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# **Vincent's Infection, of the Mouth**

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# VINCENT'S INFECTION OF THE MOUTH

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Approved by the  
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AMERICAN DENTAL ASSOCIATION

## HISTORY

POPULAR information concerning Vincent's infection of the mouth first appeared during World War I. The large number of cases among the troops engaged in trench warfare led to its designation as "trench mouth," the term continuing to be used as the popular synonym for Vincent's infection of the mouth. Technically, the disease may be more properly designated as a necrotic ulceration of the structures which support the teeth and line the mouth.

Detailed descriptions of this disease did not appear in the literature until the last decade of the nineteenth century. However, it probably antedates, by many centuries, the era of Vincent, after whom it is named. Its association with military strife is not limited to modern warfare. The literature contains many references to armies plagued by sore, ulcerated and foul-smelling mouths. From the recorded symptoms, paralleling those of the disease as known today, it may be stated with reasonable certainty that man has suffered from this disease since the early days of recorded history.

## OCCURRENCE

Vincent's infection of the mouth is not limited to any age group. The acute type occurs more often in children, adolescents and young adults. The chronic type is more often seen in older adults, usually as a complication of other diseases of the structures surrounding and support-

ing the teeth. Strangely enough, this disease does not occur in mouths before teeth erupt or after all teeth have been lost. The explanation of this phenomenon is that a so-called incubation zone, free from oxygen, is necessary as a harbor in which bacteria may lodge and thrive. Such a zone in the mouth is supplied by the unattached portion of the gums in their relation to the teeth. This anatomic relationship often affords rather deep incubation harbors, especially around partially erupted wisdom teeth (third molars). As a consequence, Vincent's infection frequently develops during periods of tooth eruption in adolescents and also in teething infants.

The incidence of this disease is believed by some observers to be markedly increasing, especially among adolescents and young adults. A similar unproved assertion is made in reference to the occurrence of the disease in women.

#### CAUSES

The exact identity of the causative bacteria was not established until very recently. It is now believed that four different micro-organisms working together are responsible for the bacterial phase of the disease. These bacteria grow only in an environment free of oxygen. This accounts for many important aspects of the course which the disease follows.

Small numbers of the bacteria associated with Vincent's infection of the mouth may be found in most mouths

during health. They probably may be regarded as normal inhabitants of the mouth along with the many other varieties routinely observed. This indicates that certain conditions predisposing to the infection are probably of much greater importance than the presence in the mouth of small numbers of these



Acute Vincent's Infection

bacteria. Axiomatically, the mere presence of bacteria in the mouth does not in itself constitute infection.

The conditions predisposing one to Vincent's infection of the mouth are numerous and varied. Some are local or oral; others are systemic. The latter may include: (1) vitamin deficiencies, (2) diseases of the blood and blood-forming organs, (3) allergies, (4) dietary and drink indiscretions, (5) certain febrile and debilitating diseases and (6) effects of certain drugs.

The predisposing factors in the disease that act locally in the mouth include

all the various irritants arising from lack of hygienic care and defects of the teeth. Great emphasis is placed on the probable relationship of tobacco smoking to Vincent's infection of the mouth. The increasing incidence of this disease said to prevail among women and adolescents of both sexes and the increase in the smoking habit among them are said by many clinicians to be related. The effects of smoking undoubtedly vary widely with the susceptibility or tolerance of individuals. However, clinical observations indicate an important relationship. The chemical irritation of the mouth tissues, with its effects on circulation, the lowered resistance and the displacement of the normal oxygen-containing air by smoke in the mouth all favor the overgrowth of the causative bacteria and enhance their ability to invade the tissues. Clinical confirmation of this relationship can be had in the increased efficiency of treatment when abstinence from smoking is required and the failure of response to treatment when the habit is continued. In the latter instance, results of treatment are often unsatisfactory and recurrences are frequent.

#### SYMPTOMS

The symptoms of Vincent's infection of the mouth vary widely with the intensity of the disease. The acute form is characterized by local discomfort, a characteristic foul odor, inflammation, ulcera-

tion and bleeding of the gums, excessive salivation, enlargement of the glands of the neck, general malaise, etc. These symptoms decrease in intensity as the disease subsides to chronicity. In its chronic stage, the disease presents a slow ulcerative process, which gradually destroys the gums and other structures supporting the teeth. The gums bleed readily, but other symptoms may be so mild as to escape notice by the patient.

#### TREATMENT

The local treatment of Vincent's infection of the mouth is distinctly a dental problem. However, medical consultation is sometimes advisable or necessary to care for the systemic conditions which may contribute to or result from the oral infection. In the treatment, certain manipulative measures designed to improve oral health, remove various irritants and open, cleanse and irrigate the incubation zones constitute the essentials of local treatment. Abstinence from smoking should be required. The value of drugs topically applied is open to question. Numerous drugs have been advocated for use, both topically and by injection, in the treatment of this disease. However, scientific tests to establish their real virtues have yet to be presented. This is true not only of drugs for chair-side use by the dentist, but also of the innumerable mouthwashes which have been proposed. In the latter instance, a warm saline (table salt) solu-

tion will serve all the useful purposes of a mouthwash. The cumulative effects of some drugs used in mouth washes are of considerable importance. This is particularly true of sodium perborate. The indiscriminate and prolonged use of this and other drugs may result in marked chemical injury to the tissues of the mouth.

#### THE QUESTION OF CONTAGION

Considerable debate still prevails in professional circles regarding the possibility of transmission of Vincent's infection of the mouth. The large number of cases that have been reported at various times is cited in support of this contention. However, many other facts point to the contrary. The occurrence of large numbers of cases in an army or institution may just as readily be due to the debilitating conditions under which large numbers of individuals live, a commonly prevailing dietary deficiency, etc. Under such conditions, an outbreak of the disease in considerable numbers cannot properly be called an epidemic. As a matter of fact, the transmission of this disease in man has never been scientifically demonstrated. However, patients suffering from Vincent's infection of the mouth, particularly the acute form, should be advised to exercise the simple sanitary measures usually practiced in other instances of acute oral or respiratory disease.