1837.

On the

Icterus neonatorum

James C. Cox
To the Medical Faculty of
The University of Edinburgh.

Gentlemen, it being a
regulation of the University, that Students,
before having the degree of M.B. or M.D.
confined or them, should present to you,
their own selection; I offer, with
much consideration and indeed with
some solicitude, now submit for
your inspection the
Subject of "Infantile Jaundice"
one in itself extremely interesting and
concerning which authors are not
so this day agreed upon.
I have drawn my conclusions greatly
from cases, it having been my lot
to witness many during the past
Summer, and I trust I have
as clearly as my experience will
permit, distinctly stated, what
seems to be the right and proper
Pathology of the Disease.
I trust you will have my kind patience,
and lenience, and hope for but
little criticism during your perusal
of these pages.
It appears to us, that jaundice, by which term we mean a peculiar appearance presenting itself on the surface of the body, namely that of a yellow tinge and not as indicating any form of hepatic lesion or that of its appendages which occurs in infants, may be divided into three great classes, according to the severity of the symptoms which accompany that phenomenon. The first form, though but slight in its effects on the constitution of the infant, is happily the most frequent in its appearance.

The second, although usually not fatal, is much more permanent and producing effects of a more serious nature and

Thirdly, that form which it seems beyond the art of man to alleviate.

We shall first speak of that mildest form of the disease, if such we may call it, and described by Steney as follows:

"The skin of new born infants..."
an imperfectly of a yellow colour, but
this yellowness is not of a deep tone,
though very generally observed. This
appearance may continue for
several days and then disappear
without the aid of medicine, or without
leaving any evil behind. It is difficult
to say to what this yellow tint may
be owing; certain it is, that it cannot
be owing to the presence of bile since
within the vena cor. the whites of
the eyes assume the yellow hue. We
know that changes from a white to
a yellow skin take place upon
certain occasions, and this continues
with surprising swiftness. Some
result from change in the cellular reunion
or intermuscular without our being
able to declare the cause. This is
unaccountably the case in yellow fever
when the presence of bile cannot be
detected in the circulating fluids.
The same thing takes place with
certain people from strong effusions
of the mind, or peculiar dispositions
of the stomach without the aid
of life; the same thing occurs
occasionally with the new born child. Therefore early yellowness of the skin must not be mistaken for jaundice, as it would lead to great error in practice. Our attention is frequently drawn to this appearance by nurses and when it is observed, we make it a rule to investigate the condition of the child first, to direct our attention first, to the colour of the eyes and the condition of the liver. If there is jaundice, we have reason to believe there is no jaundice if neither of these symptoms be present. If the first be yellow, we suppose it a still stronger ground for belief that there is jaundice, and if the fever on pulse than they should be in. If a clay colour, we are sure the child has a genuine jaundice. We have known however all the marks of this disease to exist (with the exception of pale or clay colored stools) without the child appearing to suffer in the least. They all have disappeared spontaneously.
the notice then that this author is of a decided opinion that this appearance is not owing to the presence of bile circulating in the blood, with whom Dr. Watson fully concurs in the short notice we find on the subject in his lectures on the Practice of Physic.

All systematic writers say he, follow Cullen in making jaundice a common disorder among newly born children. The jaundice Neonatalum occurs, they say a few days after birth, is not attended with any suffering or obvious disturbance of the bodily functions and soon disappears. Now there seems reason to believe that this is not jaundice at all, and has no relation to the biliary organs. The surface of the infant is frequently at its birth of a deep red colour, from hyperaemia or congestion of blood. Preventing a condition which falls little short of a mild but universal bruise. By degrees the redness fades as bruised fades through shades of yellow into the yellowish flesh colour. Such I am inclined to those
who are more conversant with these matters than myself, is the pathology of the cavity 

But the power of these authors does not extend to offer any opinion as to the cause of this disease, while the latter seems to attribute it to those changes which we observe the colouring matter of the blood to undergo when intracerebral; but although this symptom may somewhat resemble such a change, it appears to us that there are no grounds on which we can establish such a theory. For how could such a general blurring of the surface be produced? It has been suggested, by the interior contractions during parturition, but if such were the case, we should expect to find the larger children affected with it most intensely and in those in whom labour has been most difficult, so far from this being the case, we find from statistics that it is those children which are most robust and healthy.
That we least affected, and again,
we should expect to find the
presenting part on which the Caput
Saccinunium is produced most
intensely discoloured, but by careful
observation we are unable to say
that such is the case.

Can this be the same disease which
is spoken of by Nest? which is
likewise as early treated and
of an apparent slight importance,
when he says, "it sometimes happens
that about two or three days after
birth the skin of a new-born
infant assumes more or less of
a yellow colour, that this colour
gradually deepens and becomes
apparent in the conjunctiva as well
as over the whole surface of the
body, but after a day or two the
yellow tinged diminishes, and in the
course of a week or two days
completely disappears. Little if any
endispersion having attended any
stage of the affection. The general
resemblance of its symptoms to
those of jaundice in the adult
has led some persons to attribute this "icterus neonatorum" to situation of the meconium, or to gastric or intestinal disorder, produced by inauspicious food. On the other hand, the slightness of the constitutional disturbance which attends it and the occasional absence of all signs of disorder of the general health has given rise to a different opinion, according to which the occurrence is attributed to physiological rather than pathological causes. With reference to the first of these views, it may be observed, that infantile icterus is often unattended either with attention of the meconium or with any other form of intestinal disorder, while very serious disturbance of the digestive organs, or even complete atiation of the meconium from an imperfect condition of the alimentary tract, may exist without being associated with a yellow tinge of the skin.

We beg to add to this morose that if it were from absorption...
of the meconium, we should expect to find the child born in this condition for the meconium lies long in the intestinal canal before birth; or at least we should not expect to find it occurring concurrently with the due performance of the skin and of respiration.

He then goes on by saying: 'The assumption that it is a perfectly natural state in which the skin and other secreting organs are called on for a few days to assist in disposing of the bile until the demand for it is minute to the digestive functions becomes equal to its abundant supply, is shown to be erroneous by the circumstance that jaundice does not affect perfectly healthy children who have been born at the full term, have been nourished exclusively at the mother's breast, and been sheltered from cold, without being overwhelmed with clothing or confined in a vitiated atmosphere. In the Dublin Lying-In Hospital, where the children are...
defended by the most watchful care from the evils either of cold or of a saturated atmosphere, the enteric
of inanimate machines is certain, while in the Foundling Hospital at Paris, foundlings are so common, that comparatively few infants escape it. Almost all the children at the Foundling Hospital have been exposed to the action of cold while being brought to the institution, and suffer from the combined influence of cold and bad air. With infants of it, causes which interfere very seriously with the chief performance of the skin and of the respiratory organs. But why should these authors assume that the bile, which they say is not yet required for the function of digestion, should be disposed of by other means after birth than those which are so effective in disposing of it during intra-uterine gestation? But granting that fact, if it is thus eliminated, is it not probable that an amount of bile so great as to produce, as it does in some
cases, a colour so differs and
intense would not produce some
of the physiological effect in slight
degree which we know to result
from its presence in the blood, and
would also necessarily show itself
in the urine, but we have never
been able to detect it in such cases,
nor does it stain the napkin on
which it has been passed.—

Well then draws our
attention to the fact, which is quite
in accordance with our own
experience, that "the children in
whom jaundice is most frequent
and most intense are the
immature and the feeble; while in
more is it so often met with, or
in such an intense degree, as in
infants affected with induration of
the cellular tissue, in whom the
yellow colour is so deep as to be
manifest in the serum infiltrated
into the cellular tissue, or poured
out into the cavities of the
chest or abdomen. Intumescences
of that part of the kind of the lungs
are, as you know, the grand characteristics of that affection, while in many instances of it the fatal perjuries are still numerous, and the blood circulates in part through channels which ought to have been closed from the time of birth; these facts seem to substantiate the opinions entertained by many authors of high authority, that the jaundice of young children is not due to any cause primarily seated in the liver, but rather to the defective respiration and the impaired performance of the functions of the skin, of which the hepatic disorder and consequent jaundice are but the effects.

It is our opinion that these authors have been speaking of the same form of the disease, but arc made it to cause which we think pollution. The only point in which they differ in that description of the symptoms is that the latter states that the conjunction is in the tendon, while the former states to the
contrary, they also differ in their statements as to the existence of life in the urine.

According to our own experience, the following are symptoms which attend a case similar to that which we now refer to, drawn from careful observation on twelve cases. The skin of the child usually on the second day after birth, but sometimes later, becomes of a dark red colour as though from slight vascular excitement; there is no indication of the cellular tissue in the greater number of cases occurring at from times out of the twelve, but it is of a natural feel and consistency. This black fades slowly and is replaced by a yellow tinged, remaining in intensity, resembling that seen after a slight bruise, appearing first on the cheeks of the child and becoming more intense in the face and upper part of the back, but ultimately diffused over the whole surface of the body. The skin is the more intense
Part 1: The Med-Chic

Ricard


cases is dry, particularly in those in which there is induration, cellular tissue, and in such cases, we have noticed desquamation to occur with a subsidence of the characteristic symptoms. In the less intense cases, the skin is moist. The conjunctiva is not colored, nor does the urine contain bile or stain the napkin on which it was passed; the tongue is slightly furred, and the stools in only one case that we have seen were constipated. The feces of a dark green color, just as in the mesereum of a child not thus affected. These are no symptoms of unusual drowsiness, and the child looks fairly at the heart. This condition may continue for several days, but in the great majority of cases that have come under our notice, till the third day after its appearance usually, leaving the skin in a natural condition.

In Haverford in a recent thesis, has endeavored to supply a more
court account of this disease than that without giving derived from his observations on fifty three cases. He rejects the various divisions of the disease as so many hypothetical suppositions, derived from observations that occur in the adult, and disappear but are once always appearing during the first month, and attended by some symptoms and morbid changes. He contends the opinion of Dr. Legan that the induction of the cellular tissue is always accompanied by jaundice in 90 cases. This disease jaundice only manifested itself 31 times, and in 45 cases of jaundice the induction had also been met with but 31 times, coincidence but not cause and effect. He also denies that jaundice is a cause, although a common complication of this as well as of other diseases of this age. He also admits that the engorged or inflamed state of the liver as any other than an epiphrenic coronary connected with the yellow colour of the skin could produce it; still
it is from the disorder in the functions of this organ, in its transition from an organ of nutrition to one of excreta, secretion that the etiology arises.

His anatomical observations on the disease led him to conclude: first that all the organic tissues are in different degrees liable to the septic infection; secondly, the intensity of colour which these tissues acquire is in direct proportion to the amount of their sequestration. He enumerates the various structures, but we need not follow him here, much observing that the bones, ligaments, and cartilages were in a certain number of cases undoubtedly coloured, the septicetic serum being found so only once. Not only were the bones and nervous mechanisms coloured but likewise the fluids which they contained. The biliary apparatus was found to have undergone just the same changes as it does in Selenites or leucites, the so frequent complications of Selenites. But another
the liver ducts on the undilated veins presented the marks of inflammation described by some. The yellow patches in the peritoneum of the kidneys were of two sorts, described by Ralland. The one arising from utrine suppurations, the other of a pale rightless colour, interconnected with it. The respiratory apparatus shows evident marks of colour, but the nervous system and the brain in particular were entirely colored in 31 cases. The tinge of the skin is often modified into a copper or rainy color by its constricting vascularities.

Its complications, from which alone arise any danger in this affection, are, purely accidental, being more coincident than in these 45 cases such complications consisted of Sclerosis, 31 times, Appendicitis 15 times, Pneumonia 2. President Ophthalmia 10 times. To what then are we to attribute this appearance to be owing?

The question which at once suggests itself is. Does this affection depend on the presence of still
or not?

There are other arguments brought forward than those already enumerated to establish the theory that it is from the presence of bile, for instance, it is said to be owing to the change which occurs in the circulation after the birth of the child. For the ductus venosus which, in a few hours previously, had been the direct passage of the blood from the placenta to the child through the liver, was not till some short time after birth sufficiently contracted to obstruct the flow of blood from the cava portae through it.

And consequently, the blood which should have been deflected to its bile by being passed through the liver before entering the general circulation was passed directly on and hence diffused through the whole tissues of the body.

This, as well as other of the theories would be quite sufficient to account for the most prominent symptom of such cases, viz., yellowness.
of the skin, but other symptoms which we know to be owing to the presence of bile in the circulation, do not corroborate any such theories but does there some severe forms of this affection which will be spoken of hereafter. If then we can establish the fact that it is not owing to the presence of bile, which I believe we can by proving that it is not in the urine; in order to solve the question we must look to the organs which is affected, and inquire if it be not owing to an abnormal or imperfect performance of its function that it is due.

The skin now for the first time is called upon to exercise that function which is so important to the bodily health and need it be wondered at, that an organ so extensive when thus called upon should be found for a time inadequate from undue exposure to cold and from being improperly cleansed, for it is to be remembered that we have evidence from the statistics,
of the Lycée-in Hospitals at Paris and the Dublin Rotunda, that it is in proportion to the neglect and exposure to bad air that children are thus affected. How this peculiarity is developed is impossible for us to say any more than can be imagined how these rapid changes of black hair to a snow white can be affected in a very short time, simply by a mental operation. The theory we think is that the cells producing the blacks and other operations must be in an abnormal state, and either, by a muscular action, secrete a yellow matter just as the first few drops of milk squeezed from the breast are not the natural color of the milk but of a thick yellow appearance; or it may be that the cells which were just formed have had their contents as it were concentrated, and which are now being pushed to the surface by a development of new cells beneath, and hence give rise to the opaque yellow appearance observed.
Cuadie says, "in some instances the skin of the infant will be marked by dull yellow macular blotches (melanoma hepaticum) more or less extensive and sometimes occupying the greater part of the body. The colour of these blotches varies very much in intensity, and in cases where there exists considerable enlargement of the alimentary canal they occasionally assume a very dark hue (melanina); in some instances they are accompanied with a prickling or tingling sensation. This disease appears most generally connected with enlargement of the digestive organs; the colour of the skin being dependent on a morbid secretion from the cutaneous vessels; it has little or no affinity with jaundice."

This then this disease is considered by many slight in its nature and it must not be supposed from Dr. Herrick's statements that such complications are common in this disease, as those he has mentioned, for he has selected three cases from those great establishments for
The generation and observation of disease, the Children's Hospital at Paris, because they were fatal ones, and offered the opportunities of anatomical inspection.

**Treatment**

As to the treatment of this malady, all authors seem to have come to the same conclusion, for although there are such a variety of opinions as to its pathology, yet practically from the little effect it has on the bodily functions, but slight interference of the physician is required. Nature for its removal, still Röen confesses that many children were killed under this observation by the use of "innocent medicaments" before he discovered the harmlessness of this change of color, for it cannot be called a disease. He however was not content to leave the matter to nature but recommend clysters, baths, electricity, and friction to the abdomen. Huxmell and Ammon state that
"It can scarcely be called a disease, and find it commonly disappearing spontaneously and requiring no medical treatment. When it does not go off in two or three days, we may let matters right by the administration of a draught of castor oil, or two or three grains of Alum with one of Hydragammae et Capev."

Burns had the opinion that the early use of Calomel would appear the most proper practice, and the strength must be supported in all these cases by the breast milk, given with the spoon, if the child will not suck, and small doses of white wine when he is well. It states that as the respiratory function and that of the skin increase in activity, which they will do of the cause of their imperfect performance be but slight or temporary, the febrile discharges of its own accord. Great attention must be paid during its continuance to avoid the exposure of the child to cold, while no other food but the mother's milk should be given. If the bowels
In at all constituted a gain.

Hydroper and 

Cetac may be given,

followed by a small dose of Castor

oil, and the patient will often

seem to benefit. The disappearance

of the jaundice, but in a large

amount in cases near this amount

of medical interference is not needed.

Mr. Harvie's regarding simple

detriment rather as a the sign of a

new function temporarily exceeding

its physiological limits than as a

disease recommends that the care

eally should be left entirely to the

advances of nature.

Harrow, in his essays on diseases of

children says: "It is not to be

regarded, nor is anything needed

to be done to remove it, as it will

dissipate totally and spontaneously

at last. It is commonly said that

the skin is kept cleaner and fairer

by it than it would be without

it; which seems a doubt; however, it

is an agreeable delusion and may

help to reconcile so unpleasant an

appearance."
We shall next treat of that form of jaundice occurring in the infant, which is much more permanent in its duration and producing effects of a more serious nature, but are not necessarily fatal, as may be illustrated by the following case.

Mr. Wilson on the 30th of September last delivered of his third child, a boy, and she had an easy labour, and made a quick recovery. The child, a male, large and well nourished, was on the third day after birth observed to vomit much and the skin and conjunctiva to have become of a light yellow tinge: the faces were of a light clay colour and the urine deep yellow which gave with nitric acid evidences of the presence of bile. As the bowels were rather constipated it was ordered a tablespoonful of castor oil. In the next three following days it continued much in the same state, when the colour of the skin became very deep and its mother complained that it sounded its
food immediately after smoking, and that it appeared heavy and heavy so much so that it was with difficulty encouraged to take the heart.

It was now ordered very small doses of Hydrot Creta to be followed by a teaspoonful of Castor Oil, which acted freely on the bowels. The face still continued pale and the urine to contain bile.

The Mercury was continued till the 7th when the child seemed much more lively, the colour of the skin to fade and the urine almost of a natural colour. No vomiting had occurred for the last two days. The child ultimately recovered perfectly.

This form then unlike the last is one of great frequency and is spoken of by John Bulwer as follows:

In this form of the disease there is an obstacle to the passage of the bile into the intestine the child is emaciated and the meconium is paler than usual and after it is removed the stools become light.
coloured; the skin very early after birth becomes of a deep yellow color which extends to the eyes. The child snakes very little and occasionally a difficulty in swallowing is frequent. The skin becomes emaciated moves much, is troubled with flatulence, sometimes with cough and bilious in the bowels of vomiting, convulsive colic and been occasionally suppurative. In some cases the liver is felt large and the hypochondrium is tumid. The water is very dark colored. This disease often proves fatal in a week but it has been shown to continue in variable degrees of violence for a considerable time, at last to disappear though such children continue long delicate with regard to the cause of this disease we find it could be obstruction of the hepatic duct or ductus communis, either by thickening of its coats or pressure in increased enlargement of some part in the vicinity of the duct. Sometimes it proceeds from temporary obstruction
wherein Iy diarrhoea, which
ordinarily occurs after a few days.
The tongue has yellowish white fur especially towards the base and the
palate occasionally exhibits whitish
patches which resemble the false
membrane of hunger. Swelling occurs
sometimes even after a moderate meal
but it is by no means an invariable
accompaniment. There is frequently some
spending, while the child shows by
bedding, crying and irritation of the
limbs. Such are the ordinary symptoms
of jaundice; in the greater number
of cases there is neither swelling nor
thickening of the abdomen in region
of the liver, but in some cases Mr.
Bennett mentions having the hepatic
region swollen and tense. When the
disease is of a chronic character
it is attended with progressive
emaciation, thickening of the abdomen
sometimes with edema. In the lower
extremities there is effusion into the
peritoneum, the tongue becomes brownish
and of a dark brown colour, and
at an advanced stage there are
occasionally spots of perforation, resulting from the mucous membrane. Induration of the cellular tissue also sometimes but rarely complicates the affection.

This disease may last from a few days to a fortnight and then the skin assumes its natural colour, the bowels become regular and the appetite returns. But although in general it is a mild disorder unnoticed by danger we find that now and then it proves fatal.

Cheyne described it as an alarming disease; for says he when infants do not succumb, it is with great difficulty it generally occurs on the third day after birth; for it is necessary that this time should elapse before the complete absorption and subsequent deposition of the bile into the blood can take place, it is attended with lampoon, flatulence, and bilious urine, and continues many days or even weeks. Sometimes it goes gradually away but generally ends in a fatal marasmus. When this disease is fatal.
it, in all probability is so from an original malformation in the liver for we do not find upon dissection that it is a disease of the epithelium in the common ducts which, though somewhat contracted from the thickening of their coats are always firm. The malformation is an imperceptible thickening of the beginning of the hepatic ducts as they are called Pancreatici.

The disease has been supposed to arise from obstruction of the biliary ducts forcing the bile back upon the liver the obstruction being occasioned either by concretions in the secretion matter clinging the ducts commencing in the gallbladder coagulating in the stomach or duodenum, obliterating them so as to make them feed upon the ducts, but Hebden who has opinion is always entitled to the utmost deference says that it has been speculated that an obstruction of the abdomen may be great enough to influence the effluvia of bile, but this may be questioned if we reflect that the duodenum has
seldom any solid contents in it, and that should it be so plugged up by them or compressed by the other intestines as to hinder the passing of the bile, it would prove that nature is incapable of admitting anything into it from the stomach which is a supposition hardly countenanced by experience.

Cases sometimes occur where the infants are born in this condition, either from causes already mentioned, or what is more frequent, from the mother having while in the pregnant state become famished in consequence of the pressure of the uterus upwards on the hepatic ducts; the poisonous elements thus contained in the mother's blood are communicated to the child through the act of perspiration and these elements will produce certain pains, morbid effects on the latter similar to those observed in the system of the mother, or they may have been fatal before parturition had occurred, if not, but little need
require to be done, the source of the evil being now cut off and the
noxious matters is quickly eliminated by the organs of excretion.
On looking back at the various opinions given by the authors quoted
from, as to the cause of this malady, we must conclude that its treatment
in like manner must vary much. If there should be a clogging up of
the bowels by the necrotic and the bile become thus absorbed by the
surface of the intestine, it should cause an obstruction. In
frequents on the surface of the channel from which the bile flows, it is obvious
our first duty will be to get rid of such an accumulation by a
smart action on the bowels with a dose of castor oil; or should it
be hemosiderous or a toxic condition of the functions of the liver
owing either to a change in the evacuation or any other cause, or
should it be from actual bile or thickened masses in the ducts
then the gain does of the
Hydrea E Cita, followed by atropine

Julie of Carth. Oil would suggest

to us to recall into motion

the functions of that organ; and

should anyHEME cause in each

particular case manifest itself,

it must be treated in like manner

by the ordinary rules of our art.

Many authors are inclined to

use sweets in these cases; for on

our part we have not had an

opportunity of judging. If those

medicines succeed in the opinion of

Dr. D. Should be inclined to

admit their efficacy, when the

genuine laugher says he attacks a

child nearly born; it is too often

pitiful with whatever potency.

Herein we may attempt to believe

it is generally recommended to

continue the cure with an astringent

for this we have the authority of

Hannah Hands. Underwood'srema.

It is to oppose the single experience

against this might seem ill-judged

if not rash, yet we dare not sub

counter to our own observations
Munro & Winston
especially as we have given fair trial (in our own estimation) of the remedy and the result is decidedly against the practice. Inquiries have not only failed in our hands to remove the disorder but reminded the stomach so insatiable or not to receive any other remedy willingly. We have therefore abandoned them for some years and find we can succeed by another plan of cure. Underwood is of opinion the mother is capable of communicating jaundice to the infant; if this be true, the time suffering from this disorder itself, and although in such cases most of the physiological effects will be produced still it is shown not to be a true jaundice by the fact that its thieves are a normal colour, and we need not be surprised that the child does not get well (that is lose its yellow colour) until the mother or nurse is cured and the child weaned, since it is constantly receiving the same coloured milk.
There is one other peculiar fact connected with these cases, which is the tendency which this disease has to occur either in a milder or in a more fatal form in all the children of one mother, which is well illustrated by the following case related by Pearson.

Mrs. J. had been the mother of eleven children, one of which the jaundice had appeared a few days after they were born, and they all died within the period of a month after their birth. The tenth child lived six years, was then afflicted with jaundice and then died in May 1796. Mrs. J. was delivered of her eleventh child on the same third day after its birth; the skin became yellow, and the child at the same time was remarkably tired and sleepy and seemed to be slightly enfeebled. On the following days, the colour of the skin often varied, being sometimes of a deep yellow, and at others regaining its natural colour. The child continued however in the same...
languid and almost insensible state, but caused vomiting and included the heart of its mother, till within a few days of death, which took place on the ninth day. I opened the body of this child the day after death and shall now describe the appearances on dissection.

The skin had almost lost its yellow colour, and the child had not appeared at all reduced by the disease. The liver was almost twice its natural size; the whole concave surface of the right lobe had a livid appearance, but this dark colour did not penetrate but a line or two, and the internal surface was sound and healthy. The common part of the liver was of a natural colour and firmness, except on the margin of both the lobes, where the thin edge exhibited a highly injected appearance; the redness was however not livid and remarkable on the left lobe than on the right. There was a slight adhesion of the lower part of the right lobe to the peritoneum. The gall-bladder was
nearly filled with bile of a deep yellow colour and its ducts were irreducible. The heart seemed to be larger than common, and the blood vessels on its surface were unusually turgid. The right auricle was distended with blood, and the pericardium contained about a tablespoonful of water.

Cases sometimes occur when the child is born jaundiced, or when that symptom develops immediately after birth, and such cases on examination after death have turned out to be a new development of the gallbladder or its ducts or a new closure of the ductus hercules.

The important fact such cases is that life should have been so long spared without the elimination of the poison circulating in the body. In fact, such an occurrence seems almost to us impossible, and the bile must therefore be not only being given to the maternal blood in the placental circulation but such cases there is a very frequent and peculiar symptom which occurs and
which may often lead to a fatal issue, before the bile has developed its poisonous effects: this is the occurrence of bilious hemorrhage, the cause of which seems still to be a matter of some doubt, but we

assume it arises principally from the disturbed and congested condition of the liver to which such an obstruction must give rise. The bile not now being eliminated as we procure through the ducts of the liver, but accumulated in the ducts of the liver.

There would appear however another way in which this may be produced, namely by a congestion with a cessation of the functions of the organ which the function is produced with the ducts of bile itself, i.e., its superabundance by passing partly the blood from the individual skin, the passage of which has not yet become obstructed. From which the following case may be quoted as an example.

May 10th. C. H.'s daughter. Five days old was remarkably stout and
healthy when born, but on the third day after birth the skin became jaundiced. She took the heat very well before last night. When from me-sureness she ceased to drink but she has returned to the heat again she appears to be very well in every respect but that her colour is jaundiced and she has occasional fits of pain. May 18th. The skin continues fully as deep as it was and the child is becoming soft and emaciated. Her stools are white and the putty. Her bowels have been kept open by a weak injection of saline but urine stains the linen very deeply, she nurses fairly. May 21st.

There is no change in the families. Her stools and urine are much like what they were last night. She had a slight bleeding from the umbilicus, and she is fairly getting better

May 23rd. Although the heat has been off in the birth, May 16th little time was a great hemorrhage from the umbilicus, and the child died
This morning in consequence of it.

P.M. Upon opening the body the first thing done was to examine the state of the vessels of the abdominal end. The heart was found empty and a probe readily passed from the mouth into the vein. The arteries were also found there. The intestines had no sign of transpyram but were of a milky colour tinged with a delicate yellow from the bile in their contents, not in their empy.

The stomach was very much distended, the glands of the mesentery were large; they should be crisp white, conformed with those of the adult.

The liver was full and firm, and of a dark green earthy colour. The gall bladder was quite empty and contracted so that it had sunk into the flesh.

The liver and only a small part of its fundus appeared, within it there was a small soft mass of dark colour, the size of a grain. It failed. The ducts also were contracted from white and like an artery, and although no poison contained.
no bile, the opening into the duct was perfectly fit to the probe. When the liver was cut into this appearance of the former of the ducts was still recognizable.

In a late review of a new work by Mr. Seale, it would appear that this author has been disposed of him into five classes instead of three as we have done in the foregoing pages but from a careful perusal of that article we have come to the conclusion that such a division is unnecessary and may easily be followed within the limits we have given.

With regard to the last two of his classes the difference appears founded on the internal division not being of a true yellow - yellow hue but rather of a "raw Sienna" tone with a slight earth. To grew in it or in some cases with due in intensity it is of a dirty orange that the connexion is pure fine elimination and the urine does not contain any of the elements of bile, while in the second class the bile is at first of a light
yellow hue, and gradually increases in depth, until it has a saffron-like appearance, and the concomitant some similar shades and the wine stains the napkin yellow; but in neither does any constitutional disturbance exist by which they are distinguished from the third class together with a constitutional condition of the bowels, but such a minute division we think it unnecessary to make as the two latter are only evidently the same condition in different degrees of intensity, and the result of the presence of bile in the circulating, while there is no evidence that the former can be traced to such a cause. In like manner we presume we may include in our second class the fourth. If in secre which is characterized as follows: "at all time within the heart and not lift but without the heart itself of it symptoms it which arise appear in the child with cracked disturbances (changing in characters)
If the inflammatory process, from a una-
diseased condition of the skin and is accompanied by symptoms of acuity and intense
anxiety, in the jaundice is associated
with hemmorhage from the intestinal
and its seat is with hepatitis of
the multilocular vessels, or with jaundice,
and which carries the latter patient.
In other cases what has been termed
within abnormal "malignant hepatitis"
connects with the jaundice, in the latter
complicates salmonella, or is in union
with some heart cephalic
myocarditis phlebitis or atlantitis, all of which we consider more as
accidental concomitants than as the
real cause of the disease.
In the fifth and last class are
excluded those cases of congenital
malformations of which we have
already spoken.