

Some of the pathological characteristics of Idiocy. An Address delivered before the Medical Society of York ... May 25th 1893.

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1.
"Some of the Pathological Characteristics
of Idioty"

On the suggestion of Dr. Ramsay, the
Energetic Honorary Local Secretary for
York of the Royal Albert Asylum, I have
brought with me to day a few of the
specimens accumulated during my 23
years Medical Superintendency of that
Institution, & shall have the honor to
point out some of the pathological
characteristics of Idioty which they
illustrate.

For the information of those members
of the York Medical Society who are not
familiar with the Royal Albert Asylum,
I may explain that it is an Institution
for the care & training of Idiots & Imbeciles
belonging to the Northern Counties, & that
its objects being in the main Educational,
the majority of its inmates are young
people of the school age, confirmed
epileptics & insane persons being excluded.

2

To-day we shall look at the subject
entirely from the medical standpoint:
those of you who wish to hear details
of the general working of the Institution
will have the opportunity of doing so
by attending the meeting at the Exh^{ib}
Building, under the presidency of his
Grace the Archbishop, tomorrow afternoon.

Physiologically, I take it, we may
say that the general characteristic
of Idiocy & Imbecility is deficient
Brain power. This deficient brain power
may manifest itself - broadly speaking -
in one of two modes: - (1) by apathy,
i.e. imperfect reaction, (2) by irritability,
i.e. imperfect control. In the first
class of cases we find an imperfectly
developed brain, from which proceed
but feeble nerve currents: in the second
the inhibitory apparatus is at fault,
portions of the brain itself being indeed
perhaps unduly active. For simplicity's

I have so far referred to defect
 of brain only: I had ~~only~~ hardly add
 that the characteristics of Idiocy and
 Imbecility permeate the entire nervous
 system - At the periphery as well as
 in the nervous centres, abnormality
 is clearly evidenced: The external
 senses are sometimes organically, more
 frequently functionally, imperfect. It
 may indeed be said with truth that
 Idiocy is not merely an "affection of the mind"
 - to use the language of the official
 nomenclature of disease - it is a vice
 of the entire organism.

We shall not then be surprised to
 find that as a general rule Idiots &
 Imbeciles are physically as well as
 mentally defective. Both in stature &
 in weight they average far age of much
 below the average of ordinary children;
 and a table which I prepared some
 years ago for a lecture at the International
 Health Exhibition shows that in height

as compared with normal children,
 there is a deficiency at 5 years of 1 inch,
 at 10 years of 2 inches, at 15 years of 3 inches;
 4 in weight; at 8 years of under $4\frac{1}{2}$ lbs.
 at 10 years, of 6 lbs., & at 15 yrs. of 8 lbs.
 Deficiency of vitality in comparison
 with ordinary children is shown by the
 fact that the mortality of idiots between
 the ages of 5 & 20 has been calculated
 on the experience of the large English
 Asylums to be at least 9 times as
 great as that of sound-minded children
 of similar age. The proneness of Idiots
 to tubercular disease is well known; and
 about half their mortality - at any rate
 in institutions - is due to this cause.

To this audience it would be superfluous
 to point out that Size & Size of Brain,
 irrespective of quality, bears no constant
 relation to Brain-power. To the lay
 visitor it is sometimes a source of
 wonderment that the heads of many
 of our patients do not display any
 deficiency of size; & some years ago

On a comparison of the head measurements of the inmates of the Royal Albert Asylum, & of a neighbouring Asylum, the ~~average~~ I found that the average at ages from 5 to 20 did not differ very materially (See Table). On more critical examination, however, it would be soon apparent that the comparatively respectable average obtained for the head measurements of the School was due to the abnormally large heads, which more than compensated for the abnormally small heads in the series.

Before passing to the consideration of the pathological specimens which were announced as the ^{piece de resistance} subject-matter of this communication it may be convenient to set forth a mode of classification - based upon Etiological considerations - which will enable us to bear in mind the leading characteristics of the varieties of type we meet with amongst School & Insane.

Various bases of classification have been proposed by writers on the subject of Idiocy. Long ago, Esquirol proposed a psychical classification, dividing idiots into three classes, according to their degree of capacity for speech. About twenty years ago, Dr. Langdon Down pointed out the curious ethnological resemblances of certain groups of idiots, and suggested that a division might be made into Caucasian, Ethiopian, Malay, and Mongolian types. More recently, he has proposed (in Quain's *Dictionary of Medicine*) an etiological classification; but, from this standpoint, perhaps the most comprehensive classification is that put forward by Dr. W. W. Ireland in 1872, and further elaborated in his excellent work on *Idiocy and Imbecility*. Whilst expressing my obligations to both these sources, I shall venture to submit to you a scheme of classification combining some of the features of each, which I have myself found practically convenient. In the first place, a broad division of all cases of imbecility may be made into *congenital* and *non-congenital* cases. Subordinate to these primary divisions, and in a sense intermediate, we have a group of cases in which the signs of imbecility are not manifest from birth, but appear at some crisis of childhood; and these Dr. Down has named *developmental* cases. It seems questionable whether these cases should form a subclass under the congenital or the non-congenital heading; for, though the imbecility may not be developed till the first or even second dentition, the "tendency to mental catastrophe" is, no doubt, innate. At all events, such cases are to be carefully

distinguished from the purely *accidental* or *acquired* cases. In tabular form, the classification is as follows.

In the first place there is the broad division of Congenital Developmental Non-Congenital cases. In my experience at the Royal Albert Edward Asylum the former may with the aid of a discriminating scrutiny of the histories be set down as twice as numerous as the latter. (Parents would have us to believe the reverse, & worse are they to acknowledge original defect in their offspring that they will attribute the most dire results to falls, frights & fits in themselves ^{quite} inadequate to produce them). These two leading classes may themselves be divided into the following typical groups:—

CLASS A.—CONGENITAL	
Type.	Type.
1. Microcephalic.	5. Primarily senile.
2. Hydrocephalic (also non-congenital).	6. Paralytic (also non-congenital).
3. Scrophulous—"Mongol type."	7. Chronic (also non-congenital).
4. Senescent (also non-congenital).	8. Cerebral, (1) organic; (2) toxic.
CLASS B.—NON-CONGENITAL	
a. Developmental.	
9. Epileptic.	11. Syphilitic.
10. Epileptic.	12. Post-febrile (also accidental).
	b. Accidental or Acquired.
13. Toxic.	15. Emotional.
14. Traumatic.	16. MIXED CAUSES.

None Photographic Illustrations

These Brain of Fred Lower }
also Joe Bobby }

(431 m)

Of the various groups just enumerated, the most striking is the Microcephalic type. D. Ireland, in his classic work, on Idiotism & Imbecility, gives the name of Microcephalic to all heads below 17 inches in circumference: it may be doubted, however, whether calling even the broad average of the Cephalons (20.87) as a standard for normal brain action, any considerable diminution - say, even 18 or 19 inches of circumference - is compatible with well-balanced intelligence. In different Microcephalics there are many differences of conformation, but there are, generally speaking, certain prevailing characters in the conformation of head & face. The forehead is narrow & rapidly recedes towards a vertex more or less acute (Oxycephalic);

the occiput imperfectly developed; the facial features have been well-formed, the orbit large, the eyes prominent, and the nose often of the Roman type. Sometimes there is a tendency to prognathism. The tapering forehead and prominent nose give to the physiognomy, in some cases, a bird-like aspect, whilst, in others, the expression has been compared to that of a beaver or a mouse. The so-called "Arctics" are idiots of this type; and the portraits* and head-contours of Freddy (a patient at the Royal Albert Asylum) show most of the characters alluded to. This Arctic was of age, 10 1/2 fl. 6 in. high, had a head, the greatest circumference of which was under 15 in. (38 c.). In the case of another whose head-measurements were even smaller, and who died at ten years of age, the weight of the brain was 13 1/2 oz. (385 grammes). In another case of microcephaly, in which the head measured 17 1/2 in. (44.5 c.) in circumference, the brain weighed 27 1/2 oz. (780 gr.); and, in a third, with a circumference of 16 1/2 in. (42.6 c.) the cerebral weight was 21 1/2 oz. (610 grammes). D. Planché Beach remarks that the case of a microcephalic whose brain weighed but four ounces, yet displayed in its rudimentary form nearly all the conformation.

* Histories
of the
Arctics

Abstract of Lecture 2. (b)

Fœtal morbid states owe their peculiarities to:—

1 The influence of the intra-uterine environment as shown in:—

- (a) Fœtal fractures and wounds.
- (b) Exanthemata occurring in the fœtus, e.g., variola, erysipelas, etc.
- (c) Fœtal ichthyosis.
- (d) Maceration (without putrefaction) and mummification consequent on fœtal death.
- (e) Fœtal rigor mortis.

2 The placental factor as shown in:—

- (a) The possibility of the coexistence of advanced pathological change and fœtal vitality, as seen in the potential morbidity of fœtal renal disease and the potential mortality of general fœtal dropsy and of most teratological conditions of an advanced type.
- (b) The protection afforded against poisons and toxins in the maternal circulation: the placenta as a filter, a barrier, or an accumulator of poisons.
- (c) The entrance of germs, toxins, and poisons into the fœtus from the mother: the placental route practically the only one: the mechanism of placental transmission and the circumstances which modify it: the position of primary lesions in the fœtus.
- (d) The lethal effect upon the fœtus of lesions of the placenta itself: the placenta the most vital and the most vulnerable organ of the fœtus.

3 The embryonic factor as shown in:—

- (a) The modification of fœtal diseases by pre-existing malformations.
- (b) The coexistence of malformations and diseases in the fœtus.

Diagnosis of fœtal diseases (case-taking scheme):—

- (a) Ante-natal.
- (b) Intra-natal.
- (c) Post-natal.

nutritional

Abstract of Lecture 2. (b)

Fœtal morbid states owe their peculiarities to :—

1 The influence of the intra-uterine environment as shown in :—

- (a) Fœtal fractures and wounds.
- (b) Exanthemata occurring in the fœtus, *e.g.*, variola, erysipelas, etc.
- (c) Fœtal ichthyosis.
- (d) Maceration (without putrefaction) and mummification consequent on fœtal death.
- (e) Fœtal rigor mortis. *will be infrequent*

insufficiently defined

2 The placental factor as shown in :—

- (a) The possibility of the coexistence of advanced pathological change and fœtal vitality, as seen in the potential morbidity of fœtal renal disease and the potential mortality of general fœtal dropsy and of most teratological conditions of an advanced type.
- (b) The protection afforded against poisons and toxins in the maternal circulation: the placenta as a filter, a barrier, or an accumulator of poisons.
- (c) The entrance of germs, toxins, and poisons into the fœtus from the mother: the placental route practically the only one: the mechanism of placental transmission and the circumstances which modify it: the position of primary lesions in the fœtus.
- (d) The lethal effect upon the fœtus of lesions of the placenta itself: the placenta the most vital and the most vulnerable organ of the fœtus.

cause of death
Born

3 The embryonic factor as shown in :—

- (a) The modification of fœtal diseases by pre-existing malformations.
- (b) The coexistence of malformations and diseases in the fœtus.

Diagnosis of fœtal diseases (case-taking scheme) :—

- (a) Ante-natal. *use antenatal history - general maternal history*
- (b) Intra-natal.
- (c) Post-natal.

My own experience of the brains of microcephalic
 idiots - of which I send you several specimens -
 lends but little support to the theory advanced
 by Vogt that these diminutive heads indicate
 a stage of development of the original human
 ancestors of man. Speaking generally, one
 may say that the brain of the microcephalic
 is distinctly human in its characteristics,
 the typical fissures & convolutions being
 traceable, tho' diminished in size and
 rudimentary in form. Gratiotet has observed
 that in the brain of the ape the temporo-sphenoidal
 convolutions appear first, & the frontal lobe
 last, whereas in man the frontal convolution
 appears first, & the temporo-sphenoidal last.
 In the human microcephalic the frontal &
 parietal convolutions are generally those
 which are best developed. Some arresting
 influence, in intra-uterine life, has checked
 the growth, & subsequent development, of the
 brain hemispheres backward & downward, &
 consequently the temporo-sphenoidal & more
 especially the occipital convolutions are
^{loper}

Microceph.
 Brains
 1885

imperfect both in growth & development.
 The Cerebellum which is relatively larger than
 in the normal brain (1:3 m4 instead of 1:8)
 is thus left uncovered. The basal ganglia
 & the horns of special sense are as a rule well
 developed: this anatomical condition
 corresponding with the quickness of observation
 & ~~intelligence~~ ^{rapidity} often met with in this class
 of idiots. Time will not permit us to go
 further into this interesting subject, & with
 regard to prognosis, I can only say that
 possibilities of mental improvement under
 training are of course limited by the size
 of the skull.

Cases. I. Albert Leuberg -

II. Martha Dale.

III. Thomas Wilson (Refer to case of Sister)

IV. Thos. Eccleston.

V. Mary Lees (Peculiar Frontal convexity)

Pathologically, Microcephaly may be
 looked upon as an atrophic lesion
 in the sense that growth & development
 has been arrested in the later stages of

intra-uterine life. This at least seems to
 be the most frequent cause, it is not
 however denied that "early morbid processes,
 such as inflammation, or the presence of fluid
 within the cranium" may occasionally be
 the cause of arrest the growth of the brain
 after birth. Inflammatory processes are
 sometimes accompanied by premature
 symphysis; but that is not to be looked
 upon as the cause of the microcephaly.
 Of late, the operation of craniectomy has
 been proposed as a remedy for microcephaly,
 but as might have been expected "a priori"
 it has been attended with but very slight success.

Before leaving the subject of atrophic
 lesions characterizing senility I must
 briefly refer to the condition known as
 Porrocephalus illustrated by the
 Specimen marked C

William Duxbury

Slud
Photo

A very interesting & rare case of atrophy of the Cerebellum was accidentally discovered in the autopsy of a girl aged 16 who died of phthisis, & who had remained during 15 months sedentary in the asylum no sign of ataxia. The photograph taken by Dr. Ferrie (to whom I sent the brain) gives a good idea of the defect, which had not been suspected. The whole brain weighed 42 oz. & the Cerebrum was well developed; but the Cerebellum was of the most diminutive character. The left lobe was a mere fragment, the Vermiform process a minute nodule obscurely marked with laminae, while the right lobe which constituted the main portion, was only half a square inch in superficial area, & only a quarter of an inch in thickness at its base. This diminution alone had however the normal laminated appearance & structure. The pons was indicated by only a few transverse fibres. With the exception of the Cerebellum & its peduncles the rest of the brain & the cranial nerves were normal.

The cranial characteristics of hydrocephaly consist of a general ovoid appearance of the crown looked at from above, the contour from back to front and side to side being more or less globular, and the greatest circumference being found at the temples, where there is sometimes a perceptible bulging. The back of the head is somewhat flattened. Imbeciles of this type, if not suffering from active disease, usually improve very considerably under training, and at last approach very nearly the standard of ordinary intelligence. This is exemplified in one of the cases whose head contours are exhibited, a lad of twenty-one, who, with the exception of a certain amount of childish curiosity and moral imbecility, may be described as cured.*

Resembling the hydrocephalic cases in size, though not in form of head, are those comparatively rare cases of hypertrophy of brain, which, when complicated with encephalitis, usually issue in a form of idiocy tending to pass into a variety of mania. Dr. Fletcher Beach, who has paid much attention to the subject of hypertrophic idiocy, gives the following as the points of cranial distinction between hypertrophy and hydrocephalus:—

"In hypertrophy of the brain the head does not attain so large a size as in chronic hydrocephalus. The head of my first case measured 23 inches in circumference, that of the second 22 inches. I have three cases of chronic hydrocephalus now in the asylum, and their heads measure 23½, 25½ and 25½ inches respectively.

* Head measurements: Hydrocephalic Imbecile (R. M., et. twelve).—Circumference, 23½ in. — 59.5 c. Transverse, 15½ in. — 39.5 c. Callipers, 4½ in. — 11.4 c. Longitudinal, 14½ in. — 37.5 c. Callipers, 7½ in. — 19.4 c. Contours are exhibited in Fig 3.

"In hydrocephalus the increase in the size of the head is most marked at the temples; in hypertrophy above the superciliary ridges.

"In hypertrophy the head approaches the square in shape; in hydrocephalus it is rounded (see outlines). In hydrocephalus there is often an elasticity over the late closed fontanelle; in hypertrophy there is none, and there is often a depression in that situation.

"In hydrocephalus the distance between the eyes is increased from the fluid inserting itself between and distending the sutures formed by the frontal and ethmoid bones; in hypertrophy this is not the case."

Dr. West says this disease is usually associated with rickets. In the only case which I can bring forward—that of a girl of twelve—there are no signs of rickets. In this case there is frequent complaint of headache, and the progress at school is slow.

From the group of small heads we pass to the consideration of the group of large-headed Idiots, most of whom fall under the class of Hydrocephalic. This may be a congenital, but is more frequently a non-congenital condition. I exhibit a few ^{head} contours illustrating this variety, & also a portion of a brain showing how thin the ventricular walls may become when distended by fluid. In this case there was found 20 lb. of fluid in the ventricles; & this was the more remarkable as up to within an hour before her death the child — a fairly intelligent imbecile aged 11 — was able to talk, & complained of nothing but pain in the back of the neck. Brain weighed, without fluid, 36 oz.

The scrofulous type of Scurvy, is in my experience a predominant one. No less than 20 per cent of 2300 cases at the Royal Albert Hospital, & the Metropolitan Hospital for Scurvy Children, investigated by Dr. Hildesheim, Beach & myself, show a scrofulous phthisical family history - "Perhaps two-thirds, or even more, of all I visit are of the scrofulous constitution" says Dr. Hildesheim, but many of these, of course, may be ranged under other types - There remain however a considerable number in which a low condition of health with such accompaniments as scrofulous glands, phlyctenular ophthalmia, diseases of joints & bones, point to a constitutional debility which goes far to account for feeble mental action; & in some of these, bred amidst the surroundings of dirt, darkness & drunkenness, it is astonishing how much amelioration both of mental & bodily condition follows introduction into the hygienic

conditions & holism feeding of a
well regulated institution. Nevertheless
70 per cent of the deaths occurring in
idiot institutions are due to some form
of scrofulous or phthisical disease

Mongol

There is a remarkable variety of imbecility, probably scrofulous in its essence, which has obtained from its physiognomical characters the name of the "Mongol" or "Kajong" type. We have numerous specimens of that type in the ~~district~~ (perhaps 3 per cent. of its population); and you will notice in all a certain family resemblance, though they come from widely distant parts of our district. They all have a skin coarse in epidermis, if not furfuraceous; many have more eye-lids, some fissured lips; but one of their most striking peculiarities is the state of the tongue, which is transversely fissured and has hypertrophied papillae. Many of them have almost-shaped eyes obliquely set; and this feature, with the squat nose and wiry hair, give the "Mongol" aspect whence they derive their name. My view is that they are, in fact, unfinished children, and that their peculiar appearance is really that of a phase of fetal life. I do not mean that they are necessarily prematurely born, but some cause has depressed the maternal powers, and there has been a defect of formative force. It is remarkable that, in our experience, nearly half these children are the last born of a long family; and in more than one-third a phthisical history has been traced. They are generally delicate in body, and very susceptible to cold; mentally, they have good imitative powers, are often very fond of music, and dance and drill well. Comparatively few grow up to be men and women; and, as a rule, they die of phthisis before 20.

Crashy
Ceph

Brains 7 to 12 are examples of the coarse convolutions which characterize this special type. There is an absence of secondary convolutions; & the extent of grey matter is relatively small, though the weight of the brain may not be much below the average. The skull is ~~abrupt~~ ^{abrupt} oval, the transverse & long diameters approximating & there being a tendency to parallelism of the frontal & occipital planes.

Passing over the "sensorial & primarily
 neurotic" types, we must say a few
 words as to the paralytic & chronic cases
 of which however I can only show photos.
 Such conditions as those existing in the
 preencephalous brain already shown will
 account for some of the cases, but a
 much larger number are probably the
 result of "birth palsy" due to pressure
 during parturition. Cerebral hemorrhage
 is a not infrequent result of undue
 compression during birth; not ~~at all~~ ^{as}
 as has been alleged by ^{Dr. Winkler} ~~Dr. Winkler~~ &
 Botkann of compression by forceps; but
 of prolonged pressure in protracted &
 unassisted labour. "When death ensues
 early, intracerebral hemorrhage is found
 on the convexity of the brain, thickened over
 the central zone & in some cases with a central
 cortical laceration". In children resuscitated
 after prolonged artificial respiration, there
 follow not uncommonly convulsions within
 a few days of birth, & subsequently spastic

contraction of the limbs, with inco-ordination
& athetoid movements; & such children
are frequently feeble minded, the intelligence
which they possess being masked by their
physical infirmities. In diagnosis

130 Wapping
80 Wapping
Dr Shuttleworth
Ancaster House
Richmond



of the unpaired glance, under it especially
interesting at the present time. Such cases,
as you will see from the photographs
which I exhibit, have a wonderful
family likeness to each other: they are
dwarfs physically & mentally: they have

130 yds long
80 yds wide
Rushy Bottom.



Dr Shuttleworth
Ancaster House
Richmond

In these cases there was arrest
of brain development of the brain at about
the 5th or 6th months of fetal life.
Arrest of the bones followed this
arrest of cerebral growth.



contraction of the limbs, with incarceration
 & athetoid movements; & such children
 are frequently feeble minded, the intelligence
 which they possess being masked by their
 physical infirmities. Judicious training
 may accomplish very much for these
 cases, both in the amelioration of the
 mental & the physical conditions.

(Show macerated work)

The type of sporadic cretinism demands
 attention, although in my experience it
 is a comparatively rare condition -
 (I have only seen 5 cases amongst 1600
 admitted to the R.A.C.) - but its
 affinities to myxedema, & the
 prospect of amelioration now afforded
 by the ~~rationalization~~ ^{of the gland} administration
 of the thyroid gland, render it especially
 interesting at the present time. Such cases,
 as you will see from the photographs
 which I exhibit, have a wonderful
 family likeness to each other: they are
 always physically & mentally: they have

all a broad face, fungous & protruding
tongue, & however juvenile a "præternatural"
old fashioned expression. The skin is everywhere
loose & baggy: the belly tumid, & the hands
^{The animal could be distinguished by slowness of action}
& feet, equal. W. H. Stoddard, D. Cash, who has
carefully investigated the pathology of
this class, says that there is excess of
mucin in the subcutaneous tissue, excess
of yellow tissue in the lungs, liver, spleen &
kidneys, & usually the thyroid gland
is absent, tho' in some cases goitre has
been described. At any rate the system
suffers from the want of the proper
secretion of the thyroid gland; but this
being supplied by the administration
of the thyroid gland of the sheep - as in
one of my cases - apparently ameliorates disease.
The brain of the sporadic cecum shows
coarse convolutions, & a honeycomb
appearance from spaces around the
corpuscles in more superficial layers
being larger than usual.

Time will permit us only to make brief reference to one other of our types, viz. the Syphilitic. From all we know of the far reaching Constitutional Effects of Syphilis, we might fairly expect to find the inherited taint a potent factor in the production of Congenital or developmental imbecility. Yet Dr. Macdonald Beach & I found on a careful scrutiny of the histories of over 2300 cases that we shall ^{from the evidence before us} not be justified in assigning it as the cause in more than 1.17 per cent. The common characteristics of such cases are specific skin affections in infancy, followed by a period of comparative health & intelligence in early childhood, & a breaking of bodily & mental power about the period of second dentition. Progressive juvenile dementia initial results with paralytic symptoms; & Dr. Clouston of Edinburgh has recently pointed out the resemblance these cases bear to general paralysis of the insane. Death usually occurs in

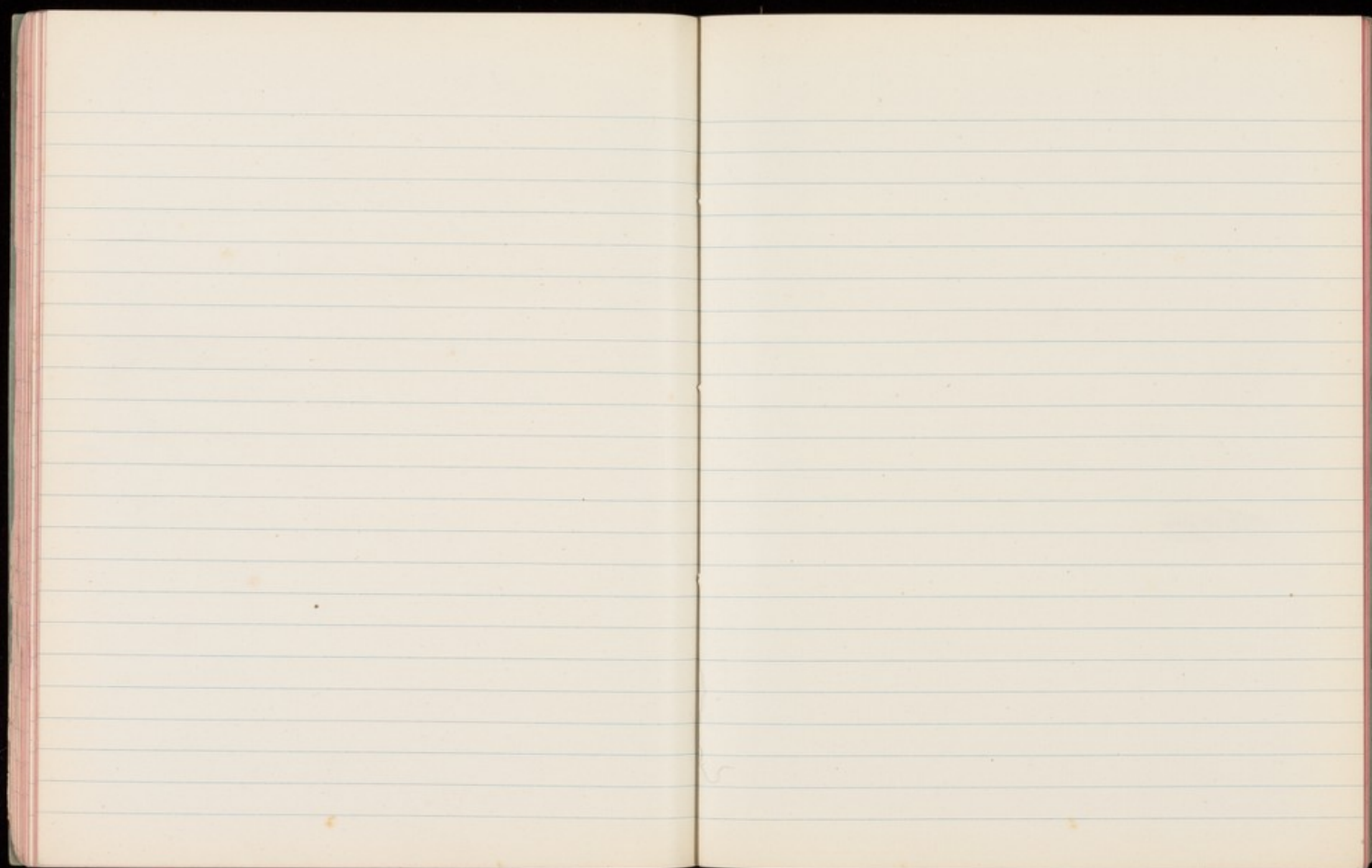
The course of 16 or 18 years; & thickening
of the cerebral arteries, ~~with marked~~ &
of the meninges, with marked atrophy
of the convolutions is found at the
autopsy.

Peculiar pathol. cond^{ns}

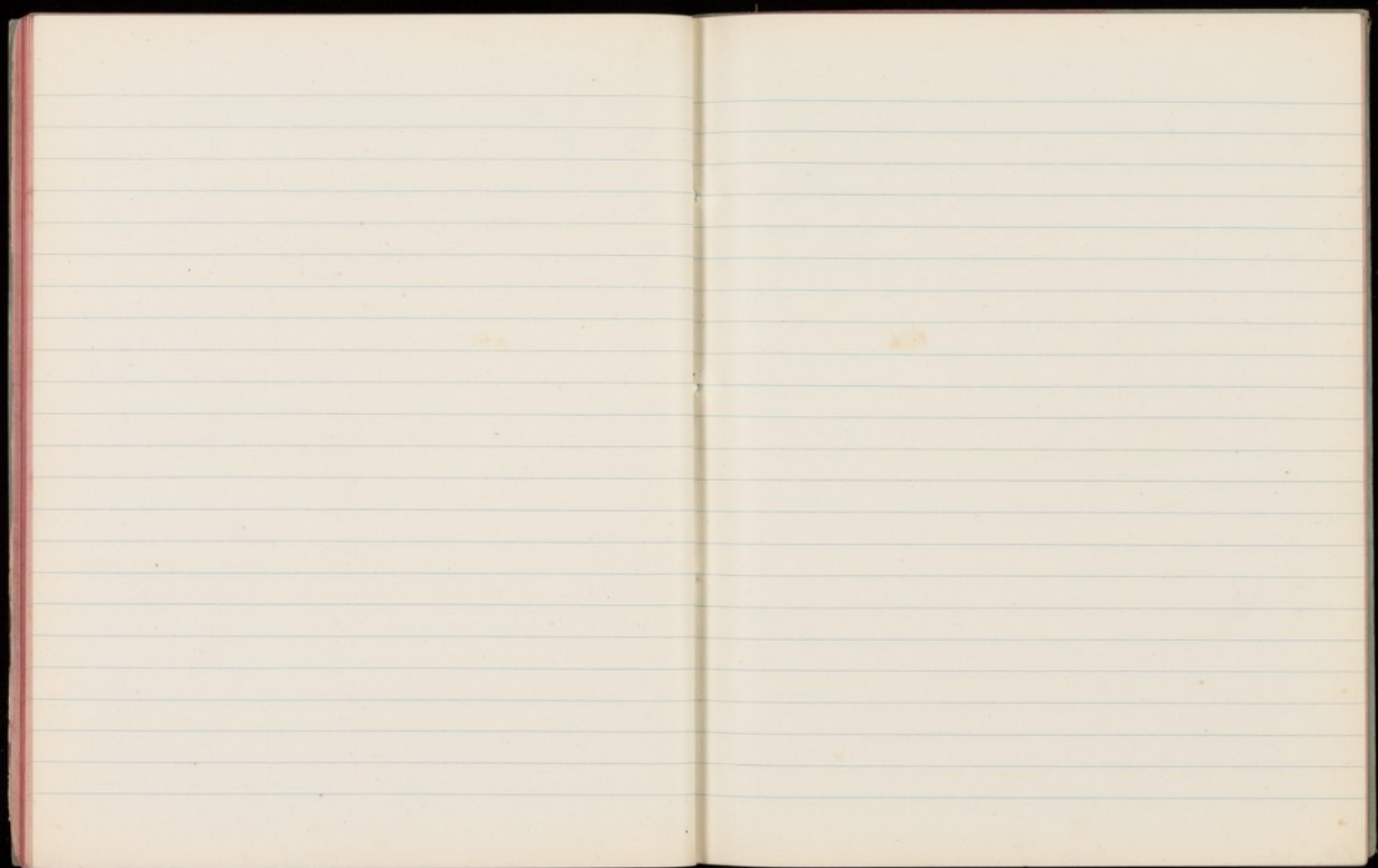
Polysarcia

Multifocal xanthoses—

Fatty Moles + Fatty Tumors



A number of blank pages follow
and have not been photographed.



childhood, but about the period of seven children a
breakdown both of body & mind occurs, gradually
indeed, but a progressive juvenile dementia with more
or less insanity. In Glasgow of Edinburgh has recently
found out the resemblance such cases bear to general
paralysis of the insane. Quite usually occurs in the course
of 10 or 15 years, & at the autopsy there will be found nothing
of the kind of cerebral changes of the meninges, & as a
consequence of the tubercles being impaired, extreme atrophy
of the hemispheres, as exemplified in a specimen exhibited
by Mr. Shutteworth.

In conclusion Mr. Shutteworth spoke for the
fragments character of his address illustrating
by the work of bone to deal adequately with the
material he had brought for demonstration; but
he trusted that his remarks would suffice to excite
interest in the Society, & that in a subject so essential
to the ordinary observations of the practitioner,
he assumed the members that they would be most
welcome as visitors to the Royal Albert Dispensary,
should they desire further to pursue the details
either of pathology or the treatment of disease &
inability.

& unassisted labour, than of compression of the head
 by forceps (as ascertained by Dr. Wenzel & Ballow) muscle
 covered haemorrhages occurring in cases of asphyxia neonatorum
 leading to convulsions even often birth in cases resuscitated
 by artificial respiration were subsequently resuscitated
 (when affecting the motor centres) for spastic contractions of
 the limbs with true-crudiments & artificial movements.
 Such children - (of the chronic & functional types) were
 mentally feeble but possessed more intelligence than was
 at first suspected. Though their speech was
 usually affected, & their movements awkward, they were
 good subjects for special education, & often became
 skilled in mechanical work (specimens of mechanical
 work were conveyed by patients of this class were exhibited).
 The type of spastic erism was interesting, though
 rare. The description of patients of this type showed
 marked resemblance to each other, & the patients suffering
 from myxedema! & it was stated that 2 cases at the
 Royal Albert Ashland were drawing musical bouzouki
 from myxedema! & it was stated that 2 cases at the
 The pathological features of this class had been fully
 described by Dr. Stillman & Hickenbach: excess of
 tissue in the subcutaneous tissue, excess of fibrous tissue

in the lungs, liver spleen & kidneys, & usually an absence
 of the thyroid glands. The cases all had a strong family
 likeness: they were dwarfs, with broad face, long nose &
 protruding tongue. The skin everywhere loose & baggy
 the belly **flaccid** & the hands & feet broad & equal. The
 broad of the thoracic cavity is coarse in structure, the
 cartilages of the subpericardial layers being surrounded by
 unusually large spaces. Mentally the characteristics were
 not so much absolute deficiency of intelligence, as extreme
 slowness of reaction. It was curious to notice in one
 of these cases the gradual dawn of a smile when something
 causing movement had occurred.
 Some furnished only of reference to one other group
 tabulated, viz. the epileptic. Though a few epileptic
 cases might be expected to play a considerable part in the
 production of disease & probably, just as a matter of fact
 the few cases in which it appeared as a cause in the
 statistics recorded in institutions was but small. - viz.
 1-17 per cent in 2380 cases tabulated by Dr. Struthers
 & Black.
 The common characteristics of such cases were a history
 of specific skin affections smugly & in infancy, followed
 by a period of comparative health & intelligence in early

of imperforatus under drawing. It was suffering
 here much fluid might be carried about in the ventricles
 without grave symptoms being perceived: portion of a
 brain was exhibited from a hydrocephalic case in which
 the ventricles were extremely thin, 20 ounces of fluid
 being found in the brain, they weighing (when drained) only
 26 ounces, & yet the child continued to converse with
 moderate intelligence until a few days before death, complaining
 only of pain at the back of the neck.
 Passing to the Scirrhous Cases, it was stated that in
 2380 cases of Adenocarcinoma, & indirectly investigated etiologically
 by Dr. Whistler & Fletcher Black (see Black's "Lectures"
 of "Physiological Medicine" pp 66-7.) no less than 20 per cent
 had a physical family history. In many were seen
 such cutaneous & visible signs of Struma as enlarged
 glands, pharyngeal dilatation & white swellings of joints
 but there was a special type, probably Scirrhous in essence
 which from its physio-genetic character had been
 designated "Malignant Struma" in the Royal Albert
 Dispensary as many as 3 per cent of the cases were of
 this type, characterized by an edgely of the suppurating
 progress of the tumor & an upward turning of the symphysis
 arch, together with a flat bridged S-shaped nose, and

edgely rounded skull, the front & back of which knotted
 to flatness, & there was a coarse papulated condition
 of the skin & of the mucous membrane, well marked in the
 tongue, & clubbed condition of the fingers & toes, see fig 3
 Certain mental characteristics were common to this class
 they were very imitative, had a good ear for tone & time
 & were capable of a fair degree of scholastic education,
 but their constitutional powers were feeble, & soon often
 failing, & not before they usually developed pulmonary
 phthisis. They were probably "constitutional children" bearing
 through like marks of fatal imperfections
 in a large proportion of cases they were the least born
 of a numerous family, & seemed to be the products of
 procreant powers well nigh exhausted.
 The brown-sweet specimens of which were shown were
 all coarsely convoluted, & though they weighed from 3 to
 4y oz. there was of course a relative depravity of gray matter
 few words were said about Charcot's "neuritic" type, a
 which photographs were exhibited, many were probably
 due to pressure during foetal life, examples indeed
 of birth injuries. It was contended that mental defect
 was more often found as a consequence of protracted

powers of observation, & although his speech was monosyllabic
 the made his words well understood, saying, "Come ye, let's have
 ye & had a certain degree of logical faculty, bringing comparisons
 of equal aptness in a business like way. His brown (exhibited)
 silens (which has been observed in other cases of monosyllabic)
 marked impositions of the ~~brain~~ occipital & hemisphere
 Sphenoidal lobes especially, so that the cerebellum is left
 uncovered; & from this & other specimens of monosyllabic brown
 it would seem that, as a rule, some ascending influence has
 checked the growth, & subsequent development of the
 hemispheres backward & downward. As the development of
 sphenoidal connections appears first, & the frontal lobes last,
 whereas in man the frontal connections appear first, & the
 hemisphere sphenoidal last, the pathological features of monosyllabic
 tend to support the conclusion of Broca that these diminutions
 heads indicate a stage of development of the original sinuous
 ancestors of man. The theory that monosyllabic descended
 upon prehistoric man, & that the cause of the ill
 developed brown) had led to the fracture of crura, & in
 in such cases, & although females had been reported
 by Louchet, & others, & others, but little benefit

had been observed by Dr. Shattlesworth in cases that had
 fallen under his notice

In connection with atrophic cerebral degeneration the
 verticillate brown of a male imbecile (aged 21 years
 at death) was exhibited, in which a spot 4 inches in
 length extended from the anterior front of the right
 frontal lobe near to the occipital, leaving the convexity of
 the lateral sinus uncovered. The patient had partial
 left hemiplegia, with atrophic. The degeneration & casts were
 also shown of a rare case of defect of cerebellum
 occurring in a girl of 15 who died not many years
 symptoms during life, though the left lobe was a more
 flattened, & the right measured only half a square inch
 in superficial area.

Monosyllabic cases were next commented on. In
 these the cerebral measurements were large, contours being
 shown in which the compensations respectively changed from
 23 to 26 inches, with skulls more or less globular.
 The greatest circumference was usually found at the
 level of the temples, & the distance between the eyes was
 unusually great. Monosyllabic cases might be
 congenital or acquired. When either disease had subsided
 there was often a considerable degree of intelligence

Dr Shuttleworth then exhibited & explained a table

setting forth a mode of classification based upon

the etiological factors of the chief varieties of disease,

copy of which is submitted. It was contended that the

congenital cases really constituted the non-congenital,

though frequently were as a rule ascribed to

fact of original defect. Whilst some cases of disease could

be readily assigned to a particular type, the majority

were the product of more than one etiological factor

so that the heading "mixed cases" was a comprehensive

one, many cases occurred in which there was indicated

hereditary predisposition, though the mental brood was

not not occur till some crisis of development, i.e. puberty

or the second dentition, & these cases were then

described as "developmental," an idea still further verified

and in the case of children recent sections in "The Diseases of

Development."

X Table of Types of Disease & Incubity

(based upon etiological considerations)

Phrenological illustrations of the more characteristic

types, such as the insensibility, hydrocephalic, monger,

lunatic, & spermatocoele, were exhibited, & then

fractiousness formed out. The constant co-existence of

congenital physical and mental abnormalities, & their bearing

upon prognosis were commented on (a few photographs of

typical cases will be found appended)

Meningeal cases. In these, there is mental disturbance

in all the head measurements, & instances were given in which

the cerebral circumference measured only 14, 15, 16, & 17 inches

respectively. In most cases were found a narrow & highly

receding forehead, & an unusually deep-set occiput,

the vertex being more or less acute (oxycephalic), while

the facial features were well formed, the orbits large, the eyes

prominent, & the nose often of Roman type - not uncommonly

the pharynx was hard like: sometimes it had been

compared to that of a beaver or a mouse. In one notable

instance (Friday boy) for many years water came at the

right nostril. (Friday boy) for many years water came at the

nostril. (Friday boy) for many years water came at the

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thus deficiency might manifest itself, viz.

(1) by Spasms, i.e. imperfect reactions,

(2) by Irritability, i.e. imperfect control.

In the first class we find an imperfectly-formed

or imperfectly developed brain, from which proceed but

feeble nerve currents; in the second, the inhibitory apparatus

is at fault, fibres of the brain, instead, being wandrily active,

imperfectness of the nervous centres are by no means, however,

the only abnormalities in cases of Idiotcy & Imbecility; the

nervous periphery also is involved, so that we find the external

senses, sometimes organically more frequently functionally,

impaired, so far from being merely an "affection

of the mind", as classed in the official nomenclature of

"Diseases", it is in truth a vice of the entire organism.

Physically, then, as well as mentally, we find, as a rule,

the class of Idiotcy & Imbecility below the normal standard,

from a table prepared by Dr Shuttleworth (with the aid

of Mr C Roberts F.R.C.S.) for a lecture at the International

Medical Exhibition of 1884, it appeared that little or

Stature, and in weight they compared unfavorably

with ordinary children of the same age, a deficiency

of 1 inch at 5 years of age, of 2 inches at 10 years of

3 inches at 15 years, existing as regards Stature, & of

4 1/2 lbs at 2 years, 6 lbs at 10 years, and 8 lbs at 15 years, as regards weight, comparing the latter with the former class. Lack of vitality in the latter class is witnessed by the fact that the mortality of females of the large Congenital imbecilities between the ages of 5 & 20 is nine times as great as that of several milder

Children of corresponding age.

There size of brain, irrespective of quality, bears no

constant relation to brain power; and a comparison

of the head measurements of inmates of the Royal Albert

Asylum, & of those of the Edinburgh Asylums showed

but little difference as regards general averages for

groups of children of similar ages in the two

institutions (see table below) it should however be

stated that the comparatively respectable averages

obtained for the head measurements of the Idiotcy

was due to the abnormally large heads of some, which

more than compensated for the abnormally small heads

of others, in the series, as the latter generally falls in

heads are sometimes so little that there is no room for wit

& sometimes so long that there is no wit for so much room"

X Table of Average Measurements, Int. & Normal Children

"Some of the ichthyological characters
of Adony"

Abstracts of address delivered before the
Medical Society of York

by

Edmund Shuteworth Esq. M.D. &c.

Medical Superintendent, Royal Albert Dispensary
for Deaf & Dumb of the Northern Counties

Manchester

May 25th 1893

Dr Shuteworth mentioned that on the suggestion
of Mr. Ransom, the energetic and Social Secretary of
the Royal Albert Dispensary, he had been induced to
bring with him some of the preserved bones and other
specimens illustrating ichthyological & pathological
peculiarities of his patients, & now proposes to offer
a few remarks on the same
standing with the attention that from the ichthyological
standpoint, different bones & cartilages is the general
characteristic of Adony & imbricaria, he said that,
broadly speaking, there were two modes in which

