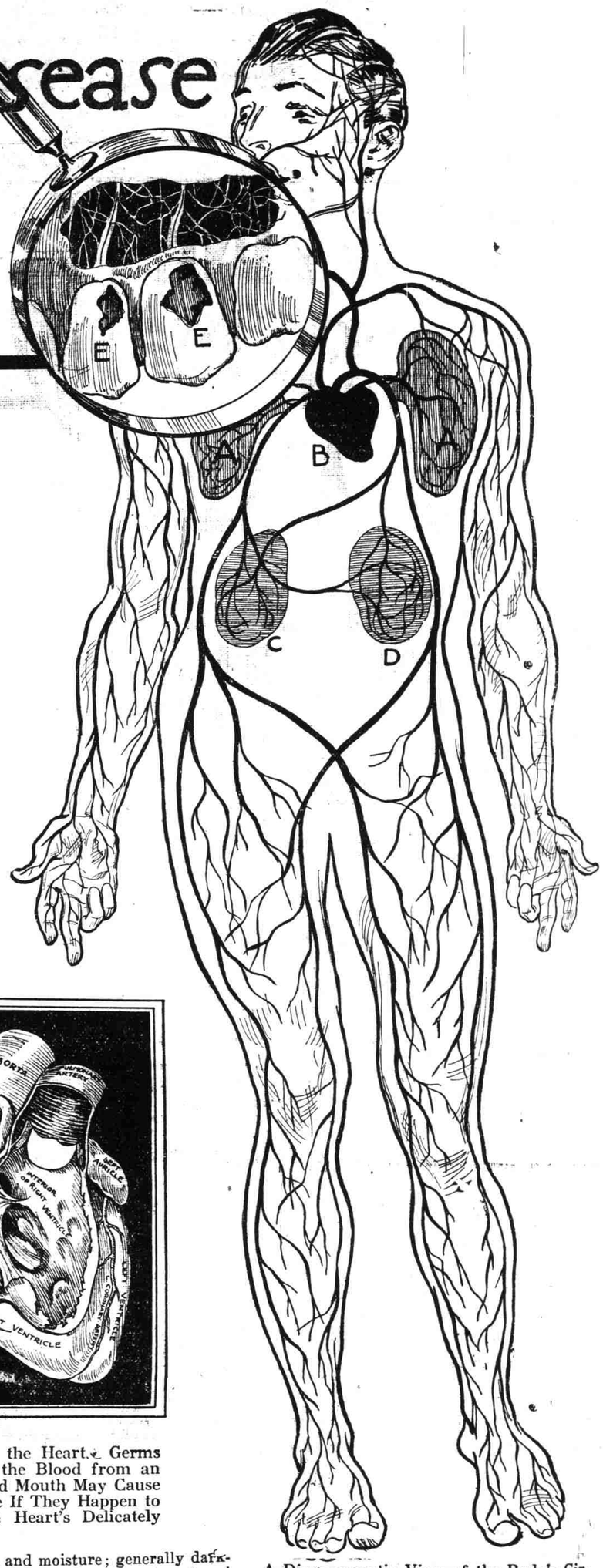
Cheap dentistry, dentistry done at bargain rates, is storing up for a lot of unsuspecting people lifelong misery and illness which they little realize is to be their lot. It is a curious thing that men and women who wouldn't think of wearing shoddy clothing or cheap shoes will permit slipshod dentistry.

Besides the heart disease (valvular) traceable to infection from the teeth and gums and tonsils, there is still another form of heart disease indirectly associated with bad teeth—degeneration of the heart muscle. This is "organic" heart disease with a vengeance, though nowadays the distinction between "functional" and "organic" disease is purely psychological.

The heart muscle suffers from faulty nutrition just as the rest of the body does, when the blood is poor or full of poison. If anemia plus toxemia continues over a period of years, the heart muscle may actually undergo a degenerative change, and then the victim has "organic" or "fatty" disease of the heart. Doctors call it myocarditis. This is one of the late results of neglected teeth. To say that a man or woman has met with premature or sudden death from bad teeth is stating the truth in many cases, for the heart would have kept beating a long time yet if the teeth had been properly cared for.



A Sectional View of the Heart. Germs Filtering Through the Blood from an Infected or Diseased Mouth May Cause Permanent Damage If They Happen to Reach One of the Heart's Delicately Adjusted Valves.



A Diagrammatic View of the Body's Circulatory System Showing the Network of Veins and Arteries Through Which Poisons Generated in the Decayed Teeth (EE) Are Often Carried to the Lungs (AA) the Heart (B) the Stomach (C) and the Liver (D) Heart Disease, Tonsillitis, Rheumatism, Bright's Disease and Other Serious Troubles Are Now Believed to Be Frequently Caused by Bad Teeth.