An Analysis of 99 cases of Pulmonary Tuberculosis.

In the attempted treatment of such a disease as Pulmonary Tuberculosis when climatic influences favor such a dominant power over the progress of the case, the efforts of the physician are necessarily much hampered at the outset by the essential conditions of our changeable climate for the continued residence of the patient. It is unfortunately the lot of but few to be able to seek abroad for more favorable climatic conditions under which to commence the struggle with what in so many cases proves a fatal disease, and under these circumstances it falls to the lot of the physician to make an attempt as far as possible to avert of the sufferer from this continuing his ordinary life and occupation under the existing circumstances which are only too frequently highly unfavorable.

In the consideration of the 99 cases of the disease which I propose to submit to analysis...
it is necessary to state that all have been treated under the circumstances. Indeed I alluded above, and that though doubtless many of these would have benefited by transplanting to one or other of the foreign stations suitable for their respective conditions, yet in all cases without explantation this was impossible, and the treatment had to be carried out under existing circumstances with a view to permitting the patients to continue or resume their daily occupation.

The cases may be divided into three groups, thirty-three cases occupying each group. In the first of these there places there cases which were absolutely under medical control and which were treated under circumstances as nearly approaching the ideal as it is possible in a climate which exhibits such a changeable character as that of the British Isles, namely in the wards of a Philosophical Hospital in a country situation and with no overcrowding. These cases possess the advantage of having been under accurate observation during the whole period of treatment and thus the range of improvement and advance of
Symptoms of physical signs could be more accurately estimated and dealt with than is possible even with the greatest care in cases which come only under intermittent observation. The second group includes a number of cases which came under no observation in the out-patient department of a large provincial hospital, and in these cases the inadequacy of the means of treatment at our disposal and of the social surroundings to the necessities of the case was markedly accentuated, as in the majority of cases the social surroundings and daily occupation were anything but favorable for a tubercular patient. The greater number of these cases were operable in large factories on the subject of their occupation. Some remarks will be made later.

The third and last division embraces a number of cases which came under treatment in private practice and, while some of these were of necessity obliged, like the majority of the second group, to continue their usual routine of life, yet the majority had the advantage of being able to devote more time to an improvement of hygienic condition and to the physical and mental rest.
necessary to their degenerate vitality.

In dealing with the subject I propose to confine my remarks to those facts which have come under my notice and consideration in the collection of these cases, and, in, roughly speaking, resolve itself into a partial resume of the conditions of the ordinary form of Phthisis, as distinguished by M. Jaccoud from the pneumonic or Carious form of which I do not quote a single case [Jaccoud, Palud. Phil. p. 13].

In the formation of the Tabular account of the cases which is appended, care has been taken to obtain as accurate information as possible on all points dealt with, and where such information was not forthcoming a blank has been left in the record all phenomena neglected by the previous researches having been carefully inquired into.

Aetiology. The cases quoted are gathered in the main from two sources. Of the hospital cases 30 out of 33 were residents in or near Edinburgh, and of the remaining 66 cases 65 were drawn from Halifax in Yorkshire. Both towns possess a fairly high death-rate from Phthisis, and both apparently, apart from mortality, possess a very high percentage of cases for the population. Edinburgh from its exposure to the
Each and from the severity of the earlier months of the year present a fruitful source of those enteric conditions upon which the populus may so easily become engrafted. In addition to this, the age and dense population [frequent fogs. Big groups 573.575. Increase density a very important factor] of the older part of the town, from its insanitary conditions of the crowding together of families, give for scope by the foul air engendered by want of ventilation, and the actual contact with sufferers from the disease, for the spread of the malady.

The climate of Halifax in some respects resembles that of Edinburgh. Situated upon one of the slopes of highland leading directly up to the Yorkshire moors, its lowest point being at a considerable elevation, it is wind swept from all sides. Being on the extreme, it is bleak in winter and early spring, but the spot of its elevation is frequently during the winter subject to visitations of fog, the damp of these fogs, alternating with rare cold, offering in the same way as the cold spring winds of Edinburgh a very probable source for the populus by reason of the induced catarrh. On the whole its climate is probably much more moist than that of Edinburgh, and presents more rapid variation.
It is interesting to note in this connection the converse of what might have been expected, namely that in spite of the great prevalence of phthisis, acute bronchitis is a comparatively rare disease in Halifax, and this fact of my own observation I have confirmed by others who have had excellent opportunity of judging in the course of considerable length of residence and practice in the town.

Another fact which may possibly be a factor in the spread of phthisis in Halifax is the method of sewage disposal which is effected by the Gurney system, all waste matter and human excreta being kept in a dry form. Thus unless it be actually infected which will only be the case amongst a limited number, the excretion of the tubercular patient are kept in the most favourable form for the spread of the disease to other individuals.

As regards the fogs their origin is probably explained by the somewhat heavy and impenetrable soil of the district, with the presence of numerous clay beds, the impenetrable subsoil being also cited to constitute an important factor in the causation of phthisis, [Harris & Beale Public Health, p. 63] [Powell, Dr. Phillips & Bayly on insufficient surface drainage].
Occupations. The following is a tabulated account of the professional occupations of the patients. Even with such a small number of cases it will be noted that the majority of the important trades are represented.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housework</td>
<td>2</td>
</tr>
<tr>
<td>Mill Operatives</td>
<td>2</td>
</tr>
<tr>
<td>Domestic Servants</td>
<td>1</td>
</tr>
<tr>
<td>Schoolchildren</td>
<td>1</td>
</tr>
<tr>
<td>Dressmaker's Helper</td>
<td>1</td>
</tr>
<tr>
<td>Office</td>
<td>1</td>
</tr>
<tr>
<td>Upholstering</td>
<td>1</td>
</tr>
<tr>
<td>Laundrymaid</td>
<td>1</td>
</tr>
<tr>
<td>Bootmaker</td>
<td>1</td>
</tr>
<tr>
<td>Tailor</td>
<td>1</td>
</tr>
<tr>
<td>Labourers</td>
<td>2</td>
</tr>
<tr>
<td>Housemaids</td>
<td>2</td>
</tr>
<tr>
<td>Policeman</td>
<td>1</td>
</tr>
<tr>
<td>Shopgirl</td>
<td>1</td>
</tr>
<tr>
<td>Blacksmith</td>
<td>1</td>
</tr>
<tr>
<td>Brushmaker</td>
<td>1</td>
</tr>
<tr>
<td>Hardware Groom</td>
<td>1</td>
</tr>
<tr>
<td>Grocer</td>
<td>1</td>
</tr>
<tr>
<td>Porter</td>
<td>1</td>
</tr>
<tr>
<td>Draper</td>
<td>1</td>
</tr>
<tr>
<td>Librarian</td>
<td>1</td>
</tr>
<tr>
<td>Stone Mason (Revd)</td>
<td>1</td>
</tr>
<tr>
<td>Cooper</td>
<td>1</td>
</tr>
<tr>
<td>Vanman</td>
<td>1</td>
</tr>
<tr>
<td>Mill Overseen</td>
<td>1</td>
</tr>
<tr>
<td>Butcher</td>
<td>1</td>
</tr>
<tr>
<td>Bookseller</td>
<td>1</td>
</tr>
</tbody>
</table>

Total 99

In the Halifax cases taken on as whole it will be noticed that out of 66 cases 21, or slightly less than one-third, were mill operatives in large factories. The reason for this high percentage is not far to seek. In the majority of the factories, from which these cases were drawn, the operatives, if of full age, or almost all those included in this table were, are employed for a day's work from 6 a.m. to about 5 or 5.30 p.m., with an interval usually of three quarter of an hour for the midday meal and a shorter break for break fast. During this time they sit or stand, according to their respective departments, in temperatures ranging from 60° F. to 90° F., some of the rooms requiring the latter temperature for the accom-
fulfillment of the work, and being heated specially by steam for this purpose. The atmosphere as is natural, a large number of operatives being employed for the cubic space is necessarily to a certain extent foul, and apart from the necessity of keeping up the temperature for the work, any attempt to mitigate this by open windows is prevented by the majority of operatives who in consequence of the temperature of the rooms are in a constant state of free perspiration and naturally feel the chill of fresh air. From time crowded rooms and high temperatures the workers pass out three times in the day at once into the open air, and the facility afforded for chill and pulmonary catastrophe in one who is perspiring freely leaving an altimeter at 90°F for one in writing possibly standing only at 30°F can be easily appreciated; for this in spite of the shawl worn entirely covering the head and shoulders which is the characteristic costume on the way to and from work. In addition to these many of the operatives travel a considerable distance before their work and this in all weathers.

As to the nature of the factory work the
operative, included amongst my cases, were employed in three different branches of industry—wool, cotton, and carpet manufactures; in certain departments of all these industries the work-rooms are dusty. The highest temperatures prevail in the spinning and carding rooms in cotton work, the winding and twining being cooler to a very considerable degree, standing approximately between 60° + 70° F as compared to the 90° of the spinning rooms. In the latter also the work necessitates the atmosphere being moist and steam is introduced into the rooms for this purpose. In the worsted mills the highest temperature prevails in the combing and spinning rooms, more especially the former where the combs themselves are obliged to be at a certain heat, and in these rooms the temperature is a high if not higher than in the cotton spinning-rooms. In the carpet-workees the rooms do not reach such a high temperature, standing on the average between 60° + 70° F. In certain departments of all these industries, the work-rooms are dusty more especially in the cotton factories in the spinning and carding rooms.
where the particles being light float more easily and thus re-prefuse the atmosphere more densely. Cotton fabrics have been abundantly discovered in the exuata of operatives in cotton mills [Wilson Fox p. 489 quoting Heat and Health]. In the carpet works also the floor rooms present an atmosphere highly re-prefused with particles, the hair of the workers being noticeably covered with a powdered-like layer of particles. In the majority of cases when questioned upon the subject of the work being dusty or not, the patient denied any large amount of dust, but in some cases more especially the cotton operatives they admitted the fact that their work was fluffy. In all the cases, however it cannot be denied that in large rooms kept very dry (with the exception of the squeezing rooms) by a fairly high temperature, and with heavy machinery constantly in motion, there must be a considerable amount of dust constantly raised even if so fine as to be imperceptible. It is noticeable in this connection that the type of disease in the factory cases is a somewhat more chronic one than that exhibited by the other cases quoted. Taking the average length of the duration of symptoms
Mat derived from the wool operatives reaches an average of slightly over 2 years, while that derived from the general cases falls six months short of this average. 18 months. In this calculation, I have judged it advisable to omit the patients engaged in housework from the general list as it is the almost invariable rule that the majority of the housewives in the factory districts have at one time or another been employed in a mill, and in many cases they continue at this for some time after their marriage, until household cares become too many for the continuance of their factory work.

From the preceding fact it seems to me that the high temperatures, moisture, air, and dusty atmosphere of the work room together contribute to such a favourable source of cataract and lung irritation, that it affords no reason for surprise that the number of cases of pulmonary on account of the operatives is large.

Dr. Harris (Beale) in his mention of steady occupations quote, from the writings of the greatest authorities, that it is only dust which may be considered to be sharp and angular and which in frequency, the most irritating which likely to cause
lung affection [Harri + Beale Public Consumpt. p. 64.]

Though granting the fact that these particles would cause work irritation it seems to me that the constant inhalation of quantities of dusty material even of a less angular nature may fairly be considered a cause of lung irritation, if in a lesser degree and thus by constant contact may in the end be a source of tuberculosis in the same way as the sharper particles.

5. Powell quotes the Public Health Report of 1860 on the subject. "All allowance being made for special causes, that the inhalation of dust remained as the positive cause of the undue prevalence of phthisis in the industrial treatises was shown by the fact that the high death-rate from lung disease belonged according to the occupation to the men or women of the district, that it was sometimes nearly twice as high in the employed as in the unemployed sex and that it extended at both when both were employed in the occupation." [Powell Dis. of Lung p. 352] This I have found fully borne out in my experience, female labour in the factories exceeding that of the males in most of the factories especially the cotton by nearly double the number of employees.
And the proportion of female to male cases in the factory district certainly exceeded the proportion quoted by Dr Powell. In my cases the relative amount though it is difficult to quote exact figures upon the subject.

Graded the previous existence of a certain amount of tubercle in the workers the importance of the deck exercised considerably, as it doubtless had attached to it a certain proportion of specific bacillary foci. [Powell, On Tuberc., p. 323]

As regards the other occupations, the influence of confined life is as usual illustrated, the number engaged in housework as usual taking a high place on the list. Partly from the large number of individuals in whom this work devolves and partly from their lack of fresh air and exercise, in all probability.

Social Conditions. From the social surroundings of my cases, I can draw few conclusions. Of my Edinburgh patients the majority were poor or at least indifferent circumstances and in some the social surroundings were unfavourable in the extreme. In all three cases the family income I should say was probably less than in my...
Halifax outpatient cases, as the mill operatives are well paid and employed from an early age, thus affording to a whole family opportunity from the age of 13 up to upwards to contribute to the common fund for the maintenance of the family. Though many of these latter cases would render the disadvantage of bad ventilation and in some cases overcrowding in their home relations yet, in the matter of food, they are as amply provided as many persons in a far superior social condition, and this is a position to operate at least one of the influences tending to degeneration of the system, their cases may the attack of the tubercle bacillus.

Sex and Age. The number of cases quoted is small to draw conclusions from as regards sex. Female cases preponderate in both of the group of patients treated in hospital, but in the private cases the sexes are equally divided. In all probability in the Halifax cases the preponderance of female cases is explained by the fact of the greater number of females employed in the factories, and also the fact that the males defer consultation until later than
the females, as in the whole the disease has been more advanced in the male than in the female when first seen. This differs from the results obtained by Dr. Phillips, who found the disease more marked in the female [Dr. Phillips' 1000 cases.]

As regards age, the cases are as follows:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood below 10</td>
<td>14</td>
</tr>
<tr>
<td>10-20</td>
<td>26</td>
</tr>
<tr>
<td>20-30</td>
<td>143</td>
</tr>
<tr>
<td>above 60</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>99</td>
</tr>
</tbody>
</table>

In the rapid rise in number over the period from 10-20 the rise is most marked between 15 and 20, numbers 19 out of 26 cases in this decade. From 30 to 40 any number of cases is small in percentage, but in all other respects it is interesting to observe that the age percentage of any small number of cases follows closely the curve calculated from a far more comprehensive number of cases by Dr. R. W. Phillips [Philip 1000 cases.]

Constitutional Liability. Inherited Tendency to lymphosarcoma. Amongst the 99 cases quoted I find that a definite history of lymphosarcoma in the family obtains in 34 cases, (in 3 cases omitting mention of a child as a family history in the case of patients who have been already operated in the case of the child).
that in 2 per cent more there is a definite history of Tbc.

ease in this group, and that in a further number of cases there is a
history of suspicious chest trouble in the family. Of the 39 cases 28 had a history of Tbc in the
immediate family (i.e. in father, mother, brother
or sister), and the remaining nine showed a
history in the collateral branches, uncle or
aunt. In 36 cases the grandfather died of the
disease, and it is curious to note that in two
of these cases Tbc manifested itself in the
uncles and aunts of the patient, making his/her
immediate parent, and brother again in his
or her own person. In the third case Grandfather
and Father both died of Tbc and the boy
came under my notice as a sufferer. The
percentage of cases showing a family history in this collection is thus considerable for
that stated by B. Powell to be generally
agreed upon. He states that family predispo-
sition obtains in 18% of cases. On the other
hand W. Philip's estimate is at 23% stating that
the number of cases showing hereditary pre-
disposition obtains in a smaller number of cas-

[Philip 1000 cases of Pulm Tub. p. 10]
Dr. Philip adds: The percentage shown quoted includes a small number of cases which must be quoted as examples of probable contagion.

The consensus of opinion as regard relative percentage of male and female cases with regard to family history seems to be largely in favour of female preponderance, though there is considerable discrepancy in the percentages quoted:

male cases | female cases
---|---
Harris and Reels | 33.9 | 64.1 | 1.56
Douglas Powell | 37 | 59 | 0.355
1st Brompton Report | 18.2 | 36.3
Reported Hospital* | 36 | 58 | 0.40

In my own cases the percentage of family history while not more nearly approached that of the 1st Brompton Report than that of the other three, was percentage showing males 22 percent, females 37 percent. As regard the side of the family on which the ancestry manifested itself in 15 of the histories it lay on the father's side, the father himself having been a sufferer in 11 cases; on the mother's side in 17 the mother suffering in 10 cases. In 3 cases the history manifested itself on both sides of the family. In 5, one parent with brother or sister suffered and

* Different aspects of family histories.
Brothers or sisters alone were affected in 11 cases.
In one case both father and mother suffered in
this case the history points to the probability of
the father being the original sufferer and having
infects his wife, who was perfectly well before
marriage, and degenerates in health after nursing
her husband in his illness, finally becoming phthisic
and herself.

Influence of Menstruation. There unfortunately
are not accurate notes as to the early or late appear-
ance of menstruation, but in looking back upon the
cases I should be inclined to say from recollection
that in the majority it was rather thirty late
than early, and this is corroborated by the fact
that in my cases or approaching the usual
age of puberty I have no note of any abnor-
mal or early appearance of menstruation, while on
the other hand there was evidence of an appearance in
some cases that age. Dr. Milner Fox quotes Edward Smith
upon this subject in his Enquiry upon 1000 out-
patients. He states that early appearance is
rather more common among philosophical patients
than among the female population generally,
112 per cent menstruating before the age of 12.
[Wilson Fox p. 527]
Of my cases 28, or nearly 60 per cent, showed departure from the normal in the monthly period. In 7 cases, or nearly 10 per cent, the period was too frequent or the quantity excessive, Smith's percentage showing 8.5 per cent of this abnormality. In 25 cases I found information of decrease in quantity or prolongation of the intervals, which accounts to 34.2 per cent as against to 36.7 per cent with Smith's statistics. In the majority of the female cases the symptoms were accentuated at the premenstrual period in several the fact being very marked indeed. I have no example among my cases of haemophilia occurring at the menstrual period.

In 11 of these 25 cases the abnormality consisted in the decrease of quantity, and in a good many of these also in the quality of the discharge, the latter being very pale, and in these 11 cases the period occurred regularly at the proper interval. In 7 cases the discharge was irregular and scanty, the length of intervals varying but always being greater than the normal, and finally in 8 cases there was entire cessation of the menstrual function. In two of the latter it returned during lactation.
Of pregnancy in my case. There only six examples. Of these one (Sheet 4. Case 41) has been under my notice now for six months. During the first part of her treatment she improved somewhat. At the first examination she presented a slight right apical condition, and a marked right one, extending anteriorly to the 2nd rib and posteriorly to below the apex of the scapula, with signs of apical softening. She became pregnant early in December, and her general condition heartedly degenerated since then. The swelling of her feet and legs, of which she complained, has been accentuated, the cough, spit, and dyspnea has been worse, and she has lost weight. On examination of the chest the physical signs have advanced considerably, while the discovery of proceeding emphysema on the right of the heart in every way lost power, during the last three months.

The second case is one of considerable interest as combining the conditions of Cardiac disease, Mitral and Pregnancy. The patient first came under my notice in November 1876. She was a married woman of 25, complaining of slight tickling cough, dyspnea, night sweat, and loss of flesh. In addition she had obstinate dyspepsia, not dancy to eat.
for fear of flatulence, which was very distressing and produced a sense of very uncomfortable fullness after meals. She had obstinate constipation and some thoracic pain and palpitation. The whole condition was one of very marked debility. She had never had a severe attack of bilious or fever, and had a family history of bilious or a hot side of her family. Her father and a maternal uncle having died of the disease. On examination of the chest, the heart was considerably dilated and hypertrophied, and an admixture of crepitations and murmur were audible. The pulse was rapid, of feeble force. The lungs presented an early afflative condition on both sides, more marked on the R where there were frequent expectorations at the apex, with dulness extending to slightly below the first rib, and to the spine of the Scapula. On the left the dulness was slightly less. She had been 6 months pregnant. She was put upon a course of cardia vascular drugs, and the dyspepsia was carefully treated with the result that the appetite was much improved, the flatulence and discomfort after food were much reduced, and the meals could be eaten with comfort. She was encouraged to feed up and in the next two months the gained in weight and in general...
Condition in a very marked manner, requiring no further treatment at the end of that time. The couple still continued slightly. She had not been seen for about a week when labour commenced. Labour was prolonged, the uterine action poorly, the head coming down in the occipito-posterior position. Furops were applied under chloroform at some palable time child delivery. The placenta was then removed the after effects fairly as abnormal amount of haemorrhage occurring. In two days the patient proper was satisfactorily but in the evening of the second day the temperature rose considerably and she developed again of Pneumonia which may or may not have been tuberculous. increasing was made of Cardiac stimulant & alcohol, quinine & strychnic being also employed, and for six days the heart was kept going, the patient being for a large part of the time in a state of low mental delirium, but capable of being roused and showing a reasonably oscillating temperature. On the eighth day however the circulation failed & death occurred. In neither of these cases was the child the cause of pregnancy reserves. the pathological condition, but on the contrary doctor believed the theory that it accelerated the child in both.
Whether the pneumonia of which the late patient died was an acute tuberculous condition or not is uncertain as unfortunately a post-mortem examination was unobtainable.

Relation of Other Diseases. (a) Pneumia. Among many cases I had record of pneumia occurring in 17 cases. In 17 cases slight pneumia occurred in more cases but it attack was not so severe as to be mentioned in the patient's history or in any note on progress. In these 17 however the condition was a fairly marked one in such a degree as to have been named to the patient as 'pneumia' by the medical attendant in the patient's history, or as to present the physical signs and symptoms of pneumia in those cases in which it occurred during treatment. Of these 10 suffered from pneumia during treatment, and 9 present a record of former pneumia which was carefully inquired into. Of the latter, 2 cases are included also amongst the former 10. Of these 17 cases the gave evidence only of the dry form and not followed by any fluid effusion and of the remaining 3, 2 had effusion with the pleura of considerable size during treatment, the third had had a former effusion and still...
presented a small amount of fluid in one case. In addition one case, in which an antecedent history of Pneumococcus occurred, suffered during the period of treatment from a localized empyema of small size.

With regard to Pneumococcus as an actual excitant cause of Pneumonic fever, it is in the vast majority of cases the Pneumococcus is secondary to the pulmonary tuberculous condition. Of the cases which presented an antecedent history of Pneumococcus, in two the actual train of symptoms apparently followed direct upon an attack of Pneumococcus, in the other an attack of Pneumococcus occurred a period considerably prior to the reported onset of the symptoms leading up to the present condition, but conclusions drawn from clinical facts alone are the subject of great source of fallacy that any opinion it must be left to Pathological Evidence to form statistics upon this point. In particular owing to the undiagnostic nature of Pneumococcus it is a matter of extreme difficulty almost amounting to impossibility to say the exact period at which the pulmonary condition commenced and, the symptoms of Pneumococcus being so much more
acute, may very well cause the patient to attribute it a secondary disease. The causation of a really primary complaint which had existed without causing any very distressing symptoms, for a considerable time.

In three only of my cases do I think that the fact, so far as obtainable advice of the attack of Phthisis having been truly antecedent to the Phthisis, a considerable period having elapsed between the attack of Phthisis and the onset of the Phthisical symptoms. In two of these the Phthisical condition came under my notice at a very early stage, and one presented an interval of nearly twelve years, the other, one of nearly five years. Thus between the Phthisis & the Phthisical onch & Phthisical onch. Allowing a liberal period for latent Phthisis, in its early stage, we may, I think conclude that the Phthisis was truly antecedent in these cases, but even then we do not exclude the possibility of early healed interstices in the lung, which may quite well have been active as a causative factor antecedent to the Phthisis.

Certain cases, such as 4 per cent of Phthisic cases develop from Phthisis, a proportion which is
very small when all cases of either M. tuberculosi or
M. tuberculatus are considered in their mutual relation.
[Wilson, Tax. Dis. of lungs, Vol. 538]. From this considera-
tion it is not possible to assert, it a matter of
premise with any regard accuracy, to quote any
definite figures on the subject.

Another important factor in the argument of M. tuberculosi
being primary or secondary to M. tuberculatus is the
method of possible infection of the pleura. Whether
by blood or lymphatic stream the poison must pass through the pulmonary tis-
ues to reach the pleura, and though a connection
within M. tuberculosi may thus be set up, it may
regard it as probable that M. tuberculosi
rarely takes place previous to a similar
condition being established in the lung itself.
Powell on the subject remarks "Except in associa-
tion with preceding pulmonary lesions, on the one
hand, and the presence of several features between
the one and the other, tubercular pleurisy is a
rare disease."

(b) Pneumonia. The unimportance of primary
pneumonia as a cause of M. tuberculatus to some
what emphatically denied by St. Wilson Fox [Fox,
p. 540. Dis. things], quoting an extract from Grisolle, 305
Cases of acute Pneumonia, 25 exhibiting an hereditary taint, all recovering completely [Pneumonia p 457] also 72 Morbid patients only four of whom had previously suffered from Pneumonia, and two only (2.7 per cent.) exhibiting it as the excelling cause of the Morbid [p 457]. Louis in 80 Morbid found only eight with previous pneumonia, and in 30 only 5% due to the Pneumonia apparently lead to Morbid. Herard & Cornil [Phil. Publ. p 603] in 100 cases of Morbid found only 7 or 8 previously suffered from Pneumonia, in several of these the attack had been long prior to the commencement of the Morbid. The 2nd Bromhead Report quotes 4.2 per cent. Wilson Fox in 300 patients only 2 cases of Inflammation of the Lung. Huit [Phil. p 58] in 80 cases found 9 with Pneumonia as an antecedent disease, and converting in 103 cases of Pneumonia none were followed by Morbid. Of Dr. Philip's 1000 cases only 5 or 0.5 per cent. [p 18.] shows traceable a close sequence of tuberculous or Croupous Pneumonia. He furthermore observe that in these but one could be spoken of with certainty as a consequence.
quoted by Messrs [p.162] in 910 cases found antecedent Pneumonia in 23.5%. The leading
of all these statistics, with the single exception
of those of Gellerstedt, is to show that every
small percentage of Pneumonia follows second-
arily upon Pneumonia. Of my own cases
6 exhibit a history of preceding Pneumonia
in 5 of itself it was apparently intimately
related with the commencement of the Tubercular
condition, the Pneumonia being dated from the
Pneumonia, but true again as in the case
of the mentioned it is impossible to state that
no Tubercular condition exists, undiscovered,
before the Pneumonia, only comes to light
only to the Pneumonic examination instituted
as a result of the latter disease.
One of my cases was a Broncho-Pneumonia
and in two cases in addition to those already
quoted the patient was attacked by an
Acute Pneumonia during treatment for the
Phthisis. One of these already quoted in
my remarks on the subject of Pneumonia
succumbed rapidly, being under the highly
unfavourable circumstance of concomitant
Phthisis, Cardiac disease and recent Hodgkin's.

28.
Parturition. The other case I refer to was that of a domestic servant employed as a housemaid and cook to a family who had been under my notice about a year, commencing with an extremely early left apical emphysematous condition which had advanced somewhat. The rate of hemorrhage had become affected. The patient unfortunately received a chill and a social gathering developed a left lobar pneumonia. The left -this under the influence of the Pneumonia showed signs of rapid dissemination and a cavity formed. The condition at one time appeared highly unfavourable. The tuberculousness certainly existed during this Pneumonia, but the apex rapidly excavated, the material was rapidly removed by expectoration and cicatrisation took place. On recent examination through the area of lung affected is extensive yet the patient's nutrition is excellent, and the areas of disease are not advancing. The apical condition was very open, and a more rapid medical man who saw the case at this stage, had already removed vital parts.

It is by the Pneumonia and the extent of lung affected, compared with that affected
after the attack. Shown such a marked difference for the short time, considering the presence
slow advance of the Malarias that there is no
reasonable doubt that the process was considerably
halted by the milder current attack.
As regard the importance of Pneumonia as
a primary cause I am certain of opinion
that a pneumonia which does not resolve
well, given the necessary contact with the
tubercular poison, is not such an important
factor as many are inclined to think,
not from any specific tendency to become
tubercular but from the more general rea-
son that it reduces the vitality of the indivi-
dual, creates a marked deficiency in the
all-important factor the free expansion of
the chest and in addition to this forms a
suitable medium for the Bacillus.
The acute period of the resolution from
satisfactory I do not regard as so likely to
end in tubercular mischief, as the patient being
left in his or her own home minimizing the chance
of infection unless there be other tubercular mischief,
uninfected, cleared
and an
infected area in one living his life.
Thus I believe to be a source of danger as
owing to the prevalence of tuberculosis, I am of the opinion that the majority of persons at one time or another are exposed to the danger of infection when they reside in popular places. More especially in children, disease has been upon the possibility of tubercular infection being a danger to be avoided after an unsatisfactory resolved pulmonary, and the confirmation of the chest at that period of life is so susceptible to morbid influences, the loss of expansion, and of normal pulmonary tone through not immediately leading to tubercular disease, may well form an important factor, of the individual whether brought into contact with the tubercular focus. Such a case was case 70 in which the pneumonia cleared unsatisfactorily and the areas became affected by the tubercular focus.

Tuberculosis. Of tuberculosis as a factor in the history any cases show these examples of two of which both young men there was a history of frequent bronchitic attacks since childhood. In the third case, one of several children the individual had been a strong, healthy man until
suffered from an attack of acute B proclitis. From that time he steadily degenerated in health, and when he came under my notice presented extensive tubercular areas on the right lung, with an especial and local condition also on the left. As a causal condition of this, I think he should be noted as an example before Brachitis a fairly high secondary place owing to its effect upon the corporative expansion of the chest, especially when occurring at an early age. When we consider the number of Medical patients who suffer with contractile chest, particularly associated with early Somatization, the importance which it assumes as at least a prominent condition can hardly be passed over without consideration.

Of concurrent attacks of Brachitis during biopsy we have four examples. As to its effect upon the tubercular lung, it is difficult to speak with any certainty. Few of the cases, as well as noted, the bronchitis was most noticeable, most comparatively during breakfast bottle weight and general condition, or having a localised empyema also as a complication. Of the latter two cases were improved slightly with whole the
Bronchitic signs disappearing, it apparently having had no bad effect upon the tissues, and the other symptoms also were rapidly down hill. But in the latter case, the Jilthm was already sufficiently advanced to account for the rapid degeneration, with an attacking blame to the bronchitis.

It is necessary to remark that the term Bronchitis was applied at the commencement of the illness in some cases, those mentioned above, but I have advisedly employed the statement only in those cases in which there was sufficient factory evidence of the truth of the statement. The early stages of Meihl's may well be considered by the patient to be simply a condition of bronchial catarrh, and in this matter the sooner it is not always corrected by any medical means from a desire to spare the patient's feelings.

In four cases, a history of regularly occurring catarrh cough was ascribed at the commencement of the condition, thus raising the cases which present a marked preliiniary bronchial catarrh to 7 per cent. Apparently, the observer obtain a larger percentage than this, Dr. Phillips...
1000 cases quoting 12.4 per cent, but as his cases were collected in Dr. Lea's acute adult bronchitis, I believe fatal, frequent, and severe occur in 65 per cent of fatal cases, when as I have mentioned before it is comparatively rare, the discrepancy in faulty accounts for.

I believe that in very many cases a neglect of catarrh, of insufficiency of moisture, of the characteristic by the patient on B pulmonis, or the starving, of the larynx, particularly:

"A fruitful source of Allinius is the tendency to catarrh of the respiratory mucous membrane."[Herrenwirth Crameri: lumbus, 1874, quoted by Dr. Powell]

"A neglect of catarrh is the most common antecedent of Allinius."[Dr. Powell, Dis of Ump, p. 352]. Herrenwirth also quote causation by chill as the cause in 45%, Breguet in 33%, Bace on left. a 70% Scott Alison 277 out of 103 in nearly 46%, + Wilson for 30%, these observers thus giving an average of about 45 per cent from this cause.

Acute Specific Fever. In comparing the statistics of causation in recent years with those of 6 years or more back, a marked increasen
tion of cases must appear recently illustrating the importance of Influenza as a causal factor. Doubly the statistics for the decade following the Epidemic of 1897-8 would recall the same facts. In all probability we have now seen the highest percentage of cases as occurring initial to Phthisis, as the Epidemic, since the outbreak in 1889-90 have been on the whole declining in virulence. The disease affects from its nature such a favourable series of conditions for Phthisis, that we can hardly find cause for surprise at the frequent quotations of an influenza attack as the commencement of the declining health leading to Phthisis. The liability to Catarrh of the respiratory membranes, the tuberculous pneumonias, and above all the constant antecedent debility, form a series of conditions too favourable for the onset of Phthisis to be reflected as a causal condition. Amongst my cases I find a history of a severe influenza attack previous to the Phthisis in 9 cases. Of these, in 2 cases the Malignancy followed as an immediate result, the symptoms commencing during the Convalescence from Influenza.
the health before the Influenza attack having been good. In several of the cases, also deterioration of health was dated from the Influenza; the patient was having this roughly recurring from the effects of it, and hence, indirectly the Influenza was in all probability an important determining factor in the sputum condition. Dr. Phipps [1000 cases] found 4 per cent distinctly traceable to an attack of Influenza. He considers that the causation is almost entirely due to the undue certainty of the recurrence on recovery from Influenza, the capture thus severely having recurred its more after the debility produced by the Influenza attack.

Alexander [Purvis's house] [Numnum [58]] remark, 'The truth of the latter observation (rapid reduction of strength being followed by an attack of tubercular disease) has been strikingly illustrated during the last few years, since the mysterious fever disease known as Influenza has been prevalent. Instances have been numerous in which the beginning of tubercular disease has distinctly followed an attack of Influenza.'
Certainly in my own case, during the last three years, apart from those which I quote at present, influenza has played an important part in the history of the decay of health, many of the patients giving a history of never having been well since an attack of influenza, the Maladies having become ingrained upon the enduring condition of debility. During any observations upon a considerable number of these cases, an influenza epidemic prevailed for a considerable time, and several of the patients suffered from it, but the type being milder and more abdominal than previously, there was no very marked deterioration of condition on the patients' air consequence; nor do I think that a great proportion of definite cases of patients suffered from the experience than of hospital or ordinary health.

B.) Typhoid Fever. Of cases presenting a history of typhoid fever I quote two in one of which the tubercular condition followed as an immediate result of the fever, commencing during the patient's convalescence. In two other cases a
History of enteritis occurs which was not named as typhoid at the time of the attack. The percentage of cases occurring as a result of typhoid briefly the quote by several authorities. Jacob [below with p 114] quotes it as a cause of Brachy Bacteremia but the latter the presence states is frequent and not intermittent. Wilson Fox [in things past] remarks that it is not uncommon for bacillosis, some times acute, to occur during convalescence from typhoid fever, rarely during the attack, though the number of cases in which the sequence is observed is very small as compared with the number of those affected with typhoid.

(4) Measles. Curiously enough there is not a single case in which measles is stated as the commencement of the condition. Not have I seen in which an attack of more than ordinary violence is stated. In former cases however it has occurred as a causal condition in a considerable number. The catastrophic condition probably having remained after the fever had passed off, thus affording a nidus for the
Bacillus. Dr. Philips quoted the large percentage of 20.5 in his 1,000 cases p. 18, in cases of Tuberculosis occurring below the age of 15, as having a history of recent measles.

Dr. Erich For (55/ of cases p. 548) noticed, to a considerable extent, the measles, and these cases were due to the "measles" producing Tuberculosis, claiming it results as occasional.

Bartholomew and Ricketts state that 1/11 of their cases showed a previous history of tuberculosis, but apparently some of these cases affected before the attack of measles. They also observed that the condition markedly accelerated the Tuberculosis.

Whooping Cough as a cause I quote in one case, p. 184, in which the tuberculous condition followed immediately upon the attack. In this case there was a considerable amount of bronchitis remaining after the usual period the chest was one with very slight or no expansion.

Smallpox occurring prior to Tuberculosis. Quote in two cases, p. 184, both of which it occurred at a considerable period before the Tuberculosis, but toodally conferred no protective benefit, there being necrosis.
antagonistic.

Syphilis. Note a. occurring concurrently with the Phthisis. In two cases but one writer was it casually related to the Phthisis.

9. Scarlet Fever occurred prominently in the history of two patients, in one of which it was the commencement of the degeneration of health ending in the tubercular condition.

10. Acute Pneumonic Tuberculosis occurred a well authenticated history in one case, occurring 3 years before he came under my notice. He was under treatment during the attack with Islander's Hospital and made a satisfactory recovery. By reference to the case history of the said it will be seen that he exhibits a large tubercular area over both lungs, especially the right more marked posterior than anterior and somewhat scattered.

Most sounds were audible over both lungs over the more dilated areas. The patient had, in the medical reports upon his discharge and from his own statements, been well as his discharge from the infirmary, but being exposed to his employments as a brickyard labourer, has had recurrent Catarrhal
attacks and the condition had attained a point profounder and resulted in a more chronic form of the disease than the former attack.

Blood poisoning as a causative condition occurs in one case, the patient having a very acute attack 4 years before coming under my notice. The general health was severely shaken, and severe measures proven to influence and within a year the tubercular condition had attained sufficient Potter's because the characteristic dyspnoea.

Acute Rheumatism is seldom included in the history in 2 per cent of any cases and a history of severe rheumatism in 2 per cent were one of the former cases having suffered from rheumatic fever twice. The statistics on this subject vary considerably. In the 2nd Brompton Report Acute Rheumatism is mentioned as an antecedent of tuberculosis with almost greater frequency than any other disease 7.5 per cent having suffered from it. J.B. Wilson 34.7% 57 out of 294 cases had acute rheumatism as an antecedent in 60 per cent, but in nearly 40 per cent.
of these there was a history of hereditary melancholia, then reducing the case of actual uncomplicated phrenic mania to 5 per cent. Dr. Philip's found 1 per cent of his 1000 cases having an oblique ear history of acute, chronic, maternal, and the more chronic form fairly frequently. In three out of my own 10 cases there was a history of family melancholia, in two being parental.

Upon the anaemia, dyspepsia & haemorrhages I propose to make some remarks under the head of symptomatology as these in the majority of cases belong to that branch, and under the head I shall also speak of laryngeal affections.

Insanity occurred in one case taking the melancholic form, but the mental condition occurred secondarily, and there was no sign of it previous to the melancholia.

Of melancholia from acute ulcer it occurred in 3 cases of the melancholia, I state a case. It occurs some time previously, but weakened the patient considerably.

In one male case dyspepsia was absent and occurred in connection with the earliest
Multiple symptoms.
Of their disease, as associated with Multini,
beside the paralytic disease common in the
lower classes, I have no record of importance.
In one case Multini followed up a sore
Hemoplegia, and severe shyness of the lip; in
recorded in one case Multini. 
A Dreier's observer quoted from Apocalypse a frequently occurring
case with Multini. [E. Jesse Hall, M.D., 1867]
I have never seen associated with the condition,
and of which I do not quite a case.

Tuberculous dactylitis occurs in the history
of one case, as preceding the Pulmonary,
tubercular affection. The patient, an anaemic girl
of 19, presented tubercular disease first in
one of the toes, which was opened; the drain
area deserted, and later in one of the fingers,
which was bitten in like manner. This was
condition appearing between the occurrences.
In a second case, which I do not quite true
I have also seen struma dactylitis in one
finger, occurring in conjunction with Early
Multini. Of the tubercular bone and joint
affection, I have no instance.
Of dental, tonsillar or pharyngeal infection I have no reliable cases. Due to this source, may have been due to the tuberculous cervical glandular enlargement, which I found in 5 per cent of my cases. In all of these the pulmonary condition was traceable immediately to the cervical glandular condition.

In two of these cases operative treatment was resorted to for removal of the affected glands, but the infection spread to others in both cases.

Dr. Philip quotes a remarkably small number of glandular affections as complications with tuberculosis, finding them only in 1.2 per cent.

[Dr. Philip's 1000 cases p. 21]

Cardiac Disease. Owing to the theories that have been from time to time advanced as to the aortic mitral relation of cardiac disease and tuberculosis, have been curious to oberving that, taking into account the comparatively few number of cases which I have collected, there occurred a number of cases in which cardiac complications were present. Special valvular affections occurred in 5 cases (i.e. slightly more than 5 per cent), two cases showing combined aortic and mitral disease.
two valvular stenosis and incompetence, and
one pulmonary stenosis. Some interesting re-
marks have lately been published upon the pre-
scence of mitral pregestotic murmurs, when
post mortem evidence shows no stenosis.
Recognizing this possibility, it becomes almost
impossible for a clinical point of view to be
absolutely certain as to the presence of the valvu-
lar condition, but in bolt-ray cases that the
advantage of another observer's corroboration,
and am inclined to think that valvular disease
is more common as a concomitant of Malaria.
That in generally suspected. The results of
statistical lately points to the fact that Phthisis
occurs more commonly in conjunction with
pulmonary Stenosis than with other heart
affections [Wetin 1975 1210 19.84.1] this
naturally points to the conclusion
that congestion is more protective at
least less prejudicial to the Phthisic Con-
dition. Harris & Seal [Pulm Mpt p 207]
quote 133 post mortem reports by skilled
observers, in which valvular lesions were
present in 24 cases, the mitral valve being
constricted in 3 cases, fringes with vegetation.
in 4 and thickened in 8 cases. The aortic valves were affected five times and the tricuspid four times. In two cases, there was evidence of dilatation, and in four cases the heart muscle was found to be pale and flabby. The high percentage of valvular disease in these cases certainly militate strongly against the theory of antagonism between phthisis and cardiac disease. O'Flahy [1000 cases] records special valvular affections in 2 percent of his 1000 cases, namely of mitral incompetence, three of mitral stenosis, two of aortic stenosis, and two of incompetence. Four instances of pulmonary stenosis. No aortic disease.

He remarks that his experience points to the somewhat slower advance of phthisis when concomitant mitral disease exists. The only safe conclusion which can be drawn from the evidence is that phthisis contrads with cardiac lesion far from responsible, but that cardiac condition leading to pulmonary congestion though by no means entirely protective, still lends certain degree to render less rapid the progress of
The lung condition, whilst conditions toward pulmonary anaemia, do not exercise any deterrent effect upon the plethoric condition, even if not previously.

of Cardiac dilatation. I have record of 2 cases in both of which the condition was well marked, and in a very large percentage of cases evidence of cardiac functional disturbance and debility was distinctly appreciable.

Infection and Contagion. Upon this much dispute question the evidence adduced in medical literature is so conflicting that it becomes a matter of extreme difficulty to form any collective notion of the various results published.

My own opinions upon the subject flow in the fact that the disease is infectious and though probably rare as an example of actual contact, as in the case of some of the acute specific fevers, yet near evidence to the patient, though strictly is to be classed an infection, yields what we may be almost an example of a clue to living contagion. The existence difficulty...
of investigation from the subacute onset and slow progress of the disease, readers it almost an responsibility to be absolutely certain, even in a highly suspicious case of infection. Again in the resistance in which we find the examples which seem most suspicious of transmitted by infection, namely those in which the disease occurs in persons lying together, we are debarred from quoting the majority of them by the suspicion of hasty death. Although I am far from denying that actual heredity is present, without the factor of infection, yet I am inclined to believe that a considerable number of the cases which are slanderously hereditary are due to infection, and I am of opinion that many of our cases which we quote as excellent in ample of heredity would entirely escape the disease if removed from the influence of the contact of the poison. This quoted by almost all authors on the subject in support of the theory of transmission, that the resident physicians and nursing staff of our military hospitals rarely suffer from the disease as a result. This I am inclined to regard as a somewhat fallacious,
argument. These persons may be free in contact with the physical, but not the most favourable circumstances which could be provided. The infection is considered and prepared for, dust is avoided, superfluous draperies are taken away with great care,室 air is used up, ventilation, and most important of all, the effects and signs of the patient are most rigidly attended to, so that no fact, small possibility of infection remained. Dr. in any opinion was in these situations, where the danger is immense and appreciates that infection becomes probable, but where the utmost importance of all these details is recognized and in a very modified form, in the ordinary dwelling house where the surrounding of the individual, give feeling place to much more favourable for the infectious process, and where the nursing staff is composed of relations who probably could not much close relation with the patient than at hospital. Treatment of infection may not contain one other care which may be worth quoting.

One instance occurred in the family of an uncle of one of the patient's patients. The family consisted of
a father and 6 children, his wife being dead.

one of the sons became affected with phthisis and

obtaining work away from home lodged with another

family sleeping with one of the sons. This son con-

tracted rapid bacillosis of which he died, the

rest of the family several persons in all also ac-

quiring the disease.

The original sufferer, his health having become too

bad for continuance of work, was then sent to the

country to the house of a shepherd with whom he

stayed. This man, an individual of extremely poor

figure physique, rapidly manifested pleurisy-

al symptoms and died after a comparatively short

illness. After this the original sufferer

recovered home and the father of the brothers decided

previously well and strong one after the other

became infected and died of rapid phthisis,

all the individuals being before the original

sufferer.

A means case probably an infection from

surroundings in case 74. This man, previously

healthy, became a clothes a close office in

which a significant fact was that none

of the employees ever stayed long as this health

always suffered. This man became infected.
degenerated in health, and shows the same of the
disease in which typical symptoms are most
pronounced. The examination revealed large areas
in the lungs, scattered, probably having been
infected through inhalation of the person constant
in dust. The fact that on removal from the
place and treatment, he reacted most rapidly
and first in no less than 24, 48, & 72 hours
point to the influence of his surroundings.

A third case may quote as an example in
all probability of infection in an incipient form.
In this case after removal to his home quarters,
a daughter of 17 and two children of about
8 or 9 all became infected. The father also
showing symptoms signs of both acute disease
of the case in which there was suspicion
of infection the examples are numerous.

To sum up the nature of infection I should be
inclined to describe it as dependent upon a
sliding scale governed by (a) the degree of
the person and (b) the inherent susceptibility
of the respiratory whether from degenerated
health and vitality or from inherent weakness
of tissue. When both these conditions are
favourable to infection, it is probably safe to
assume. A certain element of some disease
is necessary for the development of the one
that I am of opinion that in certain
cases it is not necessarily present, and that
a sufficient dose of the poison can produce
the disease in a healthy person. So the
effect when Harris, Beale [Public Census, 1872]
remarked. A healthy person may be exposed
to one minute to small, subcutaneous or even
intra-cutaneous dose of the poison, but a in the case
of animals not having been found absolutely
impossible, to the disease, so we are bound to as-
sume that absolute immunity does not exist
among man and to sufficiently large dose of the micro organism.

If these views be correct, and when the
effect of the phosphorics vary often occur, with bacilli. Each individual need be such con-
sequences, in the few or some cases, of exposure.
Then expect in 24 hours, setting free upon the
community million of little, the bacillus [Harri-
Beale Public Census, 1872]. Can we wonder
that the disease is so much a strange or popular
Centos? And then the scene when we consider
Splenomegaly. The widespread affection of the spleen during the development of Pulmonary Tuberculosis renders the early symptoms of the disease such a varying quantity that it is difficult to construct a classification of the Symptomatology. Probably the most satisfactory division of the cases as regard symptomatology is to classify them in two groups. 
A. Cases in which the symptoms point from the beginning to closure of the respiratory passages and organs. 
B. Cases in which Pulmonary or Lung-Tuberculous
Symptoms are masked by those arising from other organs.

A third group C may be introduced in which, though respiratory symptoms are present, yet other symptoms occur in such a marked manner as to claim equal importance.

Under these headings I propose to review the cases of my cases before dealing with the relative occurrence of individual symptoms.

A Case showing Pulmonary symptoms from the outset. This group includes by far the largest proportion of my cases, those never reaching 58 per cent. In this group of cases the example included those cases which exhibited in more marked manner than other symptoms symptoms combinations of the phenomena of Cough, expectoration, Dyspnoea, Hemoptysis, Pain in the chest, Hoarseness or Aphonia, and Concurrent Pulmonary affections.

Thus, I believe in all cases of a considerable number of examples, to be the largest group, when the symptomatology is accurately acquired. I make the latter statement advisedly as there is a considerable number of cases
in which some of these symptoms have been present from the earliest onset of the disease & are yet unaltered by the patient, or too changeable to be explained, while they cannot be treated for other symptoms.

In certain instances amongst the case each of these symptoms has or have been the first to appear, with the single exception of Infection. They necessarily accompany either cough, hoarseness or clearing of the throat.

B. Cases with the Early symptoms confirmed.

Examples of these cases reach to the number of 20 per cent of all my cases.

These cases have subdivided into two groups.

(1) Those of an abdominal type, in which the prominent symptoms consist of Carminatives of Abdominal Pain, Anorexia, Vomiting and apparently Carcinoma Brainhea or Constipation. This subdivided reaches 15 per cent of the whole number of cases quoted.

This type, the 'pruritic form' of some writers I have declared to exist or at of very much greater frequency than is generally expetected. The apparent simplicity of diagnosis,
The absence of other symptoms, and the unfavourability to frequent leisure render sick the general practitioner's labours, continuing to mark the real diagnosis of the disease at the period when its recognition is of utmost value; and many of these cases, I believe, in which pulmonary physical signs are present in a marked degree, are never diagnosed until the later period when the symptoms on the site of the lungs begin to assume greater prominence.

(2) Those of a type showing general septicaemic degeneration of one kind or another, and declaring themselves by combinations or single occurrence of the following symptoms: Apparently causeless loss of heat, anaemia, glandular enlargements, headache, debility, anaemia, sweating on exertion or during sleep, and febrile disturbance.

These cases include the remaining 6 per cent of all my cases, which are included in Group 3.

C. Cases of Equal Combination of the above groups. Of these my cases include 28
per cent. 18 per cent. are cases of combinations of the Respiratory and Abdominal form.
2 per cent. are cases of combinations of the Respiratory form with that of general apyretic degeneration, and the remaining 1 per cent. of combination of Respiratory & Abdominal form.
with that of general apyretic degeneration, the three varieties being about equally balanced.

Systoleus & Respiratory.

1st. Cough. This is distinctly the most frequent and characteristic symptom. The general idea which I retain is looking back upon the cases of Phthisis, which have been so that the cough is in a large number of cases, not so prominent a symptom as would naturally be supposed, but, after the careful collection of the symptoms and of the present cases, I find that it has been present (if in a higher form among some cases, at least present) consistently, in the large percentage of 93 per cent. In many of these cases it has not been a very distressing symptom, and has been masked by far more prominent phenomena.
but in all it has been found to be present constantly in at least a slight form, in some being simply a slight dry cough and sometimes all derived from this to cough of a violent and paroxysmal nature, with the accompanying expectoration.

In the more severe cases it has occurred constantly at all hours of the day and night, being more troublesome as a rule with the evening rise of temperature which so frequently occurs. In the majority of the cases in which there was need to make searching inquiries after the existence of cough it was found to occur by far the greatest frequency on first waking in the morning, due to the nocturnal collection of phlegm.

In a considerable number of cases it proved the cause of meningitis from its initiating character.

In a single case it produced involuntary convulsion, this example being a female.

In many cases combines with dyspeptic symptoms, with tickling in the throat. It has been reported to the alimentary or throat as the source.
(1) Eruption does not occur in the same proportion as cough. Doubtless in some of the cases in which its presence is denied it actually does not exist, but the quantity brought up is so small as to be swallowed without being noticed. In records as any case an occurrence in 71 per cent. In 12 per cent it was small in quantity but appreciable, and in 1 was meant in quantity.

In the majority of the cases it has preceded the inoculated fever, yellow or peculiar as colour and fairly easily ejected.

In a smaller number there has been no persistent appearance, the ejected material being either profuse and not being ejected so easily.

In many cases it has preceded the miliary fevers occurring in a considerable number of cases whereas there was evidence of neither casts, formation nor dilatationSUM:

In a considerable number of cases among the manufacturing districts patients a large number of bilharzian particles have been present and the patient has presented a more chronic type.

In the majority of cases the patient was ill-offenced.
In all cases in which any doubt of its being
necrosis existed the tubercul Bacilli have been
searched for and the course of the disease, on
the whole (contrary to the doctrine of many writ-
ers) though not constantly beeing done relatio
to the gravity of the disease.
Calcanean mania have occurred in one or
two examples but of small size.

(3) Haemoptysis had occurred in different
degree of severity in 31 per cent of any cases.
Of these 18 were records of the occurrence of
a considerable amount of haemoptysis, the
remaining 13 being records of frequent strickings
in the affection. My percentage on this whole
believe falls considerably below the usual
figures. stated by John Fox [Buchanan, 1785]
giving it from various observers as ranging
figures from 50 to 53.6 per cent [Warme -
Laurent, 65—1st Brompton Report 63—2nd Broma-
ton Report St. Pollock 58.4—William, 57
Colton, 53.6 Fox 54}-] D. Bake vi 1000
Cases found it in 26.3 per cent, Harris, Beale
[Philip Cawrey p. 306] gives it at 50 per cent.
Luei, Walse 1st B. Brompton Report state
that half of these cases only. Approximates an in-


Considerable quantity. [Written over p. 785]

Spleen. This being quoted by some authorities of considerable frequency I have made enquiries about its occurrence in a considerable number of my cases, as in only one patient under my care in hospital and in an outpa-
tient did I find evidence of its occurrence, and that in no very material manner.

(5) Dyspepsia. The symptom thus found occurring in a considerable proportion of Cason patients, it the number of 57 per cent of those 11 had it only slightly, but not
markedly, others 6, had it very slightly, and 6 presented the symptom in a very
marked and severe form.

(6) Pain in the chest. Pain of various degrees in the costal and precordial tract of 2
patients in 9 per cent of cases. Of the three,
patients pain referred anteriorly alone in 5
cases, posteriorly alone in 10, to the area of
25, to the entire chest in 10, and to the
Macedon in 2.

I am of opinion that undetermined irregular
pain is not uncommon over the affected
area, especially as the ascites being then
referred to as occurring in the chest, or in front of it, or more frequently, still behind it. Sometimes acute they are not always severe but an overtone as a sense of discomfort and not infrequently lead to the remark that the arm seems too heavy and the weight of the clothes causes aching in the chest. The lateral pains are of course frequently associated with sleep, but phenomena are often matters of a large proportion of the entire members. Unusual muscular irritability has also been present in a large number of cases.

(7) Hoarseness I have found fairly frequent as an early symptom, in many cases transient but sufficiently frequent and marked to have drawn the patient's attention to it. I find it occurred in 21 percent of the cases as occurring in a moment or at severe form. Altered quality of voice upon which Dr. Secord lays stress as an early symptom when occurring without apparent rule cause [Palm. Math. P. 3]. I find recorded in one case, in the instance the phenomenon being a true alteration.
of the voice quality without any care.

Pacinian formation I quote the evidence of. This symptom as a rule I have found in the latter stages of laryngeal disease and not occurring earlier unless an acute laryngeal condition has been set up apart from the laryngeal mucous.

In a single case I have seen of total asphonia of a functional nature as in the case of an examination showed no laryngeal condition, except the larynx may or may not be fairly far advanced.

Laryngeal disease of a tuberculosis nature occurs in 20 per cent of any cases. Of these the affection was very early in 44, slightly more marked in 12, and severe as in 4 of these latter number 2 showed ulceration.

The percentage would have no doubt have been much higher if circumstances had permitted of and examination in each case.

I am of opinion that the laryngeal mucous membrane is in a large percentage of cases alluded in character, even in many cases where functional alteration is not a
marked characteristic.
In many cases swelling was present in 8 instances
combined in some instances with fall off but in
the majority with hyperemia.
As the gums of the paits not infrequently
contracted with granularity occurred in 5 in-
stance, and was usually associated with
Vaccinitis especially of the epulis and
fold which is noted in three of those instances.
Large papillary projections from the inter-
ary fold occurred in 2 cases.
Hyperemia was present in 12 instances, two
in most instances combined with swelling.
The vocal cords were markedly thickened in 2
cases, slightly in several others.
Marked hyperemia occurred in two cases
and Vaccinitis also in two.
The area stomat exhibiting marked change
was the ex epulis and fold probably
owing to the more frequent adherence of ger-
num to the pad. Most frequently the
angulures & angulas epilothers in fold &
then the vocal cords. The pathological condi-
tion in the latter showing early pain at the posterior
ends. The Epiliotics, apart from the latter-
paller which it exhibits. Early in common
with the other parts, I have usually found
afflicted late, but causing the most dis-
harming symptom of all when rapidly
affected, especially noticed in dysphagia,
the most acute form of which I believe
to occur from ulceration of the posterior surface
of the epiglottis.

III. Alimentary.

1) Abdominal Pain. This symptom, a giving
indication of dyspepsia, occurs in a large
number of cases exhibiting itself by far
most frequently in the epigastrium: being
associated with the ingestion of food. Dr.
W. T. Fox (Dr. of Ames, 1827) states that this
symptom is rare but there forward reaches
a cure or less degree in 30 per cent of cases
over the epigastrium. It has occurred in a
male combined with other dyspeptic signs,
fever, dyspepsia, acidity, flatulence, and per
infrequency vomiting, also in a large ma-

2) Vomiting. This together with the symptoms just men-
       tioned and usually some modification of
The gastric function constitutes the leading symptom in the Abdominal Style of Phthisis, which I have already discussed. This style of the disease I have found to be most frequent in the female sex, more especially when anaemic and not infrequently combined with thre of excessive drinking of strong tea. Whether the Phthisis originates from a diseased digestive system or whether the latter is truly symptomatic with such occurrence I cannot say. But of this fact I can speak with certainty that the Abdominal symptoms in many of these cases predominate markedly over the Pulmonary phenomena, during not only the early stages but also the advanced stages of the disease.

In 5 cases further, I have record of severe abdominal pain, usually associated with disturbance of the bowel function and forming a taurine or acute organic dilatation of the intestinal tract.

Of Hepatic Enlargement with pain I quote one case, and a record of Hepatic Pain during the operation of foot without Enlargement.
(2) Vomiting. Of this symptoms a severe form, in 24 per cent of the cases, is very common. It is generally accompanied by loss of appetite, nausea, and sometimes vomiting, and in a few cases, by a fear of food. In other cases it has been seen that the vomiting is followed by diarrhea. In several cases, particularly in patients with digestive disorders, the symptoms of vomiting have been the earliest symptoms of the disease.

In one case (a female) it is interesting to note that severe attacks of vomiting occurred with each menstrual period, and no other cause for the symptoms, or pelvic cause could be discovered.

(3) Anorexia also manifests itself in a large number of cases, as a prominent symptom. In many instances other evidence of digestive disturbance exists, and in some cases has been one of the chief symptoms. It occurs in 62 per cent of the cases, then occurring in a percentage of cases for others with digestive disorders. In 3 per cent there has been the occurrence of an abnormal appetite, frequent hunger being present.
Diarrhea or Constipation. Diarrhea has been present as a marked symptom in 11 out of 10 cases. In 3 of these cases, it has only been of constant occurrence but has occurred with sufficient frequency and duration to warrant its inclusion as a well-marked symptom. In one of the cases it has occurred fairly early, but the majority cleared fairly marked pulmonary disease before it occurred. In 6 cases in addition to these, the bowels refused to maintain a normal balance and alternated between obtuse diarrhea of some sort, and constipation at others.

26 cases of Constipation were a marked symptom, sometimes of very great obstinacy. In a second case, prolonged hemorrhage.

C. Hæmopoëtic.

Loss of flesh. A history of loss of flesh is exhibited most frequently of all symptoms with the single exception of cough. It occurs in 88 cases exhibiting all degrees of rapidity, and excludes the most marked amount in all very cases being a loss of 2½ stone. This is not exceptional in a dyspepsia.
patient, but when stated that the patient
showed one of the most satisfactory results of
treatment it becomes a matter of courtesy of not
in many of the cases of very slight to f
such it is owing to extremely unfavorable
circumstances of life and there patients all
inapropely show put under treatment with
more favorable circumstances reach well
to the treatment, and even an expert in
peace.

(2) Anaemia. Of anaemia there is a marked
history in 117 per cent. the history was es-
specially to anaemia approaching the clorotic
life, as a certain form of anaemia
obtained in a far greater number of cases
than this. As these remarks about ana-
emia combined with dyspepsia is a cause
of they tea drinking in a not infrequent
antecedent of Wiltons especially in the
manufacturing districts. whereas tea drinking
amongst the factory hands attains to the
proportion of a vice.

Some interesting remarks upon medical anaemia
have lately been published by B. Holmes who
after pointing out that early diagnosis of anaemia

Nail curvature shows that cell disintegra-
lation is abundant in heat-cooked blood
in accordance with a tendency known or
source. Extensive tissue disorganization, and ex-
posure of some that we may be seen by study
of the necropsy at some future date. To detect
phlebitis in its acuteness. The fluid marks
detachment from normal path variety of leuc-
ocytes, great decrease of small lymphocytes, great
increase of phagocytes, usually marked increa-
s in large lymphocytes, many scant lympho-
cytes with irregular contour. Moderate pro-
rnin of plasmocytes. Eosinophil cells few
or absent, myelocytes occasionally present
marked cell disorganization, groups of debris from
leucocytes, phagocytes with indistinct contour,
and granules from numerous grey staining
tissue, with marked regularity in size and
appearance of phagocytes, dorsal phagocyte
small in small lymphocytes, great phagocyte
under the age with few or more nuclei,
after a clear manner sharply defined ring
separating the nucleus from the cell body in
small + large lymphocytes. De lec. [Medical
Record Sept 5th 1876]
D. Circulatory.

Apart from Cardiac Disease, with which may already deal, a large proportion of my patients have given evidence of Cardiac debility, showing a pulse of very slow motion, with in many cases abnormal rapidity, and not infrequently complaining of palpitation, especially on exertion.

This condition is in especially marked degree has preceded death in 31 per cent of the cases, but in slighter degree can frequent in many more, and a considerable number and symptoms were complained of.

E. Integumentary. The anaemic condition of the cutaneous appearance has almost been death with. Cyanosis more noticeable in the nails are present in a considerable number of cases and in many a more or less marked approach to the clubbed finger of clubbing. In a large number of my cases have been fast, early cases, the appearance of hectic has not been a remarkable symptom in the cases I quote as it would probably have been in a more advanced dementia case. Sweating in one form or another has been

71.
a marked symptom in a considerable
number of cases, occurring in the charac-
teristic neurasthenia found in 55 per cent of the cases,
and being kept specially marked in the
day in another 13 per cent, two of which
also suffered from the night force.

It was present most frequently in those cases
in which Pyrexia was present or suspected
and generally in the ratio of the accuracy
of this symptom.

I do not believe however that this symptom
in a large number of cases or, if partially
at all events, the result of an unsympathetic con-
dition in sleeping arrangements—want
of ventilation, too heavy or insufficient
bedclothes &c. Is an interesting fact
that upon the introduction of lauriephoric
acid as a remedy for this symptom, when
it was desired to employ it among my Hos-
pital patients, although the majority
had suffered from it, some obstinately &
prospectely, before admission into Hospital
there was not a single case (although some
were in a fairly advanced stage of the same),
of sufficiently marked night prevalence.
To satisfy the results, but in conjunction with this, it is to be observed that Nysxia may be no means absent, several of the cases having high temperature at night.

Of this disease, I have already spoken. An attack occurred in the leg of pitch in one case, while the patient was at work, his occupation being without standing, no cardiac or renal disease being present.

F. Tuberculous. No very striking pulmonary change have been present in the cases of cases.

The urine has in the vast majority of cases been of normal estimation. In a considerable number of cases, there has been a fairly heavy urate deposit, and three examples of albuminuria have occurred, two of which cases were very rapidly to the bed, but the third has done well; in this latter case, the amount of albumen was not large and constant and persisted during the entire course of treatment.

In one case, involuntary urination was present from cough, and in one difficulty
of mechanism was marked although no organic reason was to be found.
C. Reproductive. This system has already been dealt with under Etiology.
H. Nervous.
(1) Headache. My attention has been drawn during the collection of these cases to the frequent occurrence of headache as a symptom. In many of these cases it may be due to accompanying anaemia, but the number of cases showing the occurrence of headache far exceeds the number of cases in which any marked chronic condition exists, though anaemia of the form discussed above may be present. I am inclined to believe that many of these cases, if common with those of acute alimentary, haemorrhagic or circulatory disturbance, where there is only a small area of brain affected, are to be attributed to the absorption of toxins, resulting in general systemic (poisoning), and thus causing alimentary disturbance apparently far in excess of the symptoms to be expected from the preliminary condition. This three
Acute symptoms frequently occur early in the disease and are frequently not so marked in late stages. I would attribute to the fact that in the early stages of the pulmonary affection the vessels of the affected areas are more capable of rapid absorption of the poison. Moreover, in later stages when nature's attempts at cure have resulted in softening of part of the area and the formation of fibrous tissue around it, as the symptoms in these cases begin to show more markedly in the pulmonary fields.

Headache, of frequent occurrence, shared characteristic. I find it occurs in the large proportion of the cases and of this frequent occurrence I consider the above the most likely explanation.

1. Debility occurs as a prominent symptom in 55 per cent of cases, and manifests itself in all degrees of severity.

2. Asthma presents itself in 50 per cent of cases, when no adequate cause can be assigned, and second also as a considerable number of cases in four or six weeks from a result of cough.
Temperature. As regards fever I am not fortunate enough to speak with regard to the larger number of my patients owing to the circumstances under which I was enabled to make my observations. In the majority of cases in which I could make satisfactory searching observation on the subject there was evidence of fever of various degrees occurring in the mean of the cases at its height in the evening. But in no means disposed to think however that fever is non-uniformly present as it would appear from the evidence to the contrary, exhibiting a normal and in too other cases a consistently sub-normal temperature. The temperature, as in the case of the night sea vomiting, these also noticed in many cases to be controlled by a simple alteration of the hygiene demanded by the patient, exemplified by administering food and water, any antidiarrhoeic treatment being excluded in addition.
With regard to mental affections, none of my cases have presented the so-called cerebral type of the disease. One case has developed insanity, subsequent to a pathological affection, and one has suffered from degeneration of the brain without adequate reason being producible.

With regard to general attitude of mind, the large majority have exhibited the mental "Men, Mirth, Mirth" in a greater or less degree, some few only showing evidence of mental depression.

Conformation of Chest.

With regard to the general physical conformation of the chest, my cases again emphasize the importance in regard to susceptibility of unsatisfactory development and expansion of the chest. The causes of this condition in my patients are various. Ineffective exercise, sedentary occupations (frequently in bad position) having influence as regards general stamina, early combined and other pulmonary affections and bad habits of carriage all play their part. In two cases only of
The chest piece is to find a powerfully built and satis\-factory developed chest affect- ed. The development was moderate in 37. The chest was of a delicate, thin-walled type in 26, of flat type in 30, in both of which varieties there were many cases of tendency to the ala type, with certain degrees of contraction of the chest wall, and in one of which a slight deformity existed. The exaggerated ala type occurred in 3 cases and in 1 there was an extremely exaggerated amount of contraction over the lower ribs.

In all the chest expansion was poorly represented over the affected areas and in many over the entire chest.

In the course of treatment a number of cases considerably improved in expansion and development when the disease was not too far advanced, but these will be discussed later.

One point is the formation of the chest, namely the horizontal position of the clavicles in bilateral subjects. They found occurring in a considerable number of cases.
though unfortunately I have not data of this among all my patients. I accordin...siderately higher than the sternal. This as it naturally occurs in subjects with stupid shoulders and frequently a narrowed chest, than found in a large proportion of the cases in which I paid attention to it. It is not a result of the development of tuberculosis, but an organic mode of conforming them and consequently may acquire the value of a premonitory indication. [Daccord Puls. Mitt. p. 84]

With regard to Physical signs I do not propose to go into detail. I shall merely observe that in suspected Early conditions, especially special, where the great majority of our early condition occur I should lay great stress upon local Rattling or loss of expansion, variations of Vocal Intonation attenuate the relative
Normal Function of the two Lungs, height, breadth of Bellows or Respiration, abnormally fast; Fumble Respiration, Coughdull or Jerky Breathing, slight Respiration of Inspiration, or Localised accompaniments whether of the nature of expectorations, asthma, or friction, should taken into consideration with the general details of the case. History, Symptomology to, physiqi also strongly after examination of the Dysfunction. Any single occurrence or combination of the above demands extremely serious, and if not actually diagnostic, shall combine with it or even if the bellies in the Dysfunction, at least calling urgently for an examination of the chest at a latter date. Any of the quei of apical cutaneous, located, in my opinion highly suspicious as to quote Dr. Helen Fox, in my opinion "Squi of Brachial ear the other rarely occur except in persons who actually are, or who are very liable to become, tuberculous."

[Dr. Helen Fox, Diseases of Lungs p. 793]

Pulmonary Areas Affected.
With regard to the areas affected I find that
in 24 per cent both eyes were affected over an approximately equal area, the left eye in 26 per cent the right eye in 29 per cent, the right eye in a marked degree than the left and that in 26 per cent the left eye was affected in a more marked degree than the right. Upon the output of the side earlier affected opinion differs so widely that in so small a number of cases as mine the variation may be regarded as coincident. In 41 cases one or other eye was affected, occasionally both, the right showing affection in 20 cases and the left in 11. I do not quote a single case in which I should be prepared today that the disease commenced at the base.

Treatment. As I have already observed in my introductory remarks the circumstances under which the cases of recurrent ulceration were treated varied considerably one third of the total number being treated respectively in hospital, at home or in private practice, and consequence it will be necessary to deal with these groups.
Separately, as the resources within command for each group were different. Before proceeding to take the groups in detail however, I would observe of them generally that in none of the cases was it possible to have the advantage of medical care at one's disposal, so that the patient could preserve his life for the time being by an attempted cure, and in almost all cases the object was to obtain as much improvement within a limited time as was feasible, and enable the patient by means of this improvement to return to active employment. In only too many of the cases relapse was to be certainly anticipated on resumption of their ordinary surroundings and method of life, but we may draw as certain number of conclusions from the changes which took place under treatment.

A Patient Treated in Hospital. Though the earlier history, often and surroundings of the patient treated in Hospital were in many cases highly unfavorable, yet during the actual treatment they were placed amongst the most favorable circumstances of all my patients. In Jacques [39-58 Within Week] remarks in
Reviewing the chance of hospital patients, that they lack the fundamental means of treatment—pure air, sun, and a country life, and in consequence he draws the conclusion that the idea of recovery is chimerical. In this he is right of course to some extent. By patients on the other hand and under the fortunate circumstances of having available all these three desiderata, the hospital can be situated in the country, expose excellent and the opportunities for fresh air unlimited when the state of the patient warranted of this. In addition there was no drawback in the way of overcrowding, so great a disadvantage in the majority of their hospitals in cities. The patients were encouraged from the first to indulge in a reasonable amount of outdoor exercise morning and afternoon, the only certain indication being estimation of weather. High degree of pyrexia, and makes general activity produced by the laboratory conditions, when of low degree a nature to allow of exercise. The latter case showing the temperature in almost all cases in addition. The form of exercise prescribed was walking of a
sufficiently broke nature to reach the circulation in active condition, and was arrested by being terminated in fatigue slowing itself. Deep respiration was used in a contradistinction unless very extreme, care being taken that all patients should be warmly clad and all damp things removed in perspiratory after-effects. Ventilation was carefully attended to by open fire, or means of the window draught board system, and all warming was done by open fire, the ward being kept at a mean temperature of about 60°. Expansion of the chest was promoted by light, gentle, warm bell exercise with light weight, only contradistinct from leading by1 head692457. by692463."
rough level.

The bed clothes employed were of a light and warm nature and the bed and mattress of such construction as to afford strong resistance and a Thane noticed before this fact alone had an important bearing upon my later recollections and practices.

A wholesome and sincere diet was prescribed, combined with some form of alcohol in a considerable number of cases.

With regard to drugs the necessities varied with the different cases. Efforts were made to commence with to get the digestive system into as near a state of efficiency as possible, the state being treated with care in the preparation of Nux vomica which at that time and later have found very efficacious in tuberculosis.

The appetite was increased by one of thebetter tonics or the mixture associated with the name of St. Beuf's and a useful formula was as follows: M. P. Peace 1 gr. 2.

When the digestive system was set right it was noted as an addi- tion to a useful deli. Preble 1 gr. 6.

On a must of the preparation of cold lives oil frequently on alternate days with one
Of the Malt preparations, of the latter the Bryo Hypophosphite Co. was of considerable value and of the former, a standardized emulsion of the oil with fairly large doses of pure K Euc. resins was often employed, in cases which could not tolerate the pure K Hmnnas or the Oil with Eucalyptus alone being used. With these preparations the Carbonate of Guaiacol was frequently employed in full doses combined with Aetnacous Acid or Aspirinic Acid or used combined with the Resorcinol of Dri"n 0. Guaiacol 0.25 0. Resorcinol 0.10 0. Aetnacous Acid 0.25 wife 0.375. This mixture was

Both the fluid and solid preparations should be

Circulating ability was met by the use of Stephonthus or Digitalis with Brandy or Port Wine.

Night sweating, when present, was controlled by Camphoric Acid forte at night, or by the use of Trieth Bettecromed 1/10 or by a pill preparation of Aetnacous Sulfate 100 gr. at bedtime. Several Muis, or the Sulphate of Quinina were

employed, the Drug being also employed to
Control Pyrexia. In Pyrexia with circulatory debility the following Constitutions were found of value P. Lina. Supple
   A. arteriosi a 3.7
   E. Belladonna
   E. Mescalina a 3.7 Hope.
In cases of marked debility Raw meat juice
was employed with effect.
Constitutional over the affected area was
employed by means of Blister, repeated if necessary or by the use of Epsom. The cutaneous function was promoted by the
use of the Oil of Guaiacol or by the following
 Stimulant Preparation
   1.  Oil Eucalypti
   0.5 Cajuput a 3.7
   0.5 Alumina Z 4
Roughly speaking, for patients with early pulmonary conditions, the daily routine was
approximately as follows: Milk with bran
bust before rising. Rising at 7.30 am. Bathing.
Breakfast 8.0 am. Consisting of
milk or coffee and bread and butter. Other
meals will follow. High-energy meal will come at 1.00
pm. Outdoor exercise. Dinner 1.30 pm. After meal
vegetables. Milk or light puddings with or without
fruit. Fruit. Medicine. Outdoor exercise. Tea
4.30 pm. Tea with bread and butter. Medicine. Bed
at 8.0 pm. Supper of milk and bread 8.30.
The standard of equipment was not by
any means as weekly intervals, with results
of which I shall speak later.

B. Out-patients. In this second series of
cases the method of treatment was
much more inferior to those above detailed.
The patients were treated under highly
favorable circumstances at home and
were seen only at weekly intervals.
In general terms the treatment was as
follows: Curative from work until such
cases, exercise was advised, or if not at work.
Some fresh air during the day was enjoined. Dyspepsia and complications were treated with appropriate remedies. Expectorants, stimulants or sedatives according to the requirements of the case were employed and of Montreal rice some form was in the majority of cases administered with great benefit. Counterirritation was employed where advisable. Febrifugia was advised as far as possible.

Some few cases where necessity occurred were treated for a time as in-patients.

c. Private Cases. The treatment of this third group of cases of necessity varies even more than the former groups in regard to the circumstances of the case. The nutrition, malt and oil preparations were used to a large extent, a generous diet with the moderate use of alcohol was favored and in several cases change of air was employed with good effect. Ceratina of work was obtained in the majority of cases, and fresh air exercises substitutes. Symptomatic treatment was resorted to when
needed and dyspepsia—a permanent symp-
A new site called you carefully treated.
These found the following formula of great
value in the treatment of the dyspepsia, success-
in obstinate cases, where a considerable number
of other remedies and emboli and failed.

\[ R_{\text{Lycop}} \]
\[ R_{\text{Bisum}} \]
\[ R_{\text{Bisum}} \]
\[ R_{\text{Bisum}} \]
\[ R_{\text{Bisum}} \]
\[ R_{\text{Bisum}} \]

Under the ice-cold bath; with, liver-

discord and epigastric pain been
much improved, in nearly every case, but.

General tonic were employed in nearly
cases to improve the general debility too.

Progress. The proper of the cases has
on the whole been fairly satisfactory.
considering the disadvantage under which
many of the patients lay considerable
improvement having occurred in over a
certain number of these most unfavourably
situated cases, divided the results
of the cases into four groups: (1) Good
Here it is hoped considerable improvement took
place, and continued. All their cases showed an increase in weight of 5 lbs, which they retained. 7 of their cases increased in weight over 10 lbs, of whom 5 increased over a stone. These cases include 25 per cent. The highest numbers of these occur in the cases admitted in Hospital and the lowest among the Outpatient cases.


(2) Slightly Improved. Cases in which improvement was not so marked, weight was slightly increased and mental condition and physical repair slightly improved. These cases include 26 per cent. They are highest among the Private patients and lowest among the Outpatient cases.


(3) In status quo. Cases which showed no marked improvement or in which the symptoms improved slightly but the physical signs remained. These cases include 24 per cent. They are highest among the Outpatients and lowest among the Hospital and Outpatient cases.

(4) Bad. Cases with loss of weight, in-
crease of physical region and generally
leading rapidly downhill. These cases
include 23 per cent. They are highest
among the hospital patients and lowest
among the private cases.

It is interesting to note that these four
groups almost exactly divide the cases
having the same number in each group
and a group. And 2 this improvement
and group 3 and 4 on the whole to degen-
erate it follows that the number of cases
improving and failing to improve are
in the same of cases almost exactly
Equal. This being the case we may I
think come to the conclusion that Philippi
is a disease more amenable to treat than
has been hitherto suspected when such a
number of cases treated under circum-
stances, in the average mortality is affected,
shows so much improvement.
In conclusion I would remark that success
of work remains to be done for Veterinary Tubo.
culd as from a Public Health point of view. None hospital accommodation is available, and when this has been obtained official notifica- 
cation of cases would be of value, but the latter would be of little use as accommodation for the case ends not be found. It is to be hoped however that the future will bring efforts to reduce the prevalence of the disease and check its progress as the medical science to the populace which it at present claims it is to be.

Francis Harold Hinchcliffe.

Heath Lodge, Castle W. Huddersfield.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A.A.</td>
<td>M</td>
<td>52</td>
<td>7/3/22</td>
<td>Addison's Disease</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
</tr>
<tr>
<td>E.C.</td>
<td>M</td>
<td>22</td>
<td>10/12</td>
<td>Tuberculosis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
</tr>
<tr>
<td>B.W.</td>
<td>F</td>
<td>21</td>
<td>7/7/23</td>
<td>Rheumatic Fever</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>99.2</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>99.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>99.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>99.2</td>
</tr>
<tr>
<td>E.W.</td>
<td>M</td>
<td>25</td>
<td>5/16/21</td>
<td>Bronchitis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.6</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.6</td>
</tr>
<tr>
<td>H.M.</td>
<td>M</td>
<td>23</td>
<td>6/4/23</td>
<td>Chronic Cystitis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.8</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.8</td>
</tr>
<tr>
<td>T.M.</td>
<td>M</td>
<td>20</td>
<td>11/9/22</td>
<td>Bronchitis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.5</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.5</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.5</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.5</td>
</tr>
<tr>
<td>J.K.</td>
<td>M</td>
<td>25</td>
<td>6/7/21</td>
<td>Chronic Cystitis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.2</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.2</td>
</tr>
<tr>
<td>Q.K.</td>
<td>M</td>
<td>32</td>
<td>7/6/23</td>
<td>Tuberculosis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
</tr>
<tr>
<td>Z.K.</td>
<td>M</td>
<td>36</td>
<td>8/8/22</td>
<td>Rheumatic Fever</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>98.4</td>
</tr>
<tr>
<td>M.N.</td>
<td>M</td>
<td>55</td>
<td>9/2/23</td>
<td>Addison's Disease</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>0.2</td>
<td>0.2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>97.6</td>
</tr>
</tbody>
</table>

Sheet I - Cases Treated in Hospital
<table>
<thead>
<tr>
<th>Subject</th>
<th>Date</th>
<th>Temperature</th>
<th>Feeding</th>
<th>Fuel</th>
<th>Work</th>
<th>Walking</th>
<th>Speech</th>
<th>Spelling</th>
<th>Writing</th>
<th>Sight</th>
<th>Hearing</th>
<th>Reflexes</th>
<th>Nerves</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>21</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>27</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>28</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>30</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sheet IV. Cases tried on our patients.
<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Height</th>
<th>Weight</th>
<th>Temperature</th>
<th>Pulse</th>
<th>Respiratory Rate</th>
<th>Mental Status</th>
<th>Presence of Fever</th>
<th>History</th>
<th>Physical Signs</th>
<th>Treatment</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. F. 49</td>
<td>Male</td>
<td>M</td>
<td>6' 0&quot;</td>
<td>150 lb</td>
<td>98.6°F</td>
<td>72</td>
<td>12</td>
<td>Normal</td>
<td>0</td>
<td>Influenza</td>
<td>Influenza</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. F. 55</td>
<td>Male</td>
<td>M</td>
<td>5' 10&quot;</td>
<td>190 lb</td>
<td>98.8°F</td>
<td>68</td>
<td>10</td>
<td>Normal</td>
<td>0</td>
<td>Rhinitis</td>
<td>Rhinitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T. D. 50</td>
<td>Male</td>
<td>M</td>
<td>6' 2&quot;</td>
<td>210 lb</td>
<td>99.2°F</td>
<td>84</td>
<td>14</td>
<td>Normal</td>
<td>0</td>
<td>Asthma</td>
<td>Asthma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. F. 35</td>
<td>Male</td>
<td>M</td>
<td>6' 1&quot;</td>
<td>180 lb</td>
<td>98.4°F</td>
<td>76</td>
<td>12</td>
<td>Normal</td>
<td>0</td>
<td>Bronchitis</td>
<td>Bronchitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. D. 30</td>
<td>Male</td>
<td>M</td>
<td>5' 8&quot;</td>
<td>160 lb</td>
<td>98.1°F</td>
<td>88</td>
<td>10</td>
<td>Normal</td>
<td>0</td>
<td>Otitis Media</td>
<td>Otitis Media</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. R. 20</td>
<td>Male</td>
<td>M</td>
<td>5' 6&quot;</td>
<td>140 lb</td>
<td>97.8°F</td>
<td>72</td>
<td>10</td>
<td>Normal</td>
<td>0</td>
<td>Sinusitis</td>
<td>Sinusitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. F. 15</td>
<td>Male</td>
<td>M</td>
<td>5' 4&quot;</td>
<td>130 lb</td>
<td>97.5°F</td>
<td>68</td>
<td>10</td>
<td>Normal</td>
<td>0</td>
<td>Angina Pectoris</td>
<td>Angina Pectoris</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. F. 10</td>
<td>Male</td>
<td>M</td>
<td>4' 10&quot;</td>
<td>100 lb</td>
<td>97.2°F</td>
<td>84</td>
<td>12</td>
<td>Normal</td>
<td>0</td>
<td>Appendicitis</td>
<td>Appendicitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. F. 20</td>
<td>Male</td>
<td>M</td>
<td>5' 8&quot;</td>
<td>170 lb</td>
<td>97.0°F</td>
<td>76</td>
<td>12</td>
<td>Normal</td>
<td>0</td>
<td>Gastritis</td>
<td>Gastritis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. M. 15</td>
<td>Male</td>
<td>M</td>
<td>5' 4&quot;</td>
<td>120 lb</td>
<td>96.8°F</td>
<td>88</td>
<td>10</td>
<td>Normal</td>
<td>0</td>
<td>Hepatitis</td>
<td>Hepatitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. F. 16</td>
<td>Male</td>
<td>M</td>
<td>4' 10&quot;</td>
<td>90 lb</td>
<td>96.5°F</td>
<td>72</td>
<td>10</td>
<td>Normal</td>
<td>0</td>
<td>Nephritis</td>
<td>Nephritis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Age</td>
<td>Sex</td>
<td>Disease</td>
<td>Treatment</td>
<td>Outcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-----</td>
<td>-----</td>
<td>---------</td>
<td>-----------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John</td>
<td>25</td>
<td>M</td>
<td>Asthma</td>
<td>Prednisolone</td>
<td>Improved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mary</td>
<td>30</td>
<td>F</td>
<td>Hypertension</td>
<td>Beta-blockers</td>
<td>Controlled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jane</td>
<td>40</td>
<td>F</td>
<td>Diabetes</td>
<td>Insulin</td>
<td>Controlled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jack</td>
<td>50</td>
<td>M</td>
<td>Stroke</td>
<td>Anticoagulants</td>
<td>Recovered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joe</td>
<td>60</td>
<td>M</td>
<td>COPD</td>
<td>Bronchodilators</td>
<td>Improved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sheet III. Cases treated in Private Practice*
| Name | Age | Sex | Occupation | Native County | Mechanism of Injuries | Resuscitation | Respiratory | Circulatory | Urinary | Nervous | Mental | Physical | Palmar | Median | Trunk | Treatment | Progress |
|------|-----|-----|------------|---------------|---------------------|--------------|------------|------------|---------|--------|-------|---------|---------|--------|-------|--------|----------|---------|