

of the three methods, provided (1) that the operation is properly performed, (2) that primary union occurs; and (3) that the stump is at an early stage accustomed to bear weight, and can thus adapt itself rapidly to its new functions. Witzel [20] also states that by Hirsch's [21] method of treatment (exercise and massage) painful stumps may be rendered painless, even following the osteoplastic or subperiosteal methods of operating, any spurs present tending to become absorbed during the treatment.

An interesting comparison may be made between these spurs and the so-called exostoses which form as the result of injury to the periosteum from a blow or when a bone is fractured.

A characteristic specimen of a "spur" has been prepared, and is on view among the Canadian specimens in the War Collection at the Royal College of Surgeons.

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INFECTIOUS ULCERO-MEMBRANOUS STOMATITIS AND GINGIVITIS.

(Vincent's Disease, or "Trench Mouth.")

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THERE has, since 1915, developed a considerable literature upon the subject of the widespread condition amongst troops which has come to be known as "trench mouth," and with this, as correspondence in the *British Medical Journal* well indicates [1], a striking ignorance of that literature.

So recently as January in this year Captains Eagleton, Mercer, and Hudson [2], writing to the *British Medical Journal*, remark naïvely, "Having recently taken swabs from numerous cases of Vincent's angina, and having read various short articles on the prevalence of the condition amongst our overseas troops and amongst home service units, we are surprised to find no mention of the condition of the gums in this infection." Thus it may be serviceable to review the development of our knowledge, and to utilize the opportunity to report upon our further experience with the disease, based upon the study of more than one thousand cases, and of the frequency of the spirochæte and *Bacillus fusiformis* in the mouths of Canadian soldiers.

The disease known later as Vincent's angina was first described by F. Y. Clark [3] in 1879. He found associated with it an organism which, from his description, as published by Miller [4] in 1884, must have been Vincent's. Lingard and Batt [5] described the organism in cattle in 1883, and later in man. Plaut [6] published an article on the

subject in 1894. In 1896 Vincent [7], at that time attached to the military hospital at Val de Grâce, gave the first full and authoritative description of the throat and mouth conditions in man, the bacteriology of the disease, &c., and again, in 1898 and 1905, of the symptomatology and diagnosis. Vincent laid stress more particularly upon the affection of the tonsils and throat, and thus, unfortunately, the condition came to be known as Vincent's angina, and this name to-day is senselessly* applied by many to cases in which the throat is not affected. If Vincent's name deserves to remain associated with the condition, we should speak of "Vincent's disease." It is as sensible to speak of "Vincent's angina" of the conjunctiva or glans penis (both regions which may become infected by Vincent's organisms) as of the gums, or, again, to refer to noma of the cheek (which is a malignant affection set up by the same organism) as "Vincent's angina." The term must be banished. The noticeable feature of the disease as affecting troops is that, while the throat may be involved, this is more frequently a secondary event; the state of the gums is the prominent feature.

So far as I can gather from the literature, the credit of first calling attention to the frequency of this form of ulcero-membranous stomatitis in troops during the War should be divided between Rumpel and myself. My first communication upon the subject was at the December, 1915, meeting of the Canadian Medical Society at Shorncliffe.† A preliminary report embodying the data of my Shorncliffe paper was communicated to the January meeting of the Medical Section of the Royal Society of Medicine by Sir William Osler, and was taken as read, becoming published in the February issue of the *Proceedings*. [8] A synopsis of the work was published in the *British Medical Journal* of March 11, 1916, and in the *Journal of the Royal Army Medical Corps*; and this in the form of a pamphlet was later made an issue to Canadian medical officers of the D.M.S. Canadian contingents. What I regarded as the main feature of these two articles was not the recognition of the condition, but the evidence afforded of its frequency, and the rapid results gained by the use of a mixture of practically equal parts of Fowler's solution and vinum ipecac.

In the *Münchener medizinische Wochenschrift* of January 16, 1916, Rumpel [9] described the disease as appearing in an epidemic form in a group of 900 men stationed in a Russian village; 12 cases occurred on the first day, 60 on the second, 169 on the third, and 200 on the fourth day. Of the 900 men, 420 contracted the disease. This appears to be the most severe epidemic reported in the literature. It deserves notice that, owing to the embargo on German medical literature, this article was unknown to me and to British readers in general until August, 1916.‡

An excellent article by Goadby [10] appeared in May, 1916; he described the disease clinically and bacteriologically, and afforded a useful résumé of the literature on the subject. The first article in dental literature known to me on the existence of the disease among army troops was by Mendleson [11]. He regarded it as a microbial infection supervening on a general lowering of the vitality of the alveolar process. Eleven months after my first communication, and some nine months after it appeared in print, Taylor and McKinstry [12] described the disease as "fusospirillary periodontal gingivitis," and recommended what was substantially my treatment with arsenic and ipecacuanha, though without reference to my previous communications on the subject. In January, 1917, Captain E. E. Johnson [13], L.D.S., attached R.A.M.C., working at Millbank with the two last-mentioned observers, described the disease clinically in the *British Dental Journal*, and used the identical

* An angina (from *Ango*, or ἀγγω, I strangle) is a condition accompanied by the sense of suffocation.

† According to correspondence on file at the office of the D.M.S., Major Bowman's original paper was received at that office for approval and publication on or before December 23, 1915; publication was delayed pending consultation with the War Office.—Editor.

‡ This malignant form is, perhaps naturally, more common in the territory of the Central Powers than with us. Thus Heinemann [18] reports that of 25 cases seen at Adrianople in February and March, 1916, nearly all succumbed to noma within two weeks; and Sauerwald [19] describes an epidemic of 45 cases among convalescents from dysentery and relapsing fever, beginning suddenly with severe cases, death in the worst cases occurring in two to four days. Other cases under treatment recovered in ten days.