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A JOURNAL THAT STANDS FOR THE "OUNCE OF PREVENTION," AS WELL AS THE "POUND OF CURE"

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Address Delivered to a Mass Meeting of Toronto Dentists, Held at the Royal College of Dental Surgeons, in the Interests of the Canadian Dental Research Foundation

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DR. PRICE'S address was most eloquently and forcefully delivered, and many of the more recent scientific truths were presented in a way which enabled practitioners to apply these principles to their daily practice. The address was profusely illustrated by a series of lantern slides, many of which were beautifully colored. The report of Dr. Price's address is as follows:

A new truth is a new sense, for with a new sense you can see things you could not see before and that others cannot see. The practitioner who through experience and study grasps a new truth and applies it in his practice has a new sense which enables him to render better and more scientific service to his patients.

The question of whether a pulpless tooth is always a non-vital tooth was discussed, and while some argue that, as a tooth derives nutrition from surrounding parts, a pulpless tooth is not necessarily a dead tooth; it was the judgment of the speaker that, just as a tree which is nearly all dead is considered a dead tree, so an infected pulpless tooth is virtually a dead tooth.

Those cases were referred to where patients are suffering from dental disease, with apparently no trace of systemic disease resulting, though pus may be discharging freely into the mouth. It is well to bear in mind that in many of these cases the discharge is virtually sterile, being composed largely of leucocytes. However, in the final

analysis it is entirely a matter of the reaction of the patient. With a lowering of the vital forces the conditions described would possibly become a menace to the health of the patient. Other patients, again, because of a lower vitality and lack of strong reaction, would, with much less infection, suffer serious if not fatal systemic disease.

It is sometimes argued that it is not absolutely necessary to perfectly fill and perfectly sterilize root canals, but Dr. Price preferred to have the comfort which the knowledge of perfect sterilization and perfect root filling gives.

Numerous slides were thrown on the screen which clearly showed, by dissection of the part, that roentgenograms do not give a complete picture of the parts, both as to the area and exact location of the resorption or the direction of the root canal. It was also shown that roentgenograms were occasionally misleading in the detection of malignant growths in the auxiliary tissues. It was the judgment of the speaker that if dentists were compelled to extract teeth themselves, instead of referring these cases to a specialist, the pathology in these diseased conditions might be intelligently studied.

Many slides were also shown illustrating both rarefying and condensing osteitis, and showing that in many cases of resorption (rarefying osteitis) nature's forces are busy in the formation of condensing osteitis beyond the rarefied area. This is nature's defence, the formation of this condensed area (where the blood vessels are obliterated), enabling the vital forces of the body to prevent general disease. In many cases nature may overcome this local infection for years, but as the patient becomes older, and the natural forces of the body are lowered, arthritic and other general lesions develop.

Attention was drawn to the necessity of realizing that in these cases of condensing osteitis infection frequently penetrates the hardened bone even to the depth of a quarter of an inch, as shown by the fact that when a culture taken from this depth in a patient suffering from arthritis was injected in rabbits, 90 per cent. developed an arthritic lesion.

Should we confine our diagnosis of these cases to rarefied areas shown up by roentgenograms, we would entirely overlook all of those cases of infection where nature's reaction has been of the condensing type.

Some patients may carry a large quantity of infection without injury indefinitely, but as they get older resistance is lowered, and under certain systemic diseases, such as influenza, resistance to streptococcus infection may disappear even within a few hours.

It is important to bear in mind that the vital consideration is the reaction of the individual to the infection, which may result in small or large rarefied areas, or condensing osteitis, according to the nature of the infection, whether it is of an acute or chronic type.

Dr. Price referred to many very remarkable recoveries as the result of the removal of foci of infection about the teeth, and mentioned particularly a man whose weight dropped from 176 to 122 lbs., and after six months in a sanitarium was over a year trying to regain his health. This patient was rejected for life insurance because of an "organic heart lesion." The removal of the local dental infection proved that there was no organic lesion, but that the infection caused an irritation which produced all the symptoms of a heart lesion.

A case was also instanced of a boy who had suffered from a chronic arthritic condition, and represented one of those cases which "would have been better if it had been worse." The infection was of a chronic type, which failed to bring about a local reaction, and the X-ray showed no resorption of the surrounding tissues. Dr. Price relies very frequently upon thermal tests in the indication of dead teeth, and by this means discovered such a tooth in the case of the boy referred to. The patient had been in bed from the time he was twelve until he was sixteen years of age, the blood count dropped from 16,000 to 8,500, and the boy is now up and around. This case was one where the local reaction was condensing osteitis, instead of the usual rarefying osteitis, and where the X-ray, therefore, failed to indicate the presence of the infected area.

An interesting case was that of a boy with a heart lesion and susceptible to streptococcus infection, where an infected pulp was discovered in a tooth without exposure. In this instance the infection was injected into rabbits, and in 33 rabbits 93 per cent. developed a heart lesion.

Another interesting case of the many referred to was that of auditory neuritis, which was found to be due to an infected vital pulp without exposure, though the tooth was carious. The tooth was extracted, and the streptococcus infection found was injected into animals, when it was found that the majority of the rabbits developed trouble in the nerve trunks, thus showing the tendency toward affinity of infection to similar tissues. In this instance the patient's hearing was restored.

Still another case was that of insanity resulting from an infection in an anterior tooth, where a patient who had been in five hospitals in five different States was cured of an affection of the mind, thus showing that dental infection may produce a sensitization which may result in some form of insanity.

A case was cited of iritis, where there were five successive attacks, the patient finally losing the sight of the left eye, and frequent treatments by oculists gave no relief. The X-ray showed absorption around two or three teeth, with condensing osteitis around one tooth, which did not respond to heat and was extracted. The culture was

injected into a number of rabbits, and within 72 hours there were distinct symptoms of iritis in the rabbits.

Another case was shown where a denture was inserted over a number of roots, which brought about a condition of infection under pressure, and the susceptible tissue in this case was muscle tissue, resulting in myositis and torticollis. An injection in ten rabbits of this infection resulted in four rabbits developing neck involvement, and a moving picture film was made showing these rabbits moving about with their necks twisted.

The case of Theodore Roosevelt was also referred to, where rarefaction was indicated upon certain teeth, but the dental condition was not suspected until it was too late. Dr. Price surmised that Roosevelt in his early life contracted fever, which resulted in the death of certain dental pulps, and urged the necessity for periodical examination by the dentist, even though the patient suffers no discomfort, and particularly following an attack of fever.

Dr. Price claimed that in 20 per cent. of teeth involved he could find no evidence of infection by means of the radiogram.

The speaker then discussed at some length the question of sterilization of infected teeth, and stated that it was exceedingly difficult to sterilize a tooth in the mouth. He jokingly gave it as his opinion that the best way was to "boil" them. Sterilization by silver nitrate neutralized by formalin was high in efficiency, as also was formalin with hot air and chloramin (not dichloramin). However, it was pointed out that, owing to the effect on the surrounding structures, it was questionable whether a solution of formalin as high as 10 per cent. should ever be used in a tooth. In silver nitrate medication it was better to neutralize with eugenol, and thus avoid the ill effects of formalin.

Reference was also made to the disadvantage of using any solvent in connection with chloropercha in root canal work, as a solvent disappears in time, leaving a bad effect upon the root filling.

In closing the address Dr. Price referred at some length to the relationship between oral infection and influenza complications. Influena rapidly destroys the body's resistance to pneumonia, the plasma of the lung becoming infected. Dr. Price studied many cases of influenza in different hospitals when the epidemic was at its height, and claimed that in those cases where there was open infection in the mouths of the patients pneumonia very frequently followed.

USE DENTAL LAC AND SPENCE PLASTER.—In making the tooth models for jacket crowns, if Dental Lac is used for impression and Spence metal used to pour the models, beautiful results will be obtained.—*Elmer S. Best, Dental Summary.*