THE RELATION OF PERIDONTAL GINGIVITIS TO VINCENT'S ANGINA.*

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THAT ulcero-membranous inflammatory affections of the buccal cavity may be widely distributed on the mucous membranes of the mouth and gums, and not confined to the pharynx and tonsil in accordance with the classical descriptions of Vincent's angina, has been recognized by many observers since this was pointed out by Vincent himself in 1898. In addition to an ulcero-membranous pharyngitis and tonsillitis (Vincent's angina), he described an ulcero-membranous stomatitis and an ulcero-membranous gingivitis. In all these conditions, two or more of which are not uncommonly seen in the same patient, he found that the same micro-organisms were present—namely, the spirillum and *B. fusiformis* (Vincent).

Although Vincent's name is usually attached to these organisms they would appear to have been first seen and described by Miller, an American dental surgeon, in 1882.

In the Queen Alexandra Military Hospital during the last few months we have examined bacteriologically nearly 300 cases of fuso spirillary infection of the mouth, and have abundantly verified the constant presence of these organisms in all forms of ulcero-membranous inflammation of the mouth, either alone or associated with various forms of cocci, bacilli, and leptothrices.

In addition to the diffuse ulcero-membranous gingivitis previously described by Vincent and others, which is frequently found in association with Vincent's angina, there is frequently met with a more restricted infection of the gums with these fusiform and spirillary organisms, in which the lesions are limited to those parts of the gums which are in immediate contact with the necks of the teeth. This condition constitutes, we believe, a distinct clinical entity, and may accurately be designated fuso-spirillary peridental or marginal gingivitis—a condition named and described by us in a paper read before the Odontological Section of the Royal Society of Medicine on November 27th, 1916.

In addition to its prevalence this affection is of interest and importance in that it is often confused with pyorrhoea alveolaris, although it differs in the absence of pus and pus pockets. Further, the treatment, course, duration, and prognosis of the two affections are essentially differential.

In our earlier examinations of cases of Vincent's angina the investigations were restricted to the ulcero-membranous lesions of the pharynx and to the differential diagnosis of the condition from other ulcerative membranous infections, particularly diphtheria and syphilis.

Later the ulcero-membranous lesions were found not to be confined to the pharynx, and many cases of fuso-spirillary gingivitis were observed often associated with the typical Vincent's angina.

It is, however, the restricted peridental or marginal gingivitis which we have particularly found associated with Vincent's angina, although in a few cases the accompanying gingivitis was of a more diffuse character.

Since our attention was first directed to this association of peridental gingivitis and Vincent's angina we have made a systematic examination of the gums of 70 cases of Vincent's angina, and in every case, without a single exception, we found the gums to be affected, the condition in the great majority of these cases being a localized peridental or marginal gingivitis.

Conversely, out of 150 cases of fuso-spirillary gingivitis the characteristic lesions of Vincent's angina were present in the pharynx or tonsils in 70. In all these cases the clinical findings were confirmed by careful bacteriological examination.

An investigation of the histories of the cases showed the same sequence of events in them all—namely, that

the gums were always infected first, and that the sore throat was the more recent condition, having been infected, it would seem, from the gums. In many cases the patients themselves would make no complaint about the gums, but on inquiry it would be found that the gums had been sore and bled more or less freely whenever an attempt was made to use a toothbrush or clean the teeth.

This condition of the gums may have been present for days or weeks, or even months, and in a few cases years before infection of the tonsil or pharynx supervenes.

In some of these cases of peridental gingivitis the patients had frequently suffered from attacks of sore throat, and examination in these cases usually revealed evidences of old ulceration of the tonsils or pharynx with loss of tissues, deep crater-like depressions in these organs being often found. In this connexion the following are interesting and instructive histories:

CASE I.

Second Lieutenant D. Lovat's Scouts, presented himself for treatment suffering from Vincent's angina of the left tonsil. Peridental ulceration of the gums was also present about the lower incisors. The teeth were sound, clean, and in good condition. After two weeks' treatment of the topical application of an alkaline solution of salvarsan the throat was quite healed and the condition of the marginal gingivitis was much improved, though slight bleeding of the gums when touched still persisted, and fusiform bacilli were still present though in greatly reduced numbers.

Owing to the fact that he was then recalled to his regiment no further treatment was undertaken. About the middle of November the right tonsil became sore and painful.

The regimental officer applied boro-glyceride, tincture of iodine, and other solutions, without success, and so referred the patient back to us on December 5th. We found a deep ulcer on the right tonsil, and a relapse of the peridental ulceration about the lower molars. Smears made from both the throat and the gums showed the usual picture of fusiform bacilli and spirilla. Swabbing the throat and gums with salvarsan solution was again regularly undertaken, and by December 18th the throat was completely healed.

On December 22nd the organisms had disappeared from the alveolar margins and there has been no recurrence either in the pharynx or the gums.

CASE II.

Pte. B., A.I.F., complained of sore throat, and two deep ulcers were found on the right tonsil. A soft whitish membranous exudation covered the ulcerated surface, and could readily be removed with a throat swab or platinum loop. This slight manipulation was sufficient to excite somewhat free bleeding. The throat had been sore for two days, and great pain on swallowing was experienced. The breath was fetid and the lymphatic glands beneath the left angle of the lower jaw were swollen and tender.

The gums also showed peridental gingivitis about the lower incisors. On cross-examination it was found that bleeding of the gums had been present for the last two years. The teeth were in good order, the first and second left upper molars having solid fillings. Smears from both the gums and throat showed the presence of fusiform bacilli and spirilla.

The teeth were thoroughly cleaned by the dentist, and the gums and throat were then painted daily with salvarsan solution. By November 22nd the condition of the throat was greatly improved and no bleeding occurred on instrumentation of the gums. On December 6th the throat was well and the gums were nearly healed. On December 15th both throat and gums were free from Vincent's organisms.

CASE III.

Pte. C. was sent for the bacteriological investigation of a sore throat of four days' duration. An ulcero-membranous inflammation of the right tonsil was found. The gums had been tender and bleeding for a week. Smears prepared both from the tonsil and the tooth margins of the gums showed typical fusiform and spirilla. In ten days the throat was healed and free from these organisms, and a week later the peridental gingivitis was healed and the tooth margins of the gums were free from the organisms.

CASE IV.

Capt. K., R.A.M.C., complained of sore throat of three days' duration and of bleeding sore gums of three weeks' duration. The sore throat was a typical Vincent's angina and the sore gums typical peridental gingivitis. The characteristic organisms were present in both conditions.

These few cases may be taken as examples of many which we are encountering daily, and the histories of the cases keep repeating the same sequence of events with monotonous regularity. First the bleeding sore gums, which may or may not have been diagnosed as pyorrhoea, and which may have been present for some considerable time, and then the throat becomes affected, and the typical ulcero-membranous pharyngitis and tonsillitis of Vincent's

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angina is seen. The diagnosis is confirmed by finding the typical organisms in both conditions.

Our experience has been confined to adults, but Vincent's angina is also seen in children, and it would be interesting to learn if the same frequency of peridental gingivitis is observed in association with Vincent's angina in children, and whether in them the same sequence of events—namely, the peridental gingivitis preceding the Vincent's angina—also occurs.

As the result of our investigations we suggest that when a patient complains of a sore throat which presents the characters of Vincent's angina it is essential to examine the tooth margins for evidence of peridental gingivitis or pyorrhoëa, and that smears be made from both sources for the detection of the causal organisms. When found to be present, the peridental gingivitis should be adequately treated as well as the Vincent's angina; otherwise the condition is likely to persist indefinitely and to cause repeated recurrence of the sore throat.

ABDOMINAL KNEADING IN THE TREATMENT OF INTESTINAL STASIS.

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DELAY in the passage of food through the large intestine is a potent cause of disease, and treatment by removal of a portion of the bowel is a very severe remedy, only to be resorted to if simpler measures fail.

The causes of intestinal stasis are numerous, but one of the most important is the anatomical construction which makes it necessary that in the first section of the large intestine the food should travel against gravitation and at the summit of the ascent turn the sharp corner of the hepatic flexure; and this just at the spot where in women it comes under the pressure of the corset. The difficulty of transit is increased by the fact that, whereas the contained food is in a semi-liquid state in the stomach and small intestine, it has become semi-solid in the colon owing to the absorption of moisture.

Then, again, the passage from a tube of small calibre such as the small intestine into a large elastic pouch like the caecum tends to favour delay. The normal time for the passage of food through the stomach and small intestine, a distance of twenty feet, is about twelve hours, while it takes another twelve hours to accomplish the journey through the five feet of large intestine.

These causes are present in the normal individual, but there are also morbid causes, such as sagging of the transverse colon, and adhesions, with the resulting kinks demonstrated by the x-ray meal.

That it is important to prevent the stasis of food in the large intestine is shown by the relief obtained through the use of purgatives and paraffin, and the popularity of the douche for washing out the large bowel.

It is to supplement these remedies that abdominal kneading is recommended. The patient, after being carefully instructed, can carry out this treatment for herself. Lying in a warm bed, in a comfortable position on the back, so as to relax as far as possible the abdominal muscles, she must place both warm hands, with the fingers flat, upon the abdomen over the position of the caecum. Gentle but firm pressure must now be made, gradually getting deeper and deeper as the muscles relax and the contents give way. The pressure must be made backwards and upwards, and must be continued at this spot for at least two minutes. The contents cannot be easily driven back into the small intestine, and will therefore be impelled forward. The hands, still pressing deeply, are made to follow the contents up the line of the ascending colon.

The next movement has for its object to assist the passage round the hepatic flexure. For this purpose the fingers of the right hand are placed at the right loin, in the cleft between the lower ribs and the hip-bone, and pressed firmly forward. The left hand is placed at a corresponding spot on the front of the body and pressure brought to bear so that the bowel is squeezed between the two hands and emptied of its contents. The pressure may be relaxed and repeated several times. The gall bladder

must now be manipulated. The tips of the fingers of both hands are forced under the ribs at the position of this viscus and pressure brought to bear upon the fundus. A very efficient instrument for this treatment of the gall bladder is the electric vibrator.

Deep kneading is now applied over the transverse colon, pressing towards the spleen. The splenic flexure is treated in the same way as the hepatic, but it is far less important. Indeed, the only other important part to treat is the sigmoid flexure, and here the pressure must be exerted downward. The patient should treat herself after getting to bed at night and again before rising in the morning, spending fifteen to twenty minutes in the process. Steady pressure and great patience are necessary if any success is to be obtained. Much of the treatment recommended can be carried out by the use of a heavy ball of shot, which is very slowly rolled over the abdomen following the direction of the large intestine.

The most obvious effect of the kneading is the passage of flatus which usually occurs while the treatment is in progress. This is frequently followed later on by an action of the bowels.

In deciding what cases require this treatment, one naturally thinks first of constipation, biliary catarrh, and dyspepsia. But intestinal stasis is often present where it is not suspected, and a careful examination of the abdomen should be made in every case of chronic illness. It may be at once obvious on inspection that the right side of the abdomen is more distended than the left. Through the parietes of elderly women elevations can sometimes be seen showing the position of lumps of hardened faeces beneath. Palpation will clear up any uncertainty in the diagnosis. Of 156 patients in whom the abdomen was examined at the Electro-Medical Hospital, Nottingham, tenderness over the caecum was present in one-third. Most of these were suffering from some form of rheumatism or from neuritis. In many the tenderness disappeared after a short course of treatment, and in none did any harm arise from the kneading and electricity applied.

In elderly persons in whom the tone of the muscular fibre is lost, difficulty is experienced in bringing about a healthy action of the bowels; they suffer from chronic retention, and when the bowels are relieved by purgatives there is inability to retain the liquid motion. For these cases abdominal kneading with electricity is useful.

Many persons in ordinary health are subject to occasional attacks of heaviness or depression. They arrive at their office only to find that the head is not clear and work is an effort. Let them lie on a couch and carry out abdominal kneading. In the course of an hour the head will become clear and all the unpleasant depression pass away. Early morning headache is caused by poisons absorbed from the abdomen, and is relieved by kneading; even when there is no constipation. Diarrhoea is due in many cases to fermentation in the caecum. The overflow gives the mistaken impression that there is no stasis. Kneading is often of service in this condition. No case of mucous colitis should be considered incurable until kneading has been thoroughly tried, while paraffin is being given internally.

A very troublesome condition, often accompanied with much pain, is that due to adhesions following operations on the abdomen. Kneading, with radiant heat and electrical treatment, will bring about a good result if persevered with.

It is not in chronic diseases only that this treatment is useful; the doctor called in to an emergency case of flatulent colic can relieve his patient in a few minutes by this method.

THE United States Public Health Service in a recent bulletin states that garment workers, particularly pressers and ironers, are subject to chronic poisoning by carbon monoxide gas, discharged into the air of workshops by gas-heated appliances. In 11.8 per cent. of the shops examined in New York City the amount of carbon monoxide was found to be excessive; in 38 per cent. the smell of gas was perceptible. Fifty per cent. of the shops used ordinary gas irons only; 41.8 per cent. used irons heated by a mixture of gas and air under pressure. Only 2.4 per cent. used electric irons exclusively, and in 8.6 per cent. defective gas irons were found. Examination of the gas tubes showed that none were gas-tight.