Melanosis and Spurious Melanosis

By

George Migh.

1863.

Permit to the Family.
Among the numerous subjects at the command of the medical student, for the choice of a suitable one for his "Thesis," he is nevertheless often perplexed to know what he is best fitted to write on or about, and will for months (if not years) before hands try out of a very long list to form upon one, which he imagines at the time he can make so good a thing of; but fails after all, not from want of ability or research on his part, but from the choice of his subject. Would it not, I would ask my readers, be advisable that the "Medical Faculty" should recommend to intending graduates a list drawn up by them as subjects well worthy of the attention of those who wish to make original investigations? But another suggestion to my able superiors I am done for the present. In these days of "Bachelor of Medicine" and "Master in Surgery" with the degree of "Doctor of Medicine" looming in the distance
could we not have better. Ibes had
settled as we had conferred upon us the highest degree in medicine the University can grant - Doctor Medicine. This degree now only being obtainable at the very earliest two years after gaining M.R.C.S. & L.M. I imagine that with the aid of these two years (it may be that as in my own case) many excellent essays would be handed in to the Medical Faculty of the Edin. Uni
versity than has been done under the existing regulations.

The subject I have chosen for my essay on this occasion is "True & Spurious Thrombosis." Looking into the history of these curious, interesting, if no less fatal maladies, one is not a little astonished to find that they have only been christened in our own day or early in the nineteenth century at the earliest.
I cannot for a moment suppose, that these

diseases belong only to us, although no writer
has engaged his pen in recording his
experience of such diseases, previous to the
illustrious Laennec in 1806. Hippocrates
himself mentions in his writings, the occurrence
of "black spuota", setting the occurrence down
as one of danger, but associates such a
symptom with no special disease.

Haller has in his works given to it a
place amongst the symptoms of
Rheuma. Haller observed black sputa
in his own spuota from an early
period of his life. Wither has asso-
ciated black spuota as often with asthma
as often having been seen by him in
that class of cases. Portal has
said that the expectoration of black
mucus is often met with, without
any necessary affection of the
lungs. Pearson, Chomel

Laennec tells us, that black
black spuota is often seen in
the health, as in many who exhibit any symptoms of pulmonary infection, hang up in the morning after sleep means matter of a bluish colour. Such would seem to be the most of the history of this new disease; or rather not if it as we know, but only if a prominent symptom. This being all we can gather of both diseases previous to the death of Pearson, Science, I propose next examining each disease individually and first by Penicillium ovis. The first account of the "black disease" was and has already stated, penned by Science although claims have been put forth by Seaporten, as the first discoverer of the disease, but if the latter observer noticed it, he certainly never made it known to the profession. Many eminent men have made it a subject of the closest study, among
whom I may mention Buschet, Gallis, 
Barrowell & Thomson, as being a few 
of those who have most ably handled 
the subject, and serve to whom the 
essay is indebted for the little in-
formation he may possess at present. 
But I would call my reader's attention 
to the seat of the melanotic deposit.

There is perhaps no part so frequently af-
fected as the cellular tissue immedi-
atly beneath the skin. It is next in fre-
guency met with in the adipose tissue 
of the body as seen in the appendix-
epiploic of the great intestine where 
these masses of fat become totally discov-
ered by the block deposit. It has hitherto 
been but rarely observed in the mucous 
membrane, although the chronic ulcer 
appearance seen in the mucous mem-
brane of the intestine has been a 
constant to this cause. In the skin of 
the human being it is also rare as a 
primary affection as the latter.
it many spread to this structure; although
some in man as affecting the skin,
it is by no means so uncommon in
the horse, often primarily attacking his
inguinal covering. Mentioning
the mumps of this noble animal re-
calls to my recollection that I have
neglected to state, that this disease is
not confined to man alone but
affects many of the lower animals
such as the horse and the cat &c.
I have also been notified by all observers
on this subject, that the disease has
a preference for those animals that
are white or grey, rather than for
the black or the brown. How far
this observation holds good in regard
to the human animal, I have not
been able to satisfy myself, as wit-
ness don't tell us of what hue the capillary
covering work in those attached to the dis-
case. Having made this necessary deposition,
I will next pass on to a continued rather than the few remarks.
the frequency of the seat of the disease. The bones like the skin are rarely affected primarily, but not unfrequently become stained black from the close proximity of the tissues primarily affected. Let us next glance for a moment at the organs in the different cavities of the body. All are seemingly not liable to take in the diseased action, while others are among susceptible to be attacked, if the disease in any part of the economy whatever. The liver is by far the most frequently affected of any organ being only inferior to the cellular adipose tissues in having the melanotic deposit placed in its interior. The other organs in the abdominal cavity which have been observed to suffer are the kidneys only, no mention being made of any pigmentary deposit being found in the eyelids as one would not unnaturally expect. In the thoracic cavity, I have only to mention the respiratory organs as being
next in frequency as organs to the liver, in having infiltrated into their parenchyma-
tous, the true melanotic substance. In
the third great cancer of the body one organ
occupying the interior alone, but one organ
can become affected, and a single case
as attacking the brain has only been re-
corded. The third form of melanosis
has been found to occupy the veins
of the affected part after death, especially
observed in the liver and was well
marked both in the veins and arteries in that case where the brain was
the principal organ affected.

II. Nature of the deposit of pigment.
It has been thought by some to be
of a cancerous nature, either I presume
from its almost uniform facility, or on
the other hand from its frequent connec-
tion with the medullary form of the
malignant growth. It differs greatly
from cancer in that it only infiltrates
the textures of the body, not like cancer
which causes a complete change in the texture, in fact converting them into the new marked formation all around the cancerous mass. This chemistry supplies another proof of their non identity, for no one till now has sought to establish any relation between the two as has been done successfully between blood and this pigment. The composition of melanosis has been carefully examined by celebrated chemists both in France and Britain and all have agreed as to its remarkable analogy in composition to haematin, but without giving the unnecessary details of such experiments, let it be sufficient for one to add, that the amount of salts in the pigment is rather greater than in the haematin.

III. Different forms of the disease

Bacchuswell has made four divisions, 1st the pemphigiform; 2nd the tumefactive; 3rd the stratiform; 4th the
liquiform. The pseudiform variety is characterized by being irregularly scattered over the surface of the part affected, its most prominent and being in the lower layer, giving it the appearance of a fine mace, as if particles of gunpowder had been inserted into the substance of it. These minute dots may be shining as a well polished shoe, or dull as one newly wetted with blacking if allowed to dry.

The tubiform is the characteristic variety of the adipose or cellular tissues, varying in size from a pin's head to that of a child's head. In the horse such an occurrence is by no means un frequent, but in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent. in the horse such an occurrence is by no means un frequent.
is especially seen in the horse.

The last form of the disease, from its being in a fluid state, has received the name liquiform. While this form is mostly confined to theaneous cavities, but may exist throughout the body whenever cysts of melanotic matter are deposited.

IV. Characters of the deposit.

Its colour has been variously described as black, bister-brown, or, as in most instances resembling China ink. And, have already mentioned, it may be shining or dullish and regular in form but often lobulated. The feeling communicated by touching the tumour varies greatly according to its situation. If situated in one or other of the large cavities with no structure surrounding it, to limit its growth, it never acquires any degree of hardness. Should however it be situated where its growth is impeded it may rise.
Frequently acquires a very considerable degree of firmness. They are bloodless or almost so, the arterial supply to the tissues in which these tumours are situated is often limited. It is but rare to find bloodvessels around form in their interior. I find however two such cases recorded by T. B. Lasswell in the Encyclopedia of Practical Medicine. One of the cases he saw in the Hôpital Bicêtre, Paris where on a visit to that city. The subject was a man admitted into the hospital suffering from partial paralysis, this attack however very soon became complete and he died in a state of collapse and profound stupor. The necro after death revealed two tumours as large as two eggs situated in the anterior lobes of the cerebrum. On one side the lateral ventricle had been opened into the tumour projected a pool every into its interior. The black fluid of the tumour passed thence all the different ventricles and reached even to the roof.
bottom of the spinal cord. Both tumours were extremely vascular. Dr. Bawell thinking that they derived their blood vessels from the pia mater, being in so close proximity to it. Mr. Wiener supposed this vascularity to be the primary disease, while Dr. Co. held that it was dependant on the melanosis. The second case is one detailed by Lodstein when small tumours were situated in many parts of the body, as in the lung, rect, and finger. In this case there must have been some connection between the melanosis to the vascular tumours; for whenever situated, they were infiltrated with black matter.

V. Symptoms:

We have, in this disease, no pathognomonic symptom, by which we could discover it during life, were it confined to the interior of the body. But as this is rarely known, we are often led to a correct diagnosis from its being
situated on the exterior of the body immediately under the skin. Having it deposited immediately under the skin, would in many instances lead you to a correct diagnosis of some internal complication happening simultaneous with the appearance of it on the surface. The tumours are little if at all painful, differing remarkably from the shooting pain of cancer; and unless a sense of both are combined, no inconvenience is felt from them.

Progress. So fatal is this disease, that in Paris, at one time, it had the name of "cancer noir," the colour suggesting ruin, the futility cancer. It proves almost uniformly fatal, sooner or later; but your prognosis as to how soon, must depend wholly on the advance of the disease, and the importance of the organ affected.

Treatment. The physician proceeds as
as remedy for this ailment, and his practice, as in many other fatal maladies, is rather to treat distressing symptoms than to try to cure the disease. The surgeon can, however, for a time subdue the advance of the disease, I don't, I will say cure it, for he may extirpate the eye in such a case, not to cure (for sooner or later it returns), but to alleviate the suffering consequent on the tension of the eye-ball. Again, he may amputate the limb; but only to save for a time the advance of the disease; if the life of his patient for a few weeks, it may be months longer.

Having now made a rough sketch of the "True," let us next inquire into the "False" or spurious Philanthropists. It has been differently named by writers, as "Coal Miners Lamy," "Black Pittani," and by those who suffer from the disease, most frequently it has been designated.
the "black spot". My attention was first directed to this disease during the course of last summer, by a woman being admitted into the infirmary under the care of Dr. Sanders, with whom I then enjoyed the privileges of a clerk. Into S. Reghin's words this session a woman was also admitted suffering from the same complaint. This is to these, still enclenched especially to your attention; but before doing so, let us first examine what is known of the disease already. The history of both diseases I give together at the outset. Up to the beginning of the present century in fact nothing was known either as regards the pathology or causes of the disease as we know them now. Dr. Pearson, followed by M. Lavoisier, first pointed out in 1813 the differences between the true and false melanosis, a many cases have recorded cases, especially those medical
men, engaged in the counties of Midlothian and Haddingtonshire, where the disease, at one time, was much more common than now, among the miners of those districts. As the causes of this disease have been a matter of much discussion, since the disease became known, it may be well for me to lay before you the several theories held on this medical question. There are no less than five distinct causes, given by various writers, each acknowledging his own as the only one competent to explain the various phenomena of the disease. Before entering upon the merits of each, I may say, all are faulty. I mean by this, that one cause alone is not, in many cases, competent to account for the varied phenomena. They are as follows.

First, some thought the cause to be a malarial or miasmatic derision from the bronchial glands. Second, Morgagni conceived it to be due to the glands of the mucous membrane of the trachea. Third, By Run and others, it has been thought to proceed from the incretaent
of the pulmonary acini. Fourth. The extraneous origin, or that it is due to the inhalation of coal dust or carbon from the burning tail-lamp of the miners lamp. Fifth. Bezaleel, followed by Krichow, conceived it to be due to "pigmentary changes, resulting from extrusions of blood and the subsequent tissues, formations of necrotic." Since W. Morton, who thinks that the coal mixed with exsanguinated is a secretion from bronchial glands, caut (or perhaps knew no better) that these glands are not secretory glands, but only used in the recovery of convulsions of lymph. These glands become naturally tinged black, as the animal (human), or otherwise advanced in years just as the lung tissue itself does. It cannot, I should say, be due to such a cause. Morgagni advances a step, it arises for the supposed cause secreting glands and not sympathetics. I fear, however, that this cause won't explain the appearances as found after death. Were the black expectoration due to this cause?
we should expect to find the carbon, a black deposit to be most abundant around these glands, or in their interior, but far from this being the case, it is just the opposite, and we find the lungs in such cases black all throughout. Buschert & Wicke's theory was, as late as 1846 or 47, partly by the latter able observer. He (Wicke) came to this conclusion, after examining four different specimens of the morto state, sent to him from this country. It is certainly beyond what one would not naturally have suspected as a cause of the black spot that it should be dependant on literally, pulmonary apoplexy, or extravasa-
tion of blood into the tissue of the lung. I cannot see with the learned Professor how this could be, lasting as this dis-
 ease does, for twenty years in some frequently five in others, and during that time were never known to
 infectious blood. Again were this true, we should be having this dis
amongst those taken, without being coal
miners, suffer from extravasations of
blood constantly, or no black spots or
seemed whatever. Then, I shall suppose
it obvious to my reader, that all the ex-
planations (3) just given, are all very
fault, it cannot coincide with known
facts. I am far however from thinking,
that the other two theories of Dr. Buett
Pearsen assume such exposition, but
on the contrary, as being in most cases
the only rational explanation.

The great fact in support of the inter-
esting origin or the cause assigned by
Dr. Pearson is, that without exception all
the cases, that have as yet occurred, have
been in those who, from their occupa-
tion or residence, were exposed to the
an atmosphere loaded with carb-
onaceous matters, for some period
of their life; that afterwards they
were seized with black spit, which
may last for a number of years.
before carrying off the patient, and without any undue exposure to an atmosphere loaded with carbon. Here Dr. Buc's theory is urged to explain. I think it self-satisfactory does so, in that he supposes it to be deposited from the blood. It would seem that after the carbon is fairly contained in the lungs by the inhalation of carbon the smoke from the lamp or from some other source as the miner's case that it is not necessary that this should be kept up for any length of time to give rise to blackspit but that once deposited it seems to favor its accumulation by preventing free access of the blood. Such a case as that recorded by Dr. Bennett—where a female, after an absence from her duty as a miner for 26 years, became afflicted with "black spit"—other symptoms of miners' phthisis, is one of the many cases. I could detail, when we must suppose that the carbon
was accumulated in the system, by being deposited from the blood.

But let us look at the class of individuals who are most liable to the disease. It has been most frequently found in coal miners, but is by no means rare amongst iron and copper miners, other such cases have occurred, with no history of ever having been miners or smockders, but who have at some period, been exposed to inhalations of carbon. It is rare or never found without some such history.

Geographical distribution.

It has become principally known by its frequency among the miners of East and Midlothian—cases have occurred amongst the miners of the Northumberland. It is very common amongst the copper miners in Cornwall, and I believe is there very fatal.
in his effects. At the Session from an obscure 
Galloway, it was at one time a too frequent 
ofatal disease; it was no uncommon 
ocurrence to be able to trace a man who 
was thus affected, from his work to his 
dwelling house.

What is the nature of the spurt and the de- 
posit in the lungs? Dr. Christie from 
his chemical analysis thought it to be coal 
charcoal; Dr. Graham transformed hem 
atin, others calling it to be carbon alone. 
Dr. Christie finds, that it is nearly possi 
ble not to recognize the ordinary products 
of the distillation of coal. A gas of the 
same odour & quality was procured which 
was a naphthenic fluid, holding in sol 
ation a crystalline principle analogous 
to, if not identified with, naphtholane. 
This is the conclusion Dr. C arrives at 
after going through many chemical tests, 
which would be needless to detail, but 
worth to note that Citric Acid did 
not make any change on it, nectarine.
immersion in chlorine. Strong solution of caustic potash dissolved out the animal matter only, without affecting the melanotic deposit. I have little doubt, that, beside the carbon inhaled into the lungs, there is at times minute particles of coal dust, too. In the case which came under my notice last summer, the patient spat-up on several occasions minute particles of pure coal, as shown by the structure under the microscope, as compared with a small piece of Dalkeith coal. This patient said, that he very frequently noticed small particles in his sputa before he came into the infirmary; but told no particular notice of them, as he knew well they were pieces of coal. Dr. Burnett, who has examined the lungs after death in cases of this kind could find no resemblance between even the colour of pure coal & that of pure carbon as shown in the lung. Prof. Inshow, however, says that the pigment itself occurs in all the forms in which the particles of dust of coal present themselves, being sometimes of an irregular
form of other times of a regular angular form
and identical in every way to fine coal dust.

Symptoms of Black Pithesis. The disease is generally preceded for a considerable time beforehand by a short dry cough, which becomes particular severe at night; this symptom generally advances until the patient is seized with all the symptoms of acute bronchitis, but the expectoration instead of being white or frothy, may now become streaked with brown or more or less black than former, The man or woman may at this stage lay himself up, depending partly on the previous health of the man, and the severity of his symptoms. However unwilling to relinquish his kind couch, he must inevitably do so to come to this stage for the first time to the delight of the physician. Pulmonary of the heart is not an unfrequent occurrence at an early stage, accom-
panied with dyspnea after severe, and acute pains in the thorax. The pulse at this stage is generally rapid, at least more so than natural; appetite becomes impaired, he takes little or no support.
The stethoscope at this time takes us one of prolonged bronchial expiration that only below the clavicle. As the disease advances all the symptoms mentioned, become aggravated, dyspnea increased, expectoration increases, it almost always occurs. Signs of emaciation may now be heard on auscultation, and if the end of all is near, the pulse from being raised has fallen wonderfully below the natural standard. St. McKeen, in one of his ten cases, says the pulse continued at the rate of 36 beats per minute for one month, his other cases on an average continued for some time before death at 40 and 45. The surface of the body is now generally of a leaden hue from the imperfectuction of the blood.

Diagnosis. The diseases with which one might confound spurious melanosia, are tubercular phthisis, chronic bronchitis, and true melanosia. From true melanosia it can generally be easily distinguished by other parts of the body becoming affected besides the lungs, as the cellular and fibrous tissues.
immediately beneath the skin. In the event of no
such aid being distinctly the disease we have as-
course to chemurgy. Dr. Henry, has given a series
of tests which are quite conclusive in leading us to
a correct diagnosis, but too complicated for every
day use, especially when so simple tests as
Nitric Acid & Chlorine can do all that is
required with certainty. If the black mark
to be due to true melanosis, then it is de-
ostroyed by both; if from the fuses it is
not at all affected. The previous history
of such cases as spurious melanosis is gen-
early quite enough to lead us to a correct-
diagnosis without chemical or other means of
diagnosis. From phthisis it may require some
active observation to distinguish it. If indeed for a
time it may be impossible to do so, but by watch-
ing carefully for a change of colour in the spate
of the occurrence of pneumonia, (which is rare
in phthisis it almost universal in pneumonia)
together with the history of the case you may
thus lead yourself to a correct diagnosis.

From chronic bronchitis I can give no dis-
Symptoms except those already given for diagnosis.

Progress. It proves fatal in periods varying from six months to twenty years, according to the constitution of the patient and the length of time he has persevered in working after he has been seized. It has been observed that mine men, so long as much more fatal than those engaged in blasting or cutting mines, than in those who engage themselves in the work of the coal, which is supposed to be owing to the coal powder used so largely by them in blasting. If a family have a hereditary tendency to phthisis, it is generally observed that while the female part of the family die of tubercle, the men who are engaged in the mines die of phthisis. The one disease never being found as associated with the other but regarded as antagonistic diseases from occurring together.

Treatment: In this as in many other affections, the medical practitioners can do little in bringing round the patient to perfect health, but, as in most cases he can alleviate the sufferer from
in puns, so in treating a case of melancholy this must be his aim and should a cure ultimately take place so much the better for the patient and the reputation of the medicalman. There is no specific for such an affection as far as we now see. Bleeding in the beginning of the present century was I believe a practice resorted to here as well as in the acute inflammations, but with what advantage we know not. Bleeding I dare say in moderation may yet be had recourse to as a remedy, but I should be inclined to restrict its use, to such cases as suffered from severe dyspepsia, or where signs of pulmonary engagement were found. Expectorants and antispasmodics may be had recourse to, in your endeavors to relieve the harassing cough, which is a constant annoyance to the patient. You must not however neglect altogether the stomach, which becomes impaired in its function at an early period of the disorder. Sores in general will be found susceptible as Uly
my the tone of the stomach right following the par
tiease to enjoy his food. From the first time
any in most cases to lose the natural fat
of the body, lead "time Oil" may be administering
to try to keep up the muscle matter. This is
the most under such circumstances we can do;
but I have just been thinking in my own mind,
if we could in any way advance the feeling to
poison of the blood, which is so universal
in almost all cases, we should make a hit
in the right direction. Such a substance as
chlorate of potash in which consists a large am-
ount of oxygen might I think be worthy
of a trial.

Lastly Pericarditis. Perhaps there is no disease
with which the physician is acquainted, so thor-
oughly under the power of that great prophyl-
actic, free ventilation, as the one under ob-
servation at present. And we are glad to
learn on inquiry, that the disease is greatly
decreasing, simply because better ventilation
is being established, in those rooms where for-
merly the disease carried off many in a
many short time. In that district where Dr. McVellan practised and where he gathered his experience in regard to this disorder the disease is little known. I have myself heard of it within a stone's cast of one of the mines which he had charge of, and where I am told to believe the affection was not at all uncommon, not many years ago, but now long looked upon as a thing of the past, and all due to better ventilation.

I should have added a few words on the most apparent appearances found after death, but I suppose dealing with it as I dealt the marked appearances of the lump as found in one of the cases I have myself seen.

Case I. James Thomas aged 47. Min. was admitted into the Royal Infirmary on the 7th April 1864, under the care of Dr. Saunders. Antecedent History. Patient states that about five years ago while following his occupation as a miner, he fell down the pit and broke his arm, and bruised, and cut other parts
of his body. The district practitioner of the district
set the fractured limb but the case was incomplete, and the fracture about the middle
of the left humerus remains still ununited.
In this account he applied for relief to Mr.
Spence, who operated upon the disunited frac-
ture but with an unfavorable result, the
ends of the bone now being only held to-
gether by fibrous union. Ever since this
accident left him, he has been out of
employment and in very poor circum-
stances, having had for days together
nothing but water to drink. Notwith-
standing this his general health has been
good until about eight weeks ago (mid-
dle of February) when he began to have a
cough and a spit which was of a blood
coloured. He states that of late he has been
losing a good deal of flesh. It shows him
self much thinner. He has been emply-
ed as a miner all his life but has
not been in a mine since 1859.
This particular occupation as a miner
was that of a miner, where he was exposed
to a great deal of dust—during his work.
And mines in which the patient has been engaged
since he was a boy.
In copper mines of Cornwall. In these he was
engaged for 15 years. In copper mines in Wales.
In Ireland in Lead. To copper mines for six
years. The following are the mines in which he
was engaged in Scotland. Came to this coun-
try 23 years ago:
Mossmill Mines in old fiordland two years
Muirav — soft coal 9 or 10 months
Morningside Muirav district two years.
Nerowthill one year.
To Connessell Synphoe Connessell.
Fire-coal. Parrot coal for four years.
Up to time of accident.
He states that in drinking the water in the
pit he very frequently swallowed small pieces
of coal along with it.
State on Admission.
Respiratory System. Left side of the chest
depressed from the clavicle down to the nipple. Pectoral muscle on this side quite wasted. The right side is emaciated but of the natural shape. Percussion resonant and nearly natural on right front, but on left front is distinctly dull as far down as the nipple, and especially in that intercostal space above the nipple. Percussion at this point is extremely painful. Auscultation on the left side anteriorly, for two inches below the clavicle there is heard hollow tubular breathing, crepitant moist rales, resonance of voice, and other signs of a cavity. On the right front there is heard particularly at the apex fine respiration which is best perceived after anything. Posteriorly there are similar signs of a cavity under the left scapula at its lower part. Elsewhere respiration is natural.

Circulatory System. Cardiac sounds normal, pulse 100 beats per minute.

Digestive System. Tongue clean, bowels regular, appetite improved. Hepato
dullness natural.

Nervous System. Complains of a constant headache.


June 1st. Patient expectorates during the 24 hours a tawny (1047) of expector, composed of mucous stainers of a coal black colour, and presents specks of matter of the appearance of small particles of coal in different parts of the spot box. One of these particles about a line in diameter and of an irregular shape was ground down by Mr. James Dixon, Optician, for the microscope, and exhibits under a power of 40 diameters the same structure and appearance as Dalhastle coal.

June 12th. Patient has expectorated two more black particles of coal visible to the naked eye and by low powers.

July 1st. Patient discharged on account of his having expressed a wish to return to Cornwall in his native place.
This patient presented all appearance of one suffering from tubercular phthisis and not from chronic bronchitis as most observers are inclined to believe that this disease simulates. The only feature worthy of notice in this man's case was the expectoration of minute particles of soot as ascertained by examination with the microscope. This would seem to act at least a much disputed point viz. that it is not coal but carbon which is the cause of the disease. This proof together with Dr. Christianson's chemical analyses seems to me conclusive on this point. This distinguished analyst having 30 years ago detected many of the products of coal in his analyses of the lungs of Dr. Gregory's famous case.

Case II. Andrew Baxtoll, age 54, former residing in Yapha at present.

The history I cannot give as I could not to-day get the report of his case on application to Dr. Begbie as it has been lost aside. I will endeavour to give however as much as is possibly necessary. He was of a stout build
at about average height (5'8'). Rather plumpish if anything. Pulse very weak at about natural range of beats per minute. Some days before death, he lay in a semi-comatose condition, from which he could be roused, but only to fall back into the same condition. There were slight tumors of the hands and muscles of the extremities. The pulse was growing weak during this period and almost imperceptible at the wrist. It gradually sunk into a profound coma-tose condition from which he could not be roused and in which he ceased to exist.

Section. The chest was flattened but the back was generally emaciated. The heart was found enlarged in its right side being greatly dilated and weighed 1792. Pulmonary apex 4½ inches, Truncus 6½. Auricles 3½. Ventricle 4½. The substance of the heart appeared natural. Lungs. The right was densest emphyseum and contained a large amount of carbo-naceous deposit, with several cavities at its apex. The bronchial tubes contained no marked deposit but were constricted and contained a good deal of dark-colored mucus.
The bronchial glands were highly colored with the carbaneous deposit. The left lung was only adherent at one or two points near the apex. The upper lobe was shrunk and contained a solid mass of carbon about the size of an apple. The lower consists containing a great amount of carbon at different parts of the surface over the lung. Lungs were found somewhat congested and fatty. Pleura had on its surface and also at some points on its certain deposits of black pigment. Kidneys were large. The gut of the body. The only appearance not taken notice of in this case and one which is in most cases observed in the absence of a quantity of fluid in the cavity of the pericardium which in many cases amounts to as much as from 1 to 3 lbs.

These then are my remarks on an interesting subject "melanosis" not that I could have said a written word, but that I consider my reader will continue along with myself that I have said quite enough.