

our mouths just as clean as possible and prevent the possibility of carrying it to others. Dr. Rosenow has done probably the most important work that has ever been done with respect to mutations of organisms, and in this slide we see illustrations of his work. Some of the bacteriologists challenged his work and gave him a strain of pneumococcus and asked him to change it to streptococcus, and here we have an illustration. That means they are simply expressions of the same organism. Mutations are very unlikely to occur except in rare cases. Now, the medical men look in the patient's mouth to see whether or not he is suffering from a lead poisoning or mercury poisoning or phosphorus poisoning, simply because the most susceptible tissue of the entire body to poisons is the tissue surrounding the teeth, and that is probably the reason why pyorrhea is so prevalent. That susceptibility is shown so clearly in this case where some devitalizing paste was put into the tooth of this dog and with every precaution in sealing it into the tooth, using the cement and amalgam over the cement, yet the result of the amount of paste that passed through the apex or through the wall of the root and came back to the gingival border was enough not only to destroy the gingival border around those teeth in three days but to produce this necrotic area on each side of the tongue of the dog, showing the tremendous susceptibility of that tissue to the irritation of that drug. The next slide will show us some of the lesions at the apices of the root, but that is so large a subject we will not have time to dwell on it except to say that we of the dental profession should hesitate to use these things as the men of the medical profession and the surgeons hesitate to use bichloride of mercury in the abdominal cavity. A few years before that he used a rather strong solution of carbolic acid, but he does not use the strong solution of bichloride to-day, for he has found out that what kills the germ will kill the tissues, and he has found the thing he must do is to keep out of nature's way. We dental surgeons as a profession are still putting things into roots a dozen times too strong for the health of those tissues.

There is in the peridental tissue a network of cells running all the way from the gingival border to the apex of the root, and that chain or network seems to be a very important factor in the development of pyorrhea, for pyorrhea does not develop from a point around the tooth but develops continuously and progressively towards the apex of the root. Why this is so has never been solved, but it has been suggested partly by the finding of this network of epithelial cells by Dr. Black, that it will be shown that that network is related to pyorrhea. We have in the mouth an organism that has caused a great deal of speculation in the last year or two, the ameba, but we do not believe it is important as being a factor in pyorrhea. We believe it is probably there because there is lots of food for it, which food is the breaking down lymphocytes and leukocytes. We do not believe, as I said, that it is to blame for pyorrhea.