

Original Articles.

CLINICAL NOTES ON PEDICULOSIS.<sup>1</sup>

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At one of the recent meetings of this Association, the Chairman of the Committee on Statistics, in calling attention to the various interesting points that were shown in their report, stated that the number of cases of pediculosis reported from Boston was largely in excess of those from the other sections. An examination of the statistics published in the Transactions of this Association for the last nine years shows that this was not only the case during the year referred to, but that the excess has been a constant one.

Having looked up the statistics in regard to a class of cases in which I have always been interested I venture to lay before you a few of the results, although I fear that, to many of you, the subject will appear unimportant and uninteresting.

That practically, however, it is not unimportant, in Boston, at least, is, I think, shown by the fact that, out of 15,551 cases of cutaneous disease recorded on the books of the Department for Skin Diseases at the Boston Dispensary, I find 914, or very nearly 6%, entered as being caused by the presence of one of the three varieties of pediculi.

The following table is condensed from the Transactions of the Association, and gives the numbers of the three varieties of pediculosis reported during the past nine years, as well as the whole number of cases of cutaneous disease.

TABLE NO. I.

Statistics of number of cases of PEDICULOSIS reported in the Transactions of the American Dermatological Association from 1878 to 1886 inclusive.

	Boston	New York	Philadelphia	Baltimore	St. Louis	Chicago	Canada
Cases of Pediculosis	2132	995	320	113	48	660	39
Cases of skin disease	40070	32578	9269	5295	3312	21229	1173
Per cent. of Pediculosis	5½—	3+	3½+	2 1-6	1½—	3—	3—

A summing up of the nine years shows that the ratio of cases of pediculosis to the whole number of skin affections reported from Boston, is a little less than 5½%; from New York, a little over 3%; from Philadelphia, a little over 3½%; from Baltimore, 2½%; from St. Louis, less than 1½%; from Chicago, less than 3%; and the same ratio from Canada. That is, that Boston reports nearly double the number that the next largest (Philadelphia) does, and almost four times as many as the lowest (St. Louis). An examination of this table shows several interesting points, but I will only refer to the fact that in 1884, New York, out of 2,737 cases of skin disease reported none of pediculosis capillitii, and also that the number of cases of pediculosis pubis reported from Chicago are very nearly, if not quite, equal to those reported from all other localities.

The relative excess, however, in favor of Boston is even more marked in the cases of pediculosis capitis, as its percentage of these cases is 4%, to New York's

<sup>1</sup>Read before the American Dermatological Asso. Aug. 31, 1887.

1½%, Philadelphia's 2%, Baltimore's 1½%, St. Louis's 1%, Chicago's 1%, and Canada's 1%; that is, double the next highest, and over four times the lowest. This difference, running with constancy through a period of nine years, shows that it cannot be due to an accidental or temporary cause, and the interesting question to me has been as to what it could be attributed. There is nothing in the geographical situation or climatic condition of Boston that would be especially favorable to the propagation of this class of parasites, nor is there that difference in the mode of life, habits, cleanliness, etc., of the inhabitants, as compared with those of her sister cities, that could explain it. The only explanation that seems at all plausible is, that there is a difference in the observers who record the cases, in their classification of them, and I cannot but think that some cases which, in the Boston Hospital and Dispensary case-books, would be entered as pediculosis capillitii, would elsewhere be recorded as cases of eczema capitis.

I have also tabulated the cases of pediculosis from the records of the Boston Dispensary, with reference to sex and age, as well as relative frequency to whole number of cases of skin disease, and have drawn up four tables; that is, one for cases of pediculosis capillitii, which number 500; one for cases of pediculosis corporis, which number 337; one for cases of pediculosis pubis, which number 27; the fourth one being of cases which, on the record books, are entered simply as pediculosis, without stating of what variety; of these there are 50, which makes the total number 914, occurring in 15,551 cases of skin disease, a ratio of about 6%.

TABLE NO. II.

Cases of PEDICULOSIS CAPILLITII from the records of the Skin Department. Boston Dispensary.

MALE.

Year ending July 1.	Age									Total for year.
	1 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	Over 60	
1874	..	2	1	1	..	..	..	..	..	4
1875	3	2	1	..	..	..	..	..	..	6
1876	1	..	4	..	..	..	..	..	..	5
1877	4	1	3	..	..	..	..	..	..	8
1878	6	4	2	..	..	..	..	..	..	12
1879	3	1	2	..	..	..	..	..	..	6
1880	2	..	3	..	..	..	..	..	..	5
1881	3	2	..	..	..	..	..	..	..	5
1882	3	3	..	..	..	..	..	..	..	6
1883	2	..	1	..	..	..	..	..	..	3
1884	1	..	..	..	..	1	1	..	..	3
1885	2	2	..	..	..	..	..	..	..	4
1886	3	4	1	..	..	..	..	..	..	8
1887	2	3	1	..	..	..	..	..	..	6
Total Male	34	25	19	1	..	1	1	..	..	81

FEMALE.

Year ending July 1.	Age									Total for year.
	1 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	Over 60	
1874	2	5	..	..	..	..	..	..	..	7
1875	1	5	2	2	..	1	..	..	..	11
1876	4	4	5	4	1	..	..	..	..	19
1877	7	15	9	2	1	..	3	2	..	39
1878	12	17	12	4	..	..	..	..	..	45
1879	6	10	13	2	1	2	..	..	..	34
1880	6	17	10	1	1	..	..	..	1	36
1881	8	16	6	1	1	..	..	..	..	32
1882	4	10	10	1	..	1	..	..	1	27
1883	5	11	7	..	..	1	2	..	..	26
1884	4	8	1	..	1	..	1	..	..	15
1885	5	17	19	1	3	2	..	1	..	48
1886	4	19	12	1	2	..	1	..	1	40
1887	6	18	10	2	2	2	..	..	..	40
Total Female	74	172	116	21	13	9	7	3	4	419

Total, Male and Female, 500.

The three varieties of the pediculus which cause the cutaneous affections that are classed under the heading of pediculosis are the pediculus capitis, the pediculus corporis, and the pediculus pubis.

TABLE NO. III.

CASES OF PEDICULOSIS CORPORIS from the records of the Skin Department. Boston Dispensary.

MALE.										
Year ending June 30	1 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	Over 60	Total for Year.
1874	..	1	..	..	2	..	2	..	..	11
1875	..	..	4	..	..	3	..	..	..	18
1876	..	1	2	3	4	8	4	4	3	32
1877	2	..	1	3	4	3	6	5	3	32
1878	..	..	..	..	1	1	..	4	3	9
1879	..	..	2	3	1	1	..	1	3	15
18-0	..	..	2	2	2	2	2	3	3	14
1881	..	..	1	2	1	1	3	2	3	12
1882	..	2	1	2	4	1	2	4	6	22
1883	..	1	..	1	1	3	3	1	1	10
1884	..	..	2	..	2	2	2	4	3	15
1885	1	..	1	..	1	1	1	..	1	6
1886	1	1	2	2	6	2	..	3	4	21
1887	..	1	..	..	1	..	2	1	5	10
Total Male	4	7	18	16	26	25	25	32	43	196

FEMALE.

1874	..	..	..	..	..	..	1	1	1	3
1875	1	..	..	..	1	1	1	1	4	13
1876	1	..	..	2	..	2	2	2	5	25
1877	2	..	..	..	4	6	6	2	4	33
1878	1	2	..	..	2	1	1	2	4	13
1879	..	1	..	..	2	..	..	4	3	10
1880	..	..	..	..	..	1	2	1	3	7
1881	1	..	..	1	2	1	1	4	5	15
1882	1	2	1	1	..	3	1	2	2	13
1883	..	..	..	..	..	1	1	1	1	4
1884	..	1	..	..	..	3	2	1	3	10
1885	..	..	1	..	..	..	2	2	2	5
1886	1	..	1	..	1	2	1	1	2	9
1887	..	1	..	..	1	..	2	4	2	10
Total Female	8	7	3	4	13	20	23	28	35	141

Total, Male and Female, 337.

TABLE NO. IV.

CASES PEDICULOSIS PUBIS, from the records of the Skin Department. Boston Dispensary.

MALE.										
Year.	1 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	Over 60	Total for year.
1874	..	..	..	..	3	..	..	..	..	3
1875	..	..	..	..	..	..	..	..	..	..
1876	..	..	..	3	..	..	..	..	..	3
1877	..	..	..	2	..	..	..	..	..	2
1878	..	..	..	1	..	..	..	..	1	2
1879	..	..	..	1	..	..	..	..	1	2
1880	..	..	..	1	3	1	1	..	..	6
1881	..	..	..	..	1	..	..	..	..	1
1882	..	..	..	..	1	..	..	..	..	1
1883	..	..	..	..	1	..	..	..	..	1
1884	..	..	..	..	..	..	..	..	..	..
1885	..	..	..	..	..	..	..	1	..	1
1886	..	..	..	1	1	..	..	1	..	3
1887	..	..	..	1	1	..	..	..	..	2
Total Male	..	..	..	10	11	1	1	1	2	26

There was only one Female Case which was between fifteen and twenty years of age, and occurred in 1878.

Total, Male and Female, 27.

They each occupy a certain region of the body, and do not encroach on each other's territory, the pediculus capitis confining themselves to the hairy region of the scalp, the pediculus corporis to the body, and the pediculus pubis to the pubic region, axillæ, and that

when transplanted from one individual to another, they may get off their own proper ground seems almost inevitable; but, if such is the case, they soon get back there, as they are never, or, at least, rarely seen, except in their own locality. Of the three, the pediculus capitis is the most prevalent. A tabulation of the 914 cases of pediculosis entered on the case-books of my service at the Boston Dispensary shows that 500 were due to pediculosis capitis. I have drawn up the tables with reference to sex and ages, and from them certain facts can be deduced (Table No. II). The proportion of cases with regard to sex is seen to be 81 males to 419 females. In the male cases, of the 81, 34 were boys 5 or under, 25 between 5 and 10, 19 between 10 and 15, and only 3 above the age of 15. In the females, 74 were 5 or under, 172 between 5 and 10, 116 between 10 and 15, and the remaining 57 cases are scattered along, diminishing in number in each five years of age.

TABLE NO. V.

CASES OF PEDICULOSIS. Boston Dispensary. No Variety Stated.

MALE.										
Year.	1 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	Over 60	Total for Year.
1874	..	..	..	..	..	..	..	1	..	1
1875	1	..	..	..	..	4	..	1	..	7
1876	..	..	..	..	..	..	..	1	..	1
1877	..	..	..	..	1	..	..	1	..	2
1878	1	2	..	..	..	..	1	1	1	6
1879	1	2	..	..	..	..	..	..	2	5
1880	..	..	..	..	..	..	..	..	..	..
1881	..	..	..	..	..	..	..	..	..	..
1882	..	..	..	..	..	1	..	..	..	1
1883	..	..	..	..	..	..	..	..	..	..
1884	..	..	..	..	..	..	..	..	..	..
1885	..	..	1	..	..	..	..	..	..	1
1886	..	..	..	1	..	1	..	..	..	2
1887	..	..	..	..	..	..	..	..	..	..
Total Male	3	5	1	1	1	6	1	5	3	26

FEMALE.

1874	..	..	..	..	..	1	..	..	..	1
1875	1	..	..	..	1	1	..	..	..	3
1876	..	..	..	..	..	..	..	..	..	..
1877	1	..	..	..	..	..	..	..	1	2
1878	..	1	2	2	..	..	..	..	..	3
1879	..	1	..	..	..	..	2	1	1	7
1880	..	..	..	..	..	1	1	..	..	2
1881	..	..	..	..	..	..	..	..	..	..
1882	..	..	..	..	1	..	..	..	..	2
1883	..	1	..	..	..	..	1	..	..	1
1884	..	..	..	..	..	..	..	..	..	..
1885	..	..	..	..	..	1	..	..	..	1
1886	..	..	..	..	..	..	1	..	..	1
1887	..	..	..	..	..	1	..	..	..	1
Total Female	2	3	4	1	1	5	5	1	2	24

Total, Male and Female, 50.

In both sexes, the great majority of cases occur in childhood, when they are not able to take care of themselves. In boys, the frequency of pediculosis capitis drops off markedly at the age when the hair is cut short, and as they grow older, and become bald, they are, of course, comparatively free from it, my table only showing one between 15 and 20, one between 30 and 40, and one between 40 and 50. That the pediculus capitis produces any lesion of the scalp by its bite is very doubtful; that, when present in any number, they will cause a very decided cutaneous trouble, there can be no doubt of at all. It is, however, such as can in no way, from the character of the

efflorescence, be distinguished from an eczema of the scalp, varying in intensity from a congested, scaly form to an acute pustular one, according to the number of parasites present, or the susceptibility of the patient to irritating influences. When I say that it cannot be distinguished from an eczema due to other causes, I mean only as far as the efflorescence itself goes, as its situation, distribution, etc., are such as to make the diagnosis perfectly easy. There certainly is a great difference in individuals as to their susceptibility to the irritating action of the louse, as we see patients with a violently irritated scalp who do not show as many parasites as we find on others, where the cutaneous reaction is very much less. An invariable accompaniment of the presence of lice is the existence of their ova or nits. These are very characteristic, pear-shaped, semi-transparent bodies, attached to the shaft of a hair. When only a few lice are present, they generally are attached to the hair from one to one-and-one-half or two inches from the root, invariably with the sharp end towards the root; that is to say, the egg is laid by the louse with its head pointed towards the scalp. When the nits are very thick, they will be laid nearer and nearer to the root, sometimes almost touching each other. Sometimes, in the case of women or girls with long hair, they may be found on the shaft farther towards the end of the hair, but, as a rule, they are within two, or, at most, three inches of the scalp end. They are found in greater number on the hairs of the back part of the head, sides, and temples, although, in some cases, almost every hair is covered with them. The parts of the head that are most likely to show this cutaneous irritation are the occiput and crown, especially the former. If the patient has been infested by the parasite for some time, a papular eczema may be found on the back of the neck, and even extending down on to the shoulders. The post-cervical glands also may be found enlarged, especially in the case of children, and frequently, it is this enlargement of the glands that causes the mother to seek medical advice.

The diagnosis of pediculosis capitis, is very easy although it is by no means always an easy matter to see the louse itself. If present, however, in sufficient numbers to cause irritation, the nits can be surely seen. In practice, when I see a case of eczema capitis, chiefly confined to the back part of the head, and also find nits, I consider it, treat it, and cure it as pediculosis. It may be said, that it is possible that a case of eczema of the scalp might happen to get pediculi, without their being in any way the cause of the disease, and theoretically I must admit that it is possible; but practically when such cases treated with a parasiticide, have shown within a week that the eczema was cured or at least very nearly so, as has been the case invariably in my experience, it seems fair to assume that the parasite was the *origo malis*, and more especially so, when the parasiticide used is of an irritant nature, such as would most decidedly aggravate a simple eczema. The treatment of course is addressed to destroying the cause of the trouble, and for this purpose many things are used. It must be remembered, however, that we must not only destroy the pediculi, but that unless we also either remove the nits, or destroy their vitality, the cure is only a temporary one. I have found nothing so efficacious for routine dispensary practice as an ointment of carbolic acid in the strength of one to sixteen

or one to thirty-two, that is, 3ss to  $\zeta i$  of ung. petrolii. This not only destroys the pediculi but sterilizes the ova, and I have never seen any bad results from it. I must say, however, that in some very bad cases when the whole scalp is a mass of crusts, I have used instead for a few days some tar preparation, diluted with cod-liver oil.

Petroleum is a simple and cheap means of treatment, and is very commonly used. Its inflammability is an objection to its use, however, and I think that that is not the only one. One practical point has been strongly impressed upon me, and that is that if you wish to cure your patients, you had much better not tell them that the trouble is simply due to lice. They will not believe you and will not do what you tell them to, and for this same reason they look upon using such a simple means as petroleum with disfavor. It is a mere waste of breath to argue with them; they will say, and oftentimes truly, that they wash the child's head every day. It has been my experience that it is much better to give them some prescription and strict orders to keep the head clean afterwards. In cases where the mother will do it, the removal of the nits will of course be an additional safeguard, and this can be done very nicely by using a fine tooth-comb dipped in vinegar. A wooden comb is best, and it should be dipped in vinegar between each combing. The vinegar dissolves or at least softens the adhesion of the nit to the hair. By this means with a little patience, the hairs can be combed quite clean. It is advisable of course not to attempt to remove the ova in this way until the acute inflammatory symptoms have subsided.

The pediculus corporis, or as it is more properly called, pediculus vestimentorum, owing to the fact that it abides on the clothes and not on the skin, is in a general way very like the pediculosis capitis. It is larger and somewhat longer in proportion to its breadth, and shows a blackish tinge on the back, to which fact is probably due the name used by sailors to distinguish it from the head louse, that is, grey-back. In my tables it stands second in frequency, the number of cases recorded being 337 to 500 of pediculosis capitis. The relation with regard to frequency between the sexes, is reversed in favor of the males, 196 cases occurring in the male sex to 141 in females. The relative age of the patients is also shown to be the reverse of those in cases of pediculosis capitis, and there is not much difference between the sexes with regard to this point, both of them being more likely to be troubled the older they grow. In males the number of cases increases in each five years, from four cases under five years old, to forty-three over sixty, and in females from eight under five, to thirty-five over sixty. As people get older in the rank of life from which we get these cases, they get careless and perhaps unable to see to their personal cleanliness. While we are not able to see any evidence of the pediculus capitis causing a lesion of the skin by its bite, it seems undoubted that the pediculus corporis does, namely, a congested, infiltrated raised papule. This has been ascribed by some entomologists to the anatomical structure of its mouth, and the literature on this subject is extremely interesting, there being a difference of opinion between some of the best authorities, Burmeister being opposed by Simon and Erichson. Whatever the cause may be, there is no doubt but what these papules cause a most

violent irritation, as patients show the effects of scratching even to the extent of deep excoriations. Whether the body louse, when feeding, goes on to the skin, or feeds without leaving the clothing, I do not know, but in point of fact they are rarely seen on the skin. Kaposi states that when present in large numbers they may be seen on the epidermis after the clothes are removed, but I have never but once seen this, and that was in the case of a very hairy man who was infested with the parasite, when on pulling his undershirt off over his head, I saw one which had evidently been swept off, and was entangled in the heavy growth of hair on his breast. The diagnosis of pediculosis corporis in a severe case is very easy, in a slight one it may be quite puzzling. The fact that not only the parasites but their ova also, are found not on the body, but on the clothes, makes their discovery more difficult than in cases of pediculosis capitis. Even when quite plentiful the pediculi themselves are not easy to see. They hide in the seams of the clothing and it will often take a long and unpleasant handling of the clothes before one can be seen. Generally, however, the nits are more apparent. They are smaller than those of the pediculus capitis, and are attached to the fuzz of woollen clothes, or on the threads of seams. Another evidence is often found in small dark minute spots on the white underclothes, which are the fæces of the louse. The main point to guide us is, however, the distribution of the cutaneous irritation on the body. Owing to the fact that the parasite's home is on the clothing, we find the evidence of its injurious influence on those parts of the body which are brought into the most constant and intimate contact with the clothing. These are more especially, the shoulders, and in persons with a full chest the upper part of the breast, and the waist or girth. The outside of the arms, anterior aspect of the thighs, etc., will be more or less affected in proportion to the severity of the case, but it will be the shoulders and breast, and the small of the back and abdomen where the lesions are found most marked. These lesions may consist of congested papules more or less excoriated, deep furrows caused by digging into the epidermis with the nails, excoriated patches, and even furuncles, but I have never seen the moist or pustular eczematous efflorescence, that we so often see as the result of irritation in scabies, especially on the region of the supinators on the forearm. In cases of long-standing, a very decided amount of pigmentation is found, and when furuncles on the thighs have been started, we may get an inguinal adenitis.

It is, however, the much milder cases which will trouble us in the way of a diagnosis, and in such cases we often have to fall back on the distribution of the efflorescences, or, if the case is so light that no decided lesions are to be seen, on the locality to which the patient refers the pruritus complained of. The fact of old patients being especially subject to pediculosis corporis, makes the differential diagnosis between this and pruritus senilis a difficult one in many cases. The same is true with regard to the pruritus which accompanies hepatic disease and that of other organs. It must also be borne in mind that pediculosis may be co-existent and complicate the manifestations of any other skin disease, and such is frequently the case. Strange to say, however, I have never seen it and scabies on the same patient. In the treatment of this

form of pediculosis, we have the opportunity of following the old maxim, "*tollite causam*," and thus accomplishing a cure, by simply removing the infected clothes, or rendering them innocuous. Unfortunately the class of patients with whom we have to deal is such that this is by no means easy. To disinfect the clothing it is only necessary to expose it to the degree of heat at which albumen coagulates, to kill the lice and also sterilize the ova. Abroad, the hospitals have ovens where this can be done without injury, or at least without serious injury to the garments. In Boston, at the jail and States prison, the clothing is boiled, which effects the purpose, but which in the case of woollen materials is apt to render them a little small in future for the owner. Underclothes can, of course be boiled, and if anybody understands how, and is willing to do it, coats, trousers and waistcoats may be practically nearly disinfected, by passing a quite hot flat-iron along the seams and creases. In these cases, even more than in those of pediculosis capitis, that I referred to, does one run against a snag by telling the patient that their only trouble is due to a lack of cleanliness and the presence of lice. If you spend ten or fifteen minutes in hauling over their dirty clothes and finally manage to show them a louse, they will say, and many of them really believe it, that the state of their blood is such that they breed vermin. To such patients I simply order a solution of carbolic acid to moisten their skin with morning and night, and urge them to have their underclothing boiled as well as washed. Severe cases, of course, would have to be treated according to the lesions they suffered from.

Pediculosis pubis, in my tables, appears as very much less frequently occurring than the other two forms: I only having twenty-seven cases recorded, and of these twenty-six were males. This can not, however, be taken as a fair ratio of the actual comparative frequency of this disease. Without doubt if I had stripped every patient, I should have found that a very much greater number of them had this parasite. The number entered were those that called for advice for this trouble, and that there was only one woman amongst them is due to the fact that we get very few prostitutes as patients at the Dispensary, and still more that they probably recognize the trouble themselves and use domestic remedies to treat it. The ages given in my table are rather interesting, and what would be expected, that is, that of the twenty-six male cases, ten were between fifteen and twenty, and eleven between twenty and thirty, that is, twenty-one out of twenty-six were between the ages of fifteen and thirty. The only woman was between fifteen and twenty. These statistics would show that the pediculus pubis is most decidedly more frequently found in patients of that time of life, at which they are most likely to have sexual intercourse, and conversely would tend to disprove that the pediculus pubis is often acquired from waterclosets, or other non-sexual ways. One interesting fact with regard to this parasite is ignored in my statistics, and that is its occurrence in young children, on the eyelashes. The reason that such cases, of which I have seen about half a dozen, do not appear in my tables, is that they come under the observation of the oculist, rather than the dermatologist, and it has been due to the kindness of *confrères* in that speciality that I have seen the cases I have. The only way in which I can explain their being in such

a position is by supposing the child had slept with an adult infested with crabs, and had snuggled up with its head under the axilla. Anatomically the pediculus pubis differs much more from the other two, than they do from each other, its breadth being almost equal to its length, and the formation of its anterior pair of claws resembling those of the crustacean form, from which it takes its popular name. The two posterior pair of claws are armed at their ends by a quite sharp, sickle-shaped hook.

In its habits also the pediculus pubis is different, as it is found only on those parts of the body, which are provided with the stout curly body hair, same as that of the beard. When I say that they are only found in these regions, I mean permanently settled there, as it is possible that they may be shaken on to some other parts. Within these regions they may be found anywhere, their most common situation being that from which they are named; but from the pubes, as they multiply, they may wander wherever they can find congenial soil. In hairy individuals the median line of the abdomen seems to furnish a road by which they can reach the sternal hairs and the axillæ. I have also found them on the anterior aspect of the thighs, the lower legs and even on the hairs on the dorsum of the phalanges of the toes as well as the beard, mustache and eyelashes. Their position is a very peculiar one, as they are always found at the root of a hair, and apparently clasping the shaft with their anterior claws. Whether the hooklets are dug into the epidermis when the insect is not disturbed, I do not know, but certainly if any attempt is made to remove it, it will be found to cling in a way that almost causes it to be torn apart before coming off. In fact this does sometimes happen. I am inclined, however, to think that this clinging by the hooklets is only assumed when needed, though I can not be certain. I have for a time tried to get hold of the hair at the root of which the crab was seen, with the hair forceps, and try whether by twitching it out by the root, the parasite would come with it. But it is a very difficult experiment to carry out, as the hairs are so thick and matted together, that is on the pubes, the only place on which I have seen the parasite since I became interested in this point, and, moreover, a negative result would prove nothing, as in trying to separate the hair the crab would be likely to be disturbed and fasten his hooks in the skin. I do think, however, that I twice have had the louse started for one-third to one-half an inch from the skin when the hair was quietly seized and suddenly twitched out.

The eggs are laid on the shaft of the hairs, as with pediculus capitis; they are about the same size, I should say, less translucent, not so pear-shaped, and, in the case where only one is found on the hair-shaft, nearer the root end. This, if the fact, is probably due to the pubic and body hairs standing out with their axes perpendicular, or somewhat so, to the skin, whereas the scalp-hairs, in most cases, at least, are smoothed, brushed, and plastered down, so as to be almost parallel, as to their shafts, with the scalp. It would not seem that the diagnosis of pediculus pubis could be difficult, but sometimes it is, especially in cases where only a few of the parasites are present. In these cases, as in those of pediculus capitis of a similar nature, the presence of the nits is often what we must rely on, unless we wish to pass a long, tiresome, and useless time in hunting at the roots of all

hairs. Whether the pediculus pubis makes any idiopathic lesion on the skin, I am not prepared to say. Usually, we find a red, papular, eczematous eruption, chiefly confined to the hairy parts, but sometimes extending beyond. In practice, the cases I see are very apt to be complicated with inflammatory manifestations, due to treatment already undergone.

It must be remembered that patients affected with other skin troubles may become contaminated by pediculus pubis, and, in some very filthy cases, all three of the pediculi can be seen on the same subject.

The treatment, unless the case is complicated, is not difficult, but I should be more cautious in using strong means than on the scalp. For ordinary cases, I find carbolic acid in ungu. petrolii answers very well. Where severe, especially if the severity has been caused by irritants, emollients, rest, and tepid bathing; as the case yields, then a mild solution of the bichloride, Peruvian balsam, solution of boracic acid, etc. The amount of damage that is sometimes done by a liberal and repeated use of mercurial ointment, which is the popular remedy, is almost without limit.

The means by which these three parasites are communicated from one individual to another is an interesting question, and one of practical utility. The pediculus capitis are most frequently carried home from school, or the play-ground, or from using the same head-covering, brushes, combs, etc. Not infrequently, we find cases in families that one would suppose would be exempt from such accidents, but when we think of horse-cars, railroad-sleepers, etc., their occurrence does not seem so strange. Servants, also, are the means of contaminating members of their masters' families, especially the children. The habits and modes of life of the lower classes, to whom the pediculus corporis is chiefly, though by no means exclusively confined, are such as to favor the distribution of this parasite. Wearing second-hand clothes, being herded together in tenements, sleeping together, and on foul bedding, are all evident means of contamination. The cases which occur in the better classes may be explained by the use of public conveyances, travelling, and juxtaposition to dirty individuals in crowds.

Up to a few years ago, when the bunks at the Tombs and police stations began to be disinfected, a night's lodging in one of them was pretty sure to be followed by contamination, and such cases were very characteristic. I have seen very few such latterly.

My statistics from the Dispensary show 22 out of 27 cases of pediculosis pubis occurring between 25 and 30. This would rather prove that the contagion was mostly due to actual contact, but the fact in private practice is different, perhaps. I certainly have seen cases where it seemed impossible that the parasite should not have been acquired innocently, and such I believe to be the fact, though, perhaps, in a small number of cases, when we consider the position of this louse, and the tenacity with which he clings, it seems strange that he can migrate from one body to another as often as we know he does. Neither can the nits be easily dislodged from the shaft of the hair, but it may be that this may take place when on the point of hatching, or rather, that the young one comes out of its shell, and is shaken off.

The points that have appeared to me as especially worth noting from the Dispensary statistics are the much greater frequency of pediculi capitis in

children in the female above the male after childhood the decided and marked increase of frequency of pediculus corporis in proportion with advancing years and in the case of pediculus pubis, its existence being almost entirely confined to youth and early adults. These may not be facts of much importance, but, such as they are, they seem to be shown by the recorded cases. After all, some facts of interest can generally be deduced from records of a large number of cases which could be got at in no other way.

### A CASE OF SO-CALLED "VICARIOUS MENSTRUATION."<sup>1</sup>

BY F. W. STUART, M.D., OF BOSTON.

THE case which I am to report to-night I saw at the Carney Hospital, from October, 1885, to March 1, 1886, during the terms of service of Drs. E. O. Otis and J. J. Minot, and afterwards at the patient's home, until a few weeks before her death. It was suggested to me that the case was very interesting, and that it might be well for me to report it, since I had followed it longer than any other physician. I am indebted to Dr. Minot for the use of the careful notes he made during the time the patient was under his care.

I first saw the patient in October, 1885. She was then fifteen years old, and the following history was obtained: Her grandfather, father, four paternal uncles and aunts, and two paternal cousins, had died of phthisis, and two more cousins were then "in consumption." The patient had never been strong since three years old, had vomited often, and had frequent "sick headaches." She was always feverish, vomited every night if she ate a hearty supper, and so had been accustomed to limit that meal to a glass of milk. The bowels were always constipated, and she took pulv. glycyrrhiz. co. continuously. She frequently had sore eyes. In 1882, she had typhoid fever.

November 24, 1884, the catamenia appeared for the first time, lasted two days, were unattended by pain, but since that time the patient had never menstruated. At the next catamenial period, she vomited everything she ate for two or three days, and the vomiting was repeated at each period, when she also had a feeling of weight and soreness in the lower abdomen. At times, she had a pain in the right ovarian region, when a "bunch" could be felt there, though both pains and "bunch" occurred at non-menstrual periods. She had no trouble with micturition. In May, 1885, she had an epileptic fit. According to the Hospital records, she was treated, in April, for a nasopharyngeal catarrh, where a note is made, stating that a few days previously she had had an hæmoptysis, though, in October, she did not refer to it. From December, 1884, to June, 1885, she vomited only at catamenial periods, never between. In June, the vomiting began to be much more frequent and severe, everything but milk being vomited. In September, after long vomiting, she raised a little blood, and this was repeated several times. She complained of great pain immediately after eating, and vomited without any signs of nausea appearing.

Such was the history of the case up to October, 1885, though there seemed to be a large element of

hysteria in the case, and her truthfulness as regards symptoms appeared rather doubtful. The patient was pale, anæmic, and poorly nourished, but physical examination was absolutely negative, with the exception of localized tenderness in the epigastrium. The diagnosis, it was thought, rested between gastric ulcer and vicarious menstruation. She was put on pancreatinized milk, and all went well until the end of the month, when the usual symptoms appeared, and even this milk was not retained. She now visited a "clairvoyant doctor," and afterwards, a quack in New York City, who told her she had an imperforate hymen, which must be cut. She wished advice as to the cutting, but examination showed a normal hymen, as was to be expected from the history of a previous menstruation.

On December 24th, she visited the Hospital after one of her attacks, and from that time up to March 1st, careful notes of her condition were kept.

On that date, December 24th, she stated that, during the attacks, she had pain in her stomach as soon as food was swallowed, and this pain increased, and was accompanied by a loud, rumbling noise. She never belched wind, or passed any per rectum. After two or three hours of this pain she vomited, but evidently not undigested food. She never vomited directly after taking food, nor in less than two hours after its ingestion. After vomiting, the pain gradually passed away in about one hour.

December 22d. She was sitting quietly, began to choke, and then raised some blood, less than a teacupful, she said. She did not vomit at all, but coughed.

On the night of December 23d and the morning of December 24th, while fasting, she raised dark, thick blood. She had no cough; usually ate no breakfast; has had night-sweats. She sat up late nights, ate very little, danced a good deal, and slept poorly. Examination, superficial, owing to the recent hæmoptysis, showed the patient to be small, poorly developed, pale, and anæmic. No enlarged glands were to be seen or felt. Auscultation gave an almost puerile breathing, and expiration slightly prolonged. There was localized tenderness, limited to a small area over the epigastrium. She was told to take peptonized milk every two hours.

December 25th. She raised blood four times. Each time, she first began to choke, and then raised the blood, which was greater in amount than at any time before. She had considerable cough; complained of pain in the lower abdomen. The peptonized milk was retained. She was given ext. ergotæ fl. Her mother stated that the vomiting occurred at about the 24th of each month, and lasted one week. She did not think the patient vomited in the intervals. The blood seen before the last attack was mostly streaked through the vomitus, but, at the last attack, was as stated by the patient.

December 31st. The patient said she felt better. There had been no vomiting, and no raising of blood since the 25th. Her weight, which had been ninety-two pounds, was now reduced to eighty-seven pounds. Examination gave a percussion-note a little higher in the second interspace on the right than on the left side. There was also a slight difference in the back, between the scapula and the spine, the left being the higher. Auscultation gave nothing abnormal. Heart normal. The lower thorax was long and pointed. There was marked tympanic resonance on the left side of the upper abdomen. There was nothing to be

<sup>1</sup>Read before the Suffolk District Society, Section of Clinical Medicine, Pathology, and Hygiene, October 12, 1887.