

lobe to that of the right lobe, and the operation performed as already described. Two small fragments of gland-tissue are left behind, one in the left lobe about the size of half a walnut, and one in the isthmus of the same dimensions. Two quill tubes were inserted to avoid pressure during the early oozing of the walls of the wound. The stitches and tubes were removed on the third day, and the wound dressed with collodion and cotton. A small collection of pus subsequently formed at the most dependent point of wound, and left a sinus which had not healed three months after the operation, when the patient left the convalescent home. There were at that time no signs of myxœdema.

Microscopical examination by Dr. W. F. Whitney: "Several large, dark, rounded growths from thyroid region. Section showed some small cystic cavities, the walls in places infiltrated with lime salts, but in general the growth was of the character of the thyroid, but with enlarged alveoli containing a colloid material. Bronchocele."

This patient suffered from aphonia for several weeks after the operation, and a laryngoscopic examination showed that the right vocal cord was paralyzed. The voice, however, was subsequently fully restored.

CASE IV. A. S., single, twenty-five years of age, entered the hospital February 1, 1892. She was born in Ireland, and lives at present in Dorchester. Her family history is good. She has always been healthy. Five years ago she first noticed a "bunch below the Adams apple." This has grown steadily since, although it varies at times somewhat in size (Fig. 1). There is no difficulty in swallowing and no change in voice or breathing.

On examination an enlargement of the thyroid gland is seen on both sides, that on the left being about the size of a large orange, and about twice as large as that on the right. The tumor is non-pulsatile and moves with deglutition. The larynx and trachea are displaced somewhat to the right of the median line. There is no protrusion of the eyes. Extirpation of the gland performed February 6th. A semilunar incision, about five inches in length, was made from the apex of the left lobe downwards and across the median line to a point considerably lower on the left (Fig. 2). A number of large veins were divided, but there was no great difficulty in controlling the bleeding as the capsule was separated from the surrounding tissues. A portion of the right lobe, about the size of a horse-chestnut, was allowed to remain. One quill drainage-tube was inserted, and the edges of the wound were brought together by silk sutures. The dressing was applied loosely, but sufficiently firm to prevent exposure of the wound.

The wound healed by first intention, the drain having been removed on the second day. The photograph (Fig. 2) was taken about ten days after the operation. A microscopical examination showed a growth similar to that found in Case III.

In a case of large cystic goitre, which recently came under my notice, where tapping and the injection of iodine had been tried, the swelling and signs of suppuration induced me to lay open the sac freely and pack it with iodoform gauze, which operation was successfully performed without any trouble from hæmorrhage. The tumor was about the size of a cocoanut. I have not yet heard of the subsequent history of the case.

TUBERCULAR ULCERATION OF THE HARD PALATE AND GUMS.¹

BY A. COOLIDGE, JR., M.D.

THE lesion to which I wish especially to call attention is a tubercular ulceration which occurs on the gums around the upper front teeth and on the hard palate just behind them. Its usual appearance is that of a coarse, granular ulceration, deep red, and often in places presenting a raspberry appearance. It is most active close to the teeth, and there is little or no swelling. The edges of the ulcer on the hard palate are not elevated, and often merge gradually into the healthy mucous membrane. The mucous membrane alone is attacked; there is no caries of bone. It is essentially chronic in its history, and shows no attempt to heal, at least, while the teeth remain. The gums may be slowly absorbed, leaving the roots of the teeth bare.

This appearance has been described as occurring secondarily, both in cases of primary lupus of the face and of the throat. It has also been seen in connection with more active tuberculosis of the lungs, pharynx and other organs.

The anterior palatine canal has been suspected as the channel through which the disease extended from the nose to the palate, or from the palate to the nose, and this seems to be borne out in two of the cases which I report. It surely seems possible that this lesion of the gums may be the bridge by which lupus or other tubercular disease may pass from the throat to the nose, or *vice versa*.

In the three cases which I report, the lesion of the gums and hard palate is the only symptom which occurs in all. In none of them has there been up to this time any disease of the lungs, larynx or epiglottis.

CASE I. The first case is a typical one of lupus. I. K., twenty-one years of age. Her grandmother died of phthisis, her family history otherwise negative, previous health good. In 1888, she noticed a sore spot on the gum above the right canine tooth, which in the course of two or three months had spread around the gums of the upper incisors on to the hard palate just back of the teeth, and appeared as a small spot inside the nostril, after which it appeared on the face. When the fauces became involved it is difficult to say. The patient noticed that she was growing deaf a year before the spot appeared on the gum, but did not notice any serious trouble in the throat until afterwards. The disease in the pharynx gave the patient so little discomfort that she did not realize that there was any serious trouble there until extensive cicatrices had formed. I suspect that the soft palate was the primary seat of the disease. I first saw her in August, 1890, she was, and still is, being treated by Dr. J. C. White for lupus of the nose and face. The gums round the upper incisors, and the mucous membrane of the hard palate, for an inch back of the incisor teeth, showed a granular ulceration of a deep red color. The pillars of the fauces and the velum had coalesced with the posterior pharyngeal wall leaving only a small opening into the nasal pharynx. The uvula had disappeared, the velum and back of the pharynx were white, cicatricial and hard, except that on the borders of the cicatricial tissue in some places were slightly elevated, inflamed nodules. From January until May, the patient was in the Massachusetts

¹ Read before the Boston Society for Medical Improvement, February 8, 1892.

General Hospital for treatment with tuberculin. While there, a small ulcer appeared on the tongue about an inch from the tip, which has slowly extended since, until it is now about the size of a quarter. The ulceration of the gums spread somewhat on to the mucous membrane of the lip. The treatment produced little or no permanent effect upon the local disease. On two or three occasions, the white cicatricial tissue of the pillars has become inflamed, and local ulcerations have temporarily appeared, a process which has often been noticed in lupus of the throat.

At present, the patient is in much the same condition as when first seen, except that the skin has improved very much under treatment and that the tongue is involved. The granulations of the gums have resulted in their contraction, so that the roots of the teeth are more exposed than formerly. The molar teeth are also surrounded by granulations. The mucous membrane of the hard palate is ulcerated in the vicinity of the teeth, and cicatricial in the centre.

CASE II. G. H., aged eighteen years. Her two grandmothers died of phthisis, other members of the family including the patient have always been delicate; family history otherwise negative. She has for some years been a patient of Dr. White at the Massachusetts General Hospital. At the age of fourteen the patient had diphtheria followed by enlarged glands of the neck, which discharged externally for a short time. A year later a spot appeared on the leg, which increased to about the size of a silver dollar, ulcerated, and after a few months cicatrized. She subsequently had five or six similar patches on the leg and arm. In 1887, her throat began to be sore and to feel swollen, and she began to be deaf. The next year, she noticed a spot on the hard palate, which soon spread to the gums of the incisor teeth. I saw her first in September, 1889, there was then nothing on her skin but the cicatrices mentioned above. In the throat, the left anterior pillar was of a pale pink color and irregularly thickened. The right pillar was ulcerated, cicatrizing round the edges of the ulcer with very little infiltration, and there was some loss of substance. The uvula was nearly buried by the cicatrization of the pillars. The interior of the nostril was normal. On the hard palate for about an inch behind the front teeth and on the gums around the incisor teeth, there was a granulating ulcer. The patient was given full doses of mercury and iodide of potash for some time, but the local disturbances were apparently made worse by the treatment. For over a year different applications were made but without effect, except that after curetting the ulcer of the hard palate it cicatrized, but broke down again in a few weeks. It spread very slowly on to the mucous membrane of the upper lip, and by the destruction of the gums the roots of the teeth became prominent. In the autumn of 1890, a small ulcer appeared on the floor of the right nostril. At the same time also the ulceration of the right pillar extended on to the pharyngeal wall, but later cicatrized, binding the pillar and wall of the pharynx together on that side. In January, 1891, she entered the City Hospital in the service of Dr. George B. Shattuck, for treatment with tuberculin. Examinations of scrapings from the gums failed to show any tubercle bacilli. After injections with tuberculin, the ulcerations round the teeth and in the nostril became inflamed, the pharynx was less actively affected. The ulceration in the nostril extended, being preceded by an in-

flammatory zone, which finally attacked the skin of the nose just above the alæ, and also the septal cartilage. While in the hospital the destruction of the gums was more rapid, the incisor teeth were so loosened that they were removed. An interesting point is that after the removal of the teeth, the ulceration of the hard palate, gums and mucous membrane of the lip which had existed for three years, cicatrized speedily leaving only a slight ulceration around the canine teeth. This has continued since, and has already loosened the canine, and has attacked the molars. At present, the patient has upon the side and bridge of the nose an ulcer about the size of a five-cent piece, with elevated edges, a destruction not only of the skin, but also of the septal cartilage. The patient's general condition is much better than it was a year ago.

CASE III. M. F., twenty-seven years old, family history negative, previous health excellent, except that she had frequent headaches, which disappeared entirely while the mouth was sore, but have now returned. Five years ago, her brother noticed an ulceration, apparently tuberculous, on the edge of his left nostril, which has been under treatment, and which has, up to this time, involved only the skin around the nostril. Two years ago, the patient first noticed a sore spot on the gum over the left canine tooth, which slowly spread during a year and a half around the incisor teeth and on to the hard palate. I first saw her in the out-patient department last May. The gums around the front teeth and on the hard palate for half an inch behind them were ulcerated, deep red and coarsely granular. The patient complained of a tender spot on the floor of the left nostril, but nothing could be seen there. Except for this ulceration, the patient presented no signs of disease. She had felt run down for a few months, but was otherwise in good health. A month later, the disease had spread slightly. She was then sent into the hospital where, on July 25th, Dr. F. B. Harrington resected the upper jaw, removing all trace of the disease. The patient made a good recovery, and in three months had gained fifteen pounds. There has up to this time been no return of the disease. The part removed contained the alveolar process as far back as the first molar teeth and the anterior part of the palate process. The teeth although well-cared for had been very subject to caries as is seen by the number of fillings which they contain.

In reviewing these cases, we find a very similar lesion of the gums and hard palate in three cases presenting very different clinical histories; and this I have found to accord with previous reports. The granular ulceration of the gums has been most frequently seen in connection with lupus of the nose, especially where the soft palate or the larynx is also involved. The first of my cases belongs to this class. In the second case it appeared with a condition of the throat which has been described as scrofulous. In the third case the lesion on the gums and hard palate and a small spot in the nostril are the only evidence of disease.

Lennox Brown, in his book on diseases of the throat, puts under the head of tuberculosis only the more malignant form seen in connection with tuberculosis of the lungs and other organs. Lupus he considers a distinct disease, clinically at least. There is surely a great difference between the more malignant tuberculosis and the very slow progress often seen in lupus of the pharynx which tends to form hard cicatrices and which may lose all activity, at least temporarily.

There are, however, certain cases which are slow in their course and in which the diagnosis of lupus from the appearance in the throat alone is hard to make. That lupus may be primarily in the throat is not now doubted. Such a case was reported by Dr. F. I. Knight,² in 1881, before the American Laryngological Association, and similar cases have been reported since. The differential diagnosis between lupus and other tubercular lesions in the throat is often difficult. In the mouth, and especially around the teeth the distinction is even more difficult to make. Clutton³ prefers to call it tubercular ulceration, and the same view is taken by Michelson⁴ in a review of the literature of the subject. Tuberculosis of the mouth is generally secondary to tuberculosis of the lungs, pharynx or other organs, or to lupus. Primary tuberculosis of the mouth is not common. Some cases have, however, been reported, in most of which the disease has soon appeared in other parts of the body.

Tubercular ulceration of the gums and of the hard palate just behind the gums generally shows no tendency to heal, at least while the teeth remain. It tends to destroy the gums and loosen the teeth, and altogether acts as if the tissue immediately around the teeth were a favorable seat for the disease. It has been suggested that when the disease spreads from the gums to the nose, or from the nose to the gums, it does so through the anterior palatine canal. The lip is seldom involved, and the bone never.

I think that it is important to recognize the malignant character of this form of ulceration around the front teeth, and in cases in which both the nose and

the soft palate, or pharynx, or larynx are not already involved, to take active measures to check the disease, and if possible to prevent it crossing by this bridge from the nose to the throat or *vice versa*. Of primary importance in the treatment is the removal of the teeth, the gums of which are attacked. While the teeth remain, the gums show no tendency to heal; after the teeth are out the gums are much more amenable to treatment. In my second case, by using the curette and galvano-cautery, the ulcer on the hard palate cicatrized, but the disease could not be got at around the teeth, and the cicatrization was only temporary. After the teeth had been removed the ulcer cicatrized readily; but by that time the nose was involved, apparently by direct extension. In the third case the unhealthy tissue was entirely removed, and I hope that the patient has been saved from tuberculous disease in other places. I have not been able to find a report of a similar operation for this trouble.

Microscopic examination of the mucous membrane, from Case III, after hardening in alcohol and imbedding in celloidine, showed a granulation tissue resembling in every respect that seen in tuberculosis, namely, very numerous Langhans giant-cells, intermingled with epithelioid and small round cells. The number of Langhans cells corresponded to those found in lupus, as distinguished from some of the other forms of tuberculosis. There was very little "cheesy degeneration" seen. A few sections stained by the Ziehl method failed to reveal the presence of tubercle bacilli, but the bacteriological examination was not sufficiently thorough to warrant any deductions.

SEASON AND DISEASE-PREVALENCE IN CAMBRIDGE, 1880-1889 INCLUSIVE.

BY EDWIN FARNHAM, M.D., CAMBRIDGE, MASS.

Max. ±, min. =, above average +, below average -.

DISEASE.	January.	February.	March.	1st Quarter.	April.	May.	June.	2d Quarter.	July.	August.	September.	3d Quarter.	October.	November.	December.	4th Quarter.	Total.	Monthly Average.
Diphtheria . .	67 ±	37 -	43 -	147 -	43 -	59 +	47 -	149 -	55 +	44 -	34 =	133 =	63 +	62 +	64 +	189 ±	618	51.50
Scarlet Fever .	20 ±	12 +	12 +	44 +	5 =	13 -	6 -	24 -	5 =	5 =	10 -	20 =	11 -	18 +	17 +	46 ±	134	11.16
Typhoid Fever .	14 -	6 -	6 -	26 -	3 =	6 -	7 -	16 =	8 -	20 +	29 +	57 =	42 ±	27 +	24 +	93 ±	192	16.00
Measles . . .	3 -	2 -	4 -	9 -	6 +	22 ±	16 +	44 ±	7 +	6 +	1 -	14 -	0 =	2 -	2 -	4 =	71	5.91
Whooping Cough, } Diarrhoeal } Diseases, }	13 +	6 -	8 -	27 +	4 -	5 -	2 =	11 =	18 ±	11 +	18 ±	47 ±	9 +	5 -	3 -	17 -	102	8.50
Bronchitis . .	51 ±	47 +	36 +	131 ±	42 +	32 -	25 -	99 +	16 -	14 -	15 -	45 =	28 -	36 +	44 +	108 +	386	32.16
Pneumonia . .	119 +	98 +	110 +	327 ±	127 ±	93 +	48 -	268 +	42 -	27 =	40 -	109 =	63 -	97 +	118 +	278 +	982	81.83
Phthisis . . .	157 +	161 +	167 +	485 +	178 ±	152 -	159 +	489 ±	131 =	146 -	138 -	415 =	155 +	150 -	161 +	466 +	1855	154.58

SEASON AND REPORTED CASES OF DIPHTHERIA, SCARLET FEVER AND TYPHOID FEVER IN CAMBRIDGE, 1880-1889 INCLUSIVE.

Diphtheria . .	255 +	166 -	167 -	588 +	180 -	193 -	154 -	527 -	172 -	133 -	124 =	429 =	263 +	250 +	272 ±	785 ±	2329	194.08
Scarlet Fever .	230 +	184 +	195 +	609 +	143 -	139 -	120 -	402 -	100 -	77 =	126 -	303 =	190 +	257 +	279 ±	726 ±	2040	170.00
Typhoid Fever .	61 -	40 -	27 -	128 -	16 =	20 -	25 -	61 =	35 -	182 +	253 ±	470 +	219 +	165 +	94 -	478 ±	1137	94.75

THE diseases contained in the accompanying table were selected on account of the large contingent sup-

plied by them to the deaths from all causes, and because some of them belong to the class of diseases it is customary to call preventable, while others are ones which we hope to see hereafter included in that class.

² Archives of Laryngology, vol. II, 1881, p. 273.
³ Clinical Society Transactions, vol. XIX, 1886, and vol. XX, 1887.
⁴ Zeitschrift für Klin. Med., 1890, XVII, p. 202.