"TRENCH MOUTH," OR VINCENT'S INFECTION.

PREPARED UNDER THE DIRECTION OF A SURGEON-GENERAL, BUREAU OF PUBLIC HEALTH SERVICE.

Vincent's infection, or "Trench Mouth," was first noticed about 1897, and has undoubtedly been more or less endemic since that time. It was not until the World War, however, that the disease took on epidemic form. In France, during that war, the condition, given the name of "trench mouth," at that time, was more common than were typhoid and malaria during the Spanish-American War. It was quickly recognized by the dentists with the troops; but, owing to the cramped living conditions in which the troops lived, it continued to spread. Many soldiers with infections of the mouth and pharynx were sick in hospitals and in quarters. Since the World War it has seemed to spread slowly through the States, or perhaps has been more promptly recognized.

Vincent's infection may present itself in the mouth or as Vincent's angina in the throat, or the two may be present together. It is believed to be due to the combined action of two varieties of the same germ. Inflammation and the formation of ulcerative areas of greater or less magnitude, located on the mucous membrane of the gums, cheeks, tongue and tonsils are characteristic of the disease.

The milder or more common form is slower in its progress and remains on the surface, not affecting the membrane deeply. Stagnant, foul mucous or serum seems to be necessary to its successful development. Undoubtedly the true type is more often found in unclean mouths where decayed teeth are present, around spaces where faulty fillings overhanging gum margins are a source of irritation as well as uncleanliness, or where the soft tissues of the mouth have already received injury from diseases such as pyorrhea, salivation or other diseases.

The infection is carried and spread from an infected individual to a well one by direct contact. Eating utensils not properly cleaned, face towels, drinking cups, personal articles, kissing and living in crowded buildings without plenty of fresh air and sunshine are some of the causes of the spread of this disease. The exact mode of transmission has not been entirely agreed upon by all authorities. An unsuspecting person may be a carrier and transmit the organism, harmless to himself but harmful to others.

To prevent the likelihood of infection with this disease everyone should keep his mouth in a clean, healthy condition. When teeth first begin to decay, they should receive immediate attention, and the small cavities should be filled without delay. No decayed teeth or broken-down roots should be allowed to remain in the mouth. The mouth should be thoroughly cleaned by the use of a toothbrush and dental paste or powder, or even soap or salt and water, after each meal, if possible; but in any case always before retiring for the night, and the first thing on arising in the morning. The gums should be properly massaged with the toothbrush or the fingers, and the roof of the mouth and the tongue should be softly brushed also. Although it might be possible for a clean mouth to become infected, the chances are greatly in favor of a person with such a mouth, for a clean mouth with healthy vigorous gums and mucous membrane will resist infection. The throat is extremely difficult to cleanse properly, but always before retiring a gargle of salt water or any mild antiseptic should be used.

The true diagnosis of Vincent's infection can be made only in a medical or dental laboratory with the use of the microscope. Whenever the uncomfortable symptoms of a persistent sore mouth are experienced, that person should immediately consult his dentist or his physician for treatment. Vincent's infection cannot be treated at home with household remedies. In the first place, it could not be properly diagnosed, and the danger of its becoming acute, with serious after-results, would be great.

In case a dentist or a physician is not available, the treatment should be the use of a mouth wash at frequent intervals until skilled treatment can be obtained. Undoubtedly the micro-organism causing this disease cannot live or keep its virulent nature in the presence of air or free oxygen. Although it might continue to exist for some time in the presence of oxygen, it will not multiply. It is evident, then, that any oxygen-liberating compound will check the growth of these organisms. For this purpose there are three outstanding drugs which may be used as an efficient mouth wash. They are hydrogen peroxide, potassium permanganate and sodium perborate.

Hydrogen peroxide is capable of liberating 10 volumes of oxygen. When used as a mouth wash, diluted with equal volumes of water and used at frequent intervals, forcibly working it back and forth in the mouth by contraction of the lips and cheek muscles, it will serve very well as a temporary measure.

Potassium permanganate in 1:5000 dilution is good, although it has a disagreeable taste. Sodium perborate is readily soluble in water, and when freshly dissolved liberates about nine per cent oxygen. It is a good home remedy. The solution should be freshly prepared; the perborate should be kept in a cool place; instructions should be given to purchaser. Any of these remedies will serve as a temporary expedient until the services of a dentist can be secured; but it is dangerous to delay treatment if it can be possibly obtained.

During the acute stage the toothbrush should not be used, as it is likely to cause a hemorrhage by forcibly removing the diseased membrane. This would furnish more pabulum for bacterial growth.

Although the outlook in Vincent's infection is favorable and the condition usually responds quickly to competent treatment, neglect may result seriously as the micro-organisms causing this disease have been isolated from other more serious diseases such as meningitis, peritonitis and diabetes. Most cases of Vincent's infection can be cured with proper treatment.

TIN-PLATED LEAD TUBES. THEIR USEFULNESS AS CONTAINERS FOR TOILET PRODUCTS.*

BY R. VAN WINKLE AND W. G. CHRISTIANSEN.

In Europe, particularly in France, tin-plated lead tubes have come into quite extensive use for the marketing of various creams. In view of the toxic effects produced by the assimilation of lead, it became of definite importance that the extent to which materials packaged in tin-coated lead tubes become contaminated with lead be known. For this study both American and imported tin-plated tubes

* Section on Practical Pharmacy and Dispensing, A. PH. A., Portland meeting, 1928.