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Experimental Infection of Dogs with *Endamoeba gingivalis* and *Trichomonas buccalis* of Human Mouth.

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Neither of the two common protozoan parasites of the human mouth have hitherto been successfully transplanted into the mouths of experimental animals. This has greatly retarded the growth of our knowledge concerning the rôle of these microorganisms in disease.

Our experiments included work with dogs, cats, rabbits, guinea pigs, rats and mice. Attempts were made to introduce cultures of amoebae into the normal gingival sulcus and into artificial extensions of this groove made by means of glass needles and in several cases by means of a chisel shaped knife. In addition to cultures we attempted the introduction of pus directly from a human case of very advanced pyorrhœa. Attempts were made to infect guinea pigs which were affected with scurvy. All of the above experiments were negative including those involving normal dogs.

Our first success was with an old dog possessing an advance gingivitis. Several weeks of careful observation demonstrated that there was no spontaneous infection. A culture containing *Endamoeba gingivalis* and *Trichomonas buccalis* recently obtained from a case of active human pyorrhœa was inoculated subgingivally on November 6, 1925. Both species continued to multiply in the dog until he was sacrificed 14½ months later. Striking pathological changes were observed which closely simulated human pyorrhœa. The greatly accelerated rate of deposition of dental calculus was most marked. This experiment was quite inconclusive as to etiology of the lesions because of inadequate controls.

More recently we have successfully infected 4 other dogs with *Endamoeba gingivalis* after definitely demonstrating the absence of Protozoa before our inoculation. In every case there was more or less inflammation and gingival pocket formation prior to the beginning of the experiment. Only such dogs were susceptible. These and the controls are carefully kept under optimal conditions with properly balanced diets. None of these have borne the infection longer than 4 months. No gross pathological changes have been observed to date and the excellent environmental factors have caused a systemic improvement in most cases, which is reflected in the dental condition.