The physiognomy of mental diseases and degeneracy / by James Shaw.

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JAMES SHAW, M.D.

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By

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PREFACE.

THIS small volume is the reproduction, with some additions and alterations, of my papers, or the parts thereof which refer to Physiognomy, in the "Medical Annual" for 1894, 1897, and 1903. These have been reproduced by permission of Messrs. John Wright & Co.

Most of the figures illustrating Chapters II. to XI. inclusive were taken from patients at the West Derby Workhouse Hospital by the kind permission of the late Dr. Chapman, and with the help of Mr. J. Ford Jones, artist, and Mr. H. Heathcote, photographer. Others are reproductions of photographs kindly lent by Drs. Wiglesworth and Shuttleworth.

Facial reaction, as to its absence, presence, kind, or degree, is here still accorded the important place given to it as a valuable diagnostic sign in my article on "Facial Expression, etc., in Mental Diseases," in the Medical Annual, 1894.

The illustrations of Degeneracy in Chapter XII. are, with three exceptions, taken from Dr. F. Peterson's article on the Stigmata of Degeneration, in the State Hospitals Bulletin, July, 1896. The

three exceptions are figures 53 and 54, from Dr. R. Jones's paper in "The Lancet," March 1st, 1902, and figure 55 from Dr. M. Treves' paper in the "Journal of Mental Pathology," January, 1902.

In the brief account of the Physiognomy of Degeneracy, the definitions and descriptions given by Dr. F. Peterson, generally speaking, have been followed, with certain modifications. For fuller information on degeneracy the writings of Drs. Talbot and Peterson should be consulted.

The sketch given in Chapter XII. will perhaps suffice to explain the allusions in the previous chapters on physiognomical diagnosis and prognosis, and to aid in advising as to the prophylaxis—so far as concerns education, mode of life, occupation, marriage, etc.—of the psychoses and great neuroses.

JAMES SHAW.

Kensington, Liverpool,
October, 1903.

Press Notices of Article on
"Facial Expression as one of the Means of Diagnosis and Prognosis in Mental Diseases," in 1894 Eaition, Medical Annual.

"The most noticeable, however, is the section on Insanity, by Dr. James Shaw. This forms by itself a most valuable monograph on Facial Expression as one of the Means of Diagnosis and Prognosis in Mental Diseases; it is beautifully illustrated by an extensive series of plates, and we congratulate Dr. Shaw on his work."—*Lancet.*

"The capital article on 'Facial Expression in Mental Diseases' by Dr. Shaw."—*British Medical Journal.*

"The article on Insanity, by Dr. James Shaw, dealing particularly with facial expression as one of the means of diagnosis and prognosis in mental disease, is specially worthy of commendation, both from its literary style and the large number of strikingly illustrative plates with which it is furnished."—*Glasgow Medical Journal.*

"One of the most comprehensive contributions to this part is an exhaustive article on Insanity by Dr. James Shaw. The subject which he especially discusses is facial expression as one of the means of diagnosis and prognosis in mental diseases. Neither trouble nor expense seems to have been spared in illustrating this article."—*Dublin Journal of Medical Science.*

"The valuable article on 'Facial Expression in Mental Diseases,' by Dr. James Shaw, in which no fewer than thirty-three beautiful plates are reproduced, is ample proof that neither trouble nor expense has been spared to make the work even more valuable than its predecessors."—*Quarterly Medical Journal.*

"Perhaps the most interesting section in the whole work is the one from the pen of Dr. James Shaw."—*Indian Medico-Chirurgical Review.*

"Dr. James Shaw furnishes a profusely and beautifully illustrated exposition of Facial Expression as a Means of Diagnosis and Prognosis in Mental Disease."—*Australian Medical Journal.*

Press Notices.—Continued.

"There is a valuable and beautifully illustrated contribution by Dr. James Shaw, on Facial Expression as one of the Means of Diagnosis and Prognosis in Mental Disease, which demands attentive study from all members of the profession interested in insanity."—*Pharmaceutical Journal.*

"One of the fullest and most valuable articles is by Dr. James Shaw, on 'Facial Expression in Various Forms of Insanity,' illustrated by a large number of photographs."—*Public Health.*

"Evidently neither trouble nor expense has been spared in elucidating by illustrations the articles in the text. Notable among these may be mentioned those which accompany Dr. Shaw's valuable communication on 'The Expression of the Face as a Means of Diagnosis in Cases of Insanity.'"—*Bulletin of Pharmacy.*

"Another thirty pages, and a large number of admirable iillustrations, are given up to an article on 'Facial Expression in Insanity.'"—*Hospital.*

"The illustrations are excellent."—*Medical Record.*

"We may note the many illustrations, and, especially o interest, those accompanying the chapter on insanity."—*New York Medical Journal.*

"The number and excellence of its illustrations. The editors of the sections are known throughout the world of medicine."—*Medical Press and Circular.*

"The most striking article in the present issue is that on 'Expression of the Face as a means of diagnosis in cases of Insanity.' This is undoubtedly a most valuable contribution to the medical literature for the year. It is illustrated by photographs which have been admirably reproduced."—*The Bookseller.*

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The Physiognomy of Mental Diseases and Degeneracy.

Chapter I.

INTRODUCTORY AND GENERAL.

STUDIED for purposes of diagnosis and prognosis the physiognomy of patients suffering from, or supposed to be suffering from, mental disease, includes not only (1) facial colour, coarse and fine facial movements, etc., but also (2) the general bodily movements which constitute gestures, gait, and attitude, as well as (3) such permanent characteristics as stature, shape of body, head, and face, and the conformation of the features.

The patient, after his attitude and general demeanour have been observed, should be placed in a good light, in order clearly to see the complexion, slight changes of colour, fine lines, delicate movements, fibrillary tremor, and pupillary alterations. The patient, should, if possible, be made to face the light squarely, so that the observer may detect any asymmetry of the head or face, or any inequality of the facial lines or in the size of the pupils. In this examination the effects of abscesses, swollen

glands, and absence of teeth should be borne in mind; also that some asymmetry of the features and facial furrows is often seen in sane persons.

The face having been examined in repose, it is necessary, in order to study the facial reaction, to engage the patient in conversation, or, if he is suffering from much intellectual weakness, to ask him a question or make some statement or movement calculated to arouse his attention, and then to watch the changes of facial expression carefully, or to note their absence.

A description of the patient's appearance (or, better still, a good photograph of him) before his illness ought to be obtained where procurable. The family physician has the great advantage of having known the patient when sane. Friends often perceive the alteration of physiognomy, but cannot always accurately describe it.

Attention to these simple directions, together with a general knowledge of the facial signs given below, will enable any practitioner to refer most cases to one of the ten great symptomatic groups into which I have divided mental cases for the purposes of this monograph. Many cases will be further capable of diagnosis as to the sub-divisions etiological, pathological, or symptomatic, to which they belong, and in most others the medical man will be put on the way to a diagnosis to be confirmed by the patient's speech, conversation, conduct, and anamnesia (personal and family history).

For scheme of differential diagnosis, founded chiefly on speech and conversation, see "Epitome of Mental Diseases." It should not be forgotten that some cases present the leading symptoms of two divisions, and many those of two or more sub-groups.

The deeper the facial structure affected the less favourable, speaking generally, is the prognosis as to permanent mental recovery; convulsions and paralysis are less favourable than pallor and flushing; osseous asymmetry, and malformation, still less so.

Simulated Insanity.—This may often be distinguished from real insanity by the inability of the simulator, however well he may have learnt his lesson as to speech, dress, and actions, to assume the facial colouring, the pallor or the flushing, the dry, harsh skin, the lack-lustre or glistening eye, or the injected conjunctivæ presented by the insane patient; also by the want of correspondence between the simulator's facial expression and that properly belonging to the form of insanity he affects; where the latter is dementia either the expression in repose or the facial reaction, or both, are badly imitated; where it is mania the pantomimic ability of the maniac is absent, and the simulator becomes sooner fatigued and requires more sleep; where melancholia, the sustained power of preserving the characteristic frontal and oral lines is wanting.

If the simulator is taken by surprise the facial reaction is not the same as that of an insane person, and may even differ without the surprise test.

Eccentricity.—However the dress and actions of the eccentric man resemble those of the insane one, his face is devoid of the signs of insanity, and his facial reaction is not that of any of the forms of mental disease described below.

Febrile Delirium.—The countenance indicates low emotional force; the muscles round the mouth and eyes are relaxed, and the features are expressionless; there is little if any mobility of the facial muscles, and what movement there is is feeble and tremulous; the facial wrinkles are caused by emaciation, and not, as in acute mania, by contraction of the muscles of expression. Where a diagnosis has to be made between ordinary febrile delirium and acute delirium, anamnestic and other symptoms must be taken into account.

Chapter II.

MELANCHOLIC FORMS.

IN these depressive forms the head is as a rule bowed down with the chin approaching the chest. This attitude is well marked in the case of melancholic stupor (*Fig.* 4). Except in periodical and circular (alternating) cases, and in melancholy "folie raisonnante," degenerative stigmata (such as marked asymmetry of face or head, abnormal size, shape, or position of ears, deformities of palate, etc.) are not especially frequent (see "Periodical Melancholia" and Chapter XII).

The presence of degenerative stigmata has an evil prognostic significance, as far as permanent mental recovery is concerned.

The face is nearly always pale, often sallow, though I have seen a few cases of simple melancholia and some of hypochondriacal melancholia in which the complexion was fresh and healthy-looking, but in most of these cases the redness was due to distension of the arterioles and capillaries from weakness. The face is sometimes greyish or livid or earthy in hue, the circulation being more than ordinarily feeble. The skin is usually dry and harsh, but is sometimes moist and clammy or greasy.

The patient looks older than he is (*Figs.* 1 and 2),

and any good looks he may have had are diminished or lost.

The hair, if left to the patient's care, is long, matted, unkempt, generally dry and harsh, often rough, and sometimes stands straight out from the head (*Figs.* 1 and 2). This patient's hair on admission fulfilled all these conditions, and when photographed all but the first three (see also case of melancholic stupor. *Fig.* 4).

Evidences of the skin having been picked and the hair rubbed off or pulled out are of unfavourable prognostic omen. The eyebrows are in some cases roughened by the hairs being made to project through the action of the corrugators.

There is always more or less emaciation (*Figs.* 1 and 2). This is very noticeable, both in the facial and the posterior cervical regions; in the latter causing the occiput to appear more prominent. In the anterior cervical region it causes undue prominence of the sterno-mastoid muscles (*Fig.* 1).

Where the loss of subcutaneous fat is extreme and persistent the prognosis is bad. When the patient, after a mental illness of some months' duration, becomes distinctly fatter without any appreciable psychical improvement, the likelihood of his restoration to sanity is diminished.

All the muscles of the lower part of the face are flaccid, causing the cheeks to sink downwards, the lower jaw to droop, and the face to appear longer than in good health and spirits (*Fig.* 2). The flaccidity

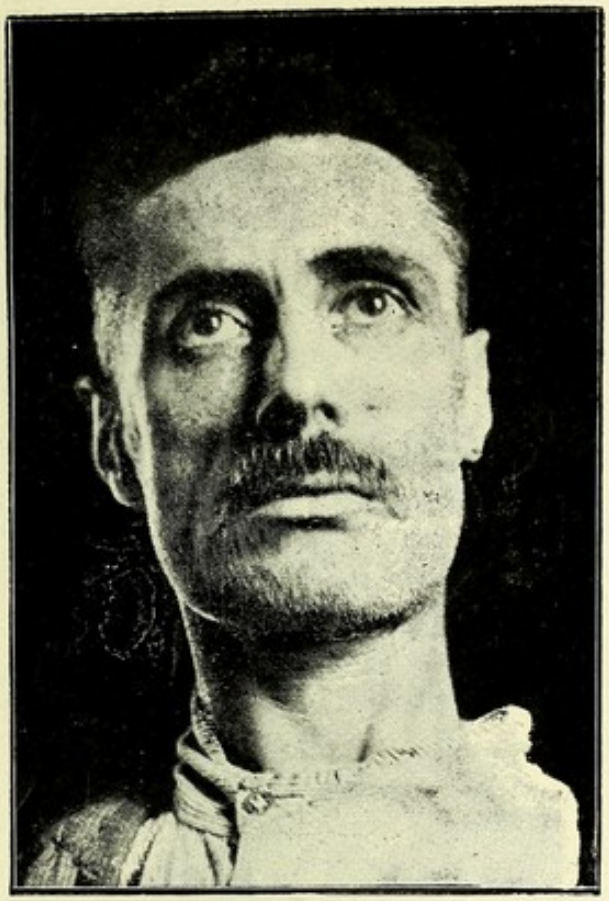

Fig. 1.

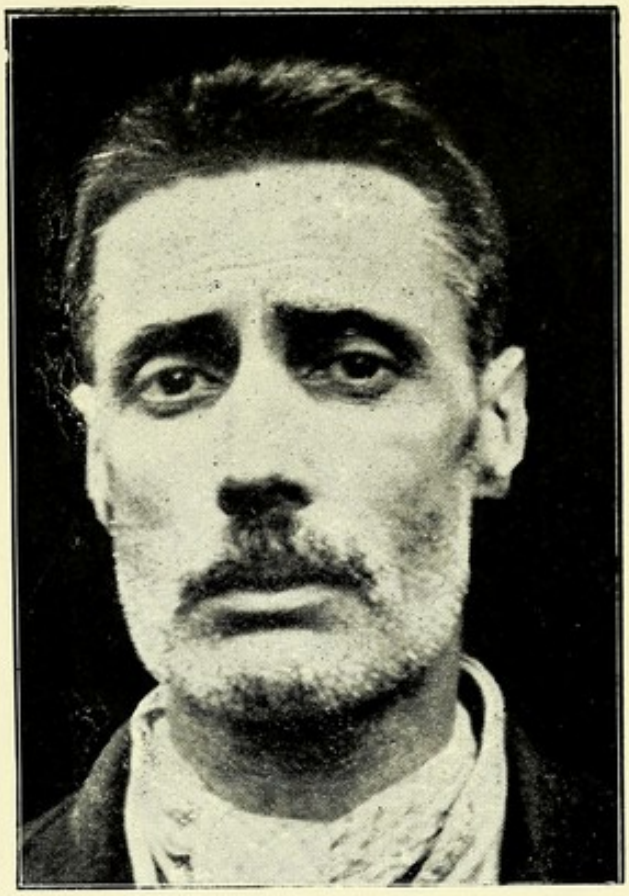

Fig. 2

HYPOCHONDRIACAL MELANCHOLIA.

Fig. 3.—Puerperal Melancholia.

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especially affects the orbicular muscles, so that the mouth is partly open with pendulous lower lip (*Fig.* 2); and the depressor anguli oris, being less under the control of the will than the elevator muscles, acts more strongly than the latter when voluntary power is diminished, and causes the angle of the mouth to droop more or less (*Figs.* 1 and 2).

The forehead is nearly always wrinkled horizontally, owing to the action of the occipito-frontalis muscle being inadequately opposed by that of the orbicularis palpebrarum. (See case of stupor, *Fig.* 4). Though in some cases the whole face is smooth and pale with immobile features and sad eyes or drooping eyelids, in many cases there are vertical wrinkles extending a little way above the nose, and caused by the contraction of the corrugatores superciliorum.

Further, in some cases the central fibres of the frontal muscle seem to overcome the pyramidalis nasi and draw up the inner end of the eyebrow (*Fig.* 2); compare this with *Fig.* 1 of same patient), the outer part of the forehead remaining smooth; this latter phenomenon (lateral frontal smoothness) has been attributed to the action of the orbicularis by some observers, to that of the corrugator by others; but having seen persons sane and insane, in whom the centre of the forehead remained smooth except for vertical furrows just above the nose, whilst the outer parts became wrinkled transversely, it seemed to me that the whole so-called "grief muscle" action might be owing to the associated contraction

of the nasal or central frontal fibres of the occipito-frontalis muscles and the outer fibres of the corrugators, the outer or lateral frontal and the inner or upper corrugator fibres remaining inactive. So that the centre of the superciliary arch is held down, and just above the nose there may be a knotted fold, or a vertical one extending to the transverse furrows; compare the case of melancholia (*Fig.* 2), in which the median frontal and external corrugator fibres are contracted, with the case of acute mania (*Fig.* 9), in which the right lateral frontal fibres are seen contracted along with the inner (or upper) corrugator fibres.*

Occasionally at the same time the inner end of the upper eyelid is drawn up.

The skin below and at the outer angles of the eyes is often puckered and wrinkled. The alæ of the nose and the angles of the mouth are generally lowered.

The naso-labial furrow—an important line in the study of the face—running from the alæ of the nose to the angle of the mouth, is deepened through the action of the superior straight muscles being proportionately stronger than that of the orbicularis oris (well seen in the case of melancholic stupor (*Fig.* 4).

These lines and wrinkles are more or less persistent, and some of them, such as those caused by the combined action of the corrugator, pyramidal, and central frontal fibres, the so-called "grief muscles,"

* Some of the finer lines have been obliterated in the process of reproduction.

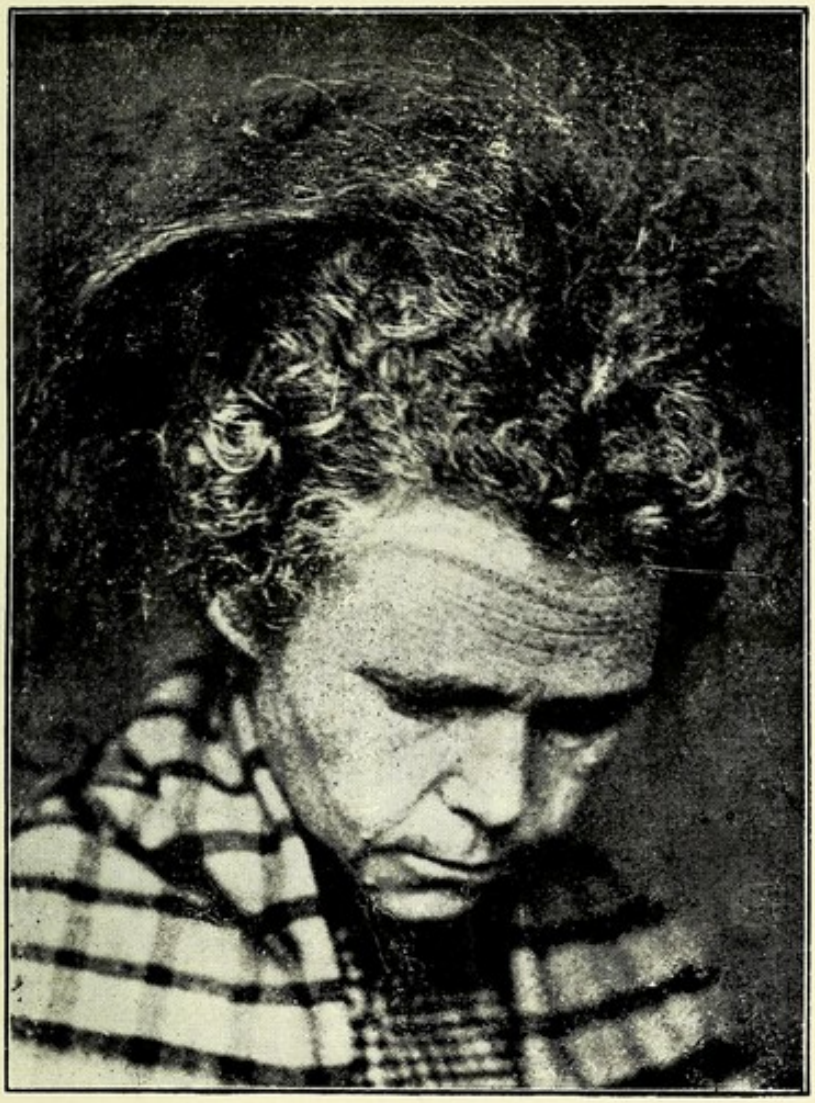

Fig. 4.—Melancholic Stupor.

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can rarely be voluntarily assumed without practice, and not always with it.

The muscles about the mouth are much more under voluntary control than those of the upper part of the face; in sane adults, especially male adults, it is customary to suppress or mask as much as possible the facial expression of the actual emotions and feelings, particularly that of bodily pain; in many cases of insanity this highest and last acquired form of control is lost, there is a veritable dissolution of expression, and the muscles about the mouth now readily betray painful or other feelings. See *Figs.* 1, 2, 3, 4, 9, 15, 20, for painful emotions; and *Figs.* 5, 13, 21, 23, 26, 31, for the opposite. In *Fig.* 2 both the oral and oculo-frontal regions betray the presence of painful emotions, the latter more palpably, however, in this case.

The eyelids generally droop. The eyes are dull and devoid of lustre, and often suffused with tears. They may be motionless and either directed downwards (as seen in *Fig.* 4), or widely open apparently gazing at some distant object (*Fig.* 1). The look may be askance, uneasy, and suspicious. Or the eyes may be fixed with an expression of sadness (*Fig.* 1), of suffering (*Fig.* 3), of painful tension, or of astonishment. Or the glance may be timid and unsteady.

The countenance, as a whole, may bear an expression of indifference, self-effacement, inertia, inquietude, anxiety, doubt, distrust, sadness (*Figs.*

1 and 3), gloom (*Fig.* 2), despair, fear, or horror. The lower part of the face, especially of females, may wear an expression of suffering not shown in the frontal region (*Fig.* 3).

A facial expression of anxiety, restless worry, or jealousy is often one of the first objective signs in cases of melancholia. In the developed disease the expression exhibited is persistent, almost unvarying except in degree, and often intense.

Facial reaction in the developed disease, before convalescence has set in, is either absent (*Fig.* 3), abnormal, or exaggerated. When spoken to, the patient either exhibits no facial alteration, or purses up her eyes, depresses the corners of her mouth, and bursts out crying. Very slight circumstances will cause copious weeping. Or the lines of gloom and psychical pain may be increased in depth without weeping. Compare *Figs.* 1 and 2. In the latter the patient represented in *Fig.* 1 has just been asked a question as to the obstruction of the bowels from which he imagines he is suffering; although he complains of physical pain the reaction is much more marked in the upper than in the lower part of the face. In melancholic females and in idiots the reverse is nearly always the case.

Simple Melancholia is the typical form of these depressive conditions, and the foregoing remarks are applicable almost in their entirety to its facial signs.

On a closer analysis it will be found that expres-

sions of sadness, gloom, despondency, and despair are conveyed by pallor, with more or less ruffling of the forehead, accompanied by a far-away look of the eyes occasioned by the parallelism or slight divergence of their axes and the dilatation of the pupils (*Fig.* 1). These expressions are increased in dark people—and melancholia appears to occur more frequently (in my experience at all events) in dark than in fair persons—by the dark lines about the eyes due to feeble circulation, increased venosity of blood, and deposit of pigment. If there is drooping of the oral angles and cheeks, the expression is still more accentuated (*Figs.* 1 and 2).

An expression of sadness may also be conveyed by pallor with drooping of the head, eyelids, cheeks, oral angles, and nether lip, without wrinkling of the forehead.

Drawing up the inner ends of the eyebrows or natural elevation of these ends gives a gloomy expression.

Feelings of doubt, distrust, and suspicion are evinced by an averted face and oblique furtive glance.

Complete inertia is indicated by total loss of tension of the facial muscles.

Anxiety and inquietude are in part expressed by the widely open eyes and scared watchful look (*Fig.* 3).

Several or only one of these expressions may be present in any given case.

The bodily movements are slow, languid, and feeble.

The prognosis is good, but should be guarded at the commencement, in view of the fact that depression sometimes initiates other diseases, including general paralysis. When the patient is recovering the face may, in repose, still express gloom or indifference, but the facial reaction has already improved, and a cheering remark or question evokes a smiling reply.

Delusional Melancholia.—The delusions are always disagreeable, the hallucinations often frightful. The countenance frequently expresses dread and horror, either continuously or paroxysmally.

In extreme cases the hair stands on end, the skin is either pale or flushed, with prominent veins, the lower lip is drooping and everted, and the mouth half open owing to loss of control over the oral orbicular muscle; from the same cause and the contraction of the straight muscles, the cheeks are furrowed in lines from the wings of the nostrils to the corners of the mouth, and the nostrils are raised and extended; through loss of control over the palpebral orbicular muscles the eyes are widely opened; the forehead, owing to the unopposed action of the frontales, is wrinkled transversely in many folds, and, at the inner extremities of the eyebrows, strongly furrowed in diverging lines; in consequence of diminished innervation of the circular fibres of the iris the pupils are large.

Sometimes in paroxysms of delusional dread the

sterno-cleido-mastoid and platysma myoides are powerfully contracted, giving rise in the former case to prominent ridges in the neck, and in the latter to forcible drawing downwards and outwards of the corners of the mouth.

The facial reaction in these cases, during the paroxysm, is *nil*, as the patient is so powerfully under the influence of the delusions and hallucinations that his attention cannot be obtained.

In *Agitated Melancholia*, the patient, instead of sitting or standing, like most melancholiacs, with bowed head, is in constant movement with signs of acute anguish, weeping, crying, lamenting, and wringing his or her hands. This motor, or rather psycho-motor, excitement is not necessarily of unfavourable omen, but if in any case of melancholia there are convulsive or paralytic symptoms, the prognosis is bad.

An unalterable fixity of facial expression of emotional depression is unfavourable in all forms.

Chronic Melancholia.—The emotional depression has now come to be less pronounced, but the facial symptoms resemble those already described in the acute forms. The skin has, however, become coarser, harsher, duller in tint, and often picked in places ; the hair is dry and rough, and often pulled out or rubbed off here and there, or over a considerable part of the head. Othæmatomata are sometimes seen, or one or both ears may be shrivelled up in consequence of them.

There is an appearance of facial deterioration, and the prognosis is almost hopeless.

Hypochondriacal Melancholia.—The transverse and vertical furrowing of the forehead, the elevation of the inner ends of the eyebrows, and the drooping of the corners of the mouth, are particularly well marked in some cases. Where bodily pain is complained of, especially in female patients, the latter symptom is often the most prominent.

In others the face continues to have the appearance of good physical health, although it wears a more or less worried, careworn expression.

In yet others the face is extremely pale, the forehead is wrinkled transversely though not very deeply, the hair is often dry, rough and erect, and if left to the patient's care, long, matted, and shaggy. Such a case is represented in *Fig.* 1. He is thirty years of age, but looks fifty. *Fig.* 2 is from a photograph of his facial reaction when questioned as to his bowel obstruction. The fine lines extending all across the forehead have now become central, shorter, much deeper, and of course approximated, whilst the nasal ends of the eyebrows are markedly elevated ; at the same time the lower jaw, the corners of the mouth, and the nether lip are more depressed. The vertical supra-nasal furrows are present, though not strongly marked. He is the victim of idleness and bad heredity ; a spoiled only son who has never been taught any trade ; his mother (very dark complexioned) is a gloomy recluse, and three sisters

(like himself dark haired) are also gloomy. Since the death of his father three years ago, at the age of eighty-seven, a fair-haired sister has been the bread-winner of the family.

In *Periodical* (including *Circular*) *Melancholia* there are often somatic stigmata such as, in addition to those already mentioned, disproportion between face and head, other cranial anomalies, total absence or adherence of the lobule of the ear. Darwin's tubercle on the upper and back part of the border of the ear, non-appearance of the permanent teeth, abnormally large or small mouth, hare-lip, hypertrophic swelling of the lower lip, projecting upper teeth, projecting lower jaw, deflection of nose, obliquity of palpebral fissure, congenital blindness, albinism, hypertrophy of the adipose tissue, coalescence of the eyebrows, the growth of a beard in the female, etc. (See Chapter XII.)

The facial expression is similar to that in simple melancholia, in some cases approaching, and in a few quite reaching, that in stupor (*vide* case of melancholic stupor, *Fig.* 4).

The ultimate prognosis, as in all cases of a degenerative nature (those with somatic stigmata, bad heredity, etc.), is unfavourable ; distinct periodicity and marked alternations always warrant a bad prognosis.

In *Melancholy "Folie Raisonnante"* there are also degenerative signs, one of which is that the beginning coincides with certain physiological periods.

In *Organic Melancholia* there is often, though not always, more or less unilateral facial paralysis (see organic dementia). The prognosis in all cases of melancholia with atheromatous arteries is bad.

In *Senile Melancholia* there are facial signs of depression, suspiciousness, and senility.

The *Hebephrenic* form of *Dementia Præcox* is marked by excitement intermingled with depressive hallucinations, terror, etc., the symptoms being most fugitive and varying from moment to moment. In the *katatonic* form there occur periods of depression with attacks of boisterousness. *Masturbational Insanity* in the second stage displays mild melancholic symptoms with, in some cases, a slight facial expression of disgust owing to the olfactory hallucinations so frequently present in this form. A slight elevation of the upper lip and nostril, and deepening of the naso-labial furrow are sufficient to convey this expression when it is not intense. There are frequently hypochondriacal symptoms. Sometimes there is an element of stupor.

In *Neurasthenia* a facial expression of apprehension with some depression is frequently met with. In many cases there is pallor; in some, facial fatigue; in others the pupils are dilated. Sometimes there is tremor, and occasionally there is nothing abnormal facially. In all, the facial reaction is normal unless the disease amounts to *Neurasthenic Insanity*.

In *Climacteric Insanity* the skin of the face is

muddy and over-pigmented, often picked and scratched. The expression is a combination of sadness, worry, and apprehensiveness. The "grief muscle" action is often observed.

In *Traumatic Insanity*, in addition to the facial expression of depression, there are often partial paralyses affecting especially the muscles of the eyeball.

Puerperal Melancholia.—At first the facial expression indicates anxiety and dread, afterwards delusions and hypochondriacal symptoms (*Fig.* 3). In *Fig.* 3, the symptoms are all below the eyebrows, whilst in the male hypochondriac (*Figs.* 1 and 2) they are most marked in the oculo-frontal region; both patients complained of bodily pain.

Lactational Insanity.—Generally there are facial signs of depression, which are sometimes accompanied by those of lethargy and stupor, sometimes by those of suspicion, apprehension, delusions of identity, and hallucinations of sight, smell, and hearing. There is always anæmia.

Anæmic Insanity.—Anæmic pallor of lips, gums, and eyelids; slight depression; sometimes an element of stupor.

Prognosis good in last three, and especially in last two forms.

In *Insanity of Paralysis Agitans* there are senile signs and the peculiar movements.

Rheumatic Insanity approaches stupor, and there are often choreic movements.

In *Uterine Melancholia* there are sometimes facial

signs of disagreeable auditory hallucinations (see hallucinatory forms).

The melancholic first stage of *Katatonia* (now included by Kræpelin in his dementia præcox) is in many cases accompanied by choreiform movements of the facial muscles, cramps, and epileptiform and hysterical convulsions.

Chapter III.

MANIACAL FORMS.

IN these forms the emotions and facial signs are mostly those of elation, joy, cheerfulness (*Fig.* 9), satisfaction, anger and rage (*Fig.* 6). All is mobility, changeability, variety, even inventiveness, contrasting strongly with the monotony of melancholia. The body is erect and the head tilted back or to one side (*Fig.* 9).

Facial reaction, nearly always present, is often exaggerated, frequently evanescent.

Simple Mania or Hypomania.—There is sometimes a prodromal expression of sadness. In the developed disease the forehead is ordinarily smooth, owing to slight contraction of the frontal muscles. From the same cause the eyebrows are somewhat elevated. The eyelids, alæ of the nose, and angles of the mouth are slightly raised by contraction of their elevators, aided in the latter case by the zygomatics (shown in case of acute mania, *Fig.* 9). Through the action of the last-mentioned muscles and that of the risorius there is a tendency to retraction of the oral angles, as shown in the same case of acute mania.

The circulation is more than normally rapid, the eyes are bright, and there is a heightened colour of the face. The patient in most cases, in the early

part of the disease, looks handsomer and younger than formerly, whereas the melancholiac looks uglier and older.

Sometimes the appearance is not pleasing, owing to the inco-ordinate action of the facial muscular fibres, the bloated sensual look, the glistening eye.

The features are mobile, the expressions changeable, the prevailing mild elation being varied by occasional fits of anger or outbursts of laughter. The eye often expresses eroticism.

The face, especially after the disease is of some duration, may be pale and somewhat worn-looking, but even then is free from the drooping, the monotony and poverty of expression of melancholia. The face sometimes wears an expression of silliness.

Acute Mania.—It is often preceded by a short stage of depression, sometimes by one of simple mania.

The prevailing expression may either be one of cheerfulness or of jollity (*Fig.* 9), or one of angry ill-humour or of fierceness (*Fig.* 6). The expressions are more accentuated, more variable, and more evanescent than in simple mania. The face expresses in quick succession joy, anger, wildness, distraction, sadness, mischievousness, lasciviousness, fear, etc.

In some cases constantly, and in many cases frequently, there is a playful humour with mimicry and amusing grimaces, winking, grinning, and voluntary distortions of the mouth and face generally. The limbs are seldom at rest, and sometimes there are rhythmical movements.

Fig. 5.

Fig. 6.

ACUTE MANIA.

Fig. 7.

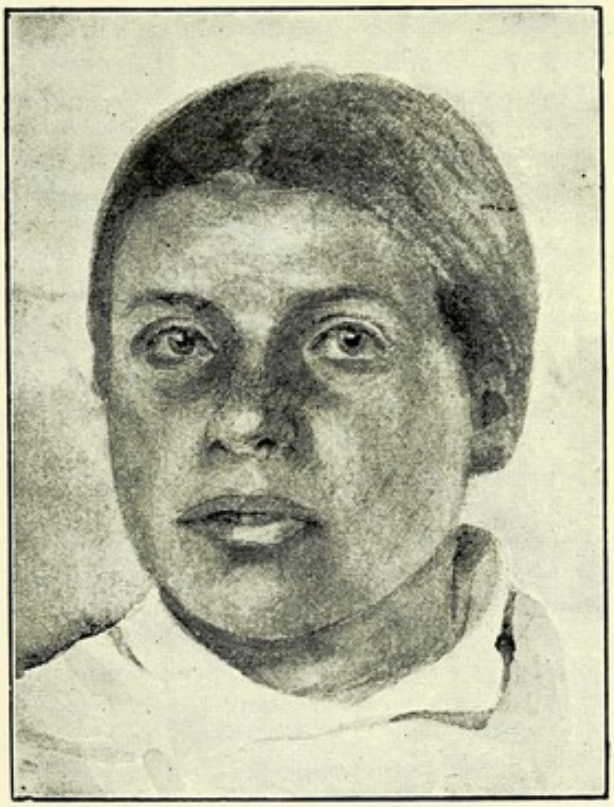

Fig. 8.

EPILEPTIC MANIA WITH ALCOHOLISM.

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At first, in the good-humoured cases, the patient looks healthier, younger, and handsomer, with flushed features and brilliant eyes. Afterwards in these cases, and early in the angry ones, the complexion is pale or sallow (as in case shown in *Fig.* 5), and in all the face soon becomes thin and worn-looking.

The skin becomes muddy and diminished in delicacy of tint and texture, either dry and harsh or pallid and clammy. Owing to this, combined with the injected conjunctivæ, glistening eyes, and in some cases fibrillar muscular inco-ordination, the patient has an unpleasant appearance.

The eyes are in some cases kept shut; in some there is nystagmus, and this is generally symptomatic of the transition from the acute to the chronic stage. The pupils may be either dilated or contracted, and are occasionally unequal. Any persistent affection of them, especially extreme contraction, influences the prognosis unfavourably.

Owing to salivation and loquacity there is sometimes frothing at the lips, especially during exacerbations.

In some cases, often of alcoholic origin, there is tremor of the cheeks and lips, especially the former.

In the outbursts of rage in acute mania the dilated nostrils quiver, and there is marked tremor of the straight facial muscles; there is either a strongly marked frown from contraction of all the corrugator and relaxation of the frontal fibres, or the eyes are

widely open and glaring, an appearance given by the sclerotic being visible all round the iris instead of at the sides only. This glaring appearance is well shown in the angry-humoured acute maniac depicted in *Fig.* 6. *Fig.* 5 of the same plate shows this patient in a quieter mood. The appearance of ferocity is occasionally increased by the upper lip being raised so as to expose the canine teeth.

Sometimes, in consequence of exalted delusions, there are presented the attitude and facial expression of pride.

There is always facial reaction; when spoken to the patient shows facially that he understands, but the impression is momentary, or there is an outburst of laughter, weeping or rage (*Fig.* 6).

Acute mania may be diagnosed from agitated melancholia by the mobility and changeability of expression, the grimaces, etc., and the absence of a fixed monotonous expression of mental anguish; from meningitis by the fierce, prominent, and blood-shot eye, great intolerance of light, contracted pupils, hot and dry skin, and firmly knit brows of the latter. The diagnosis from febrile delirium has already been given.

Remissions resembling hypomania are frequent.

If there is paralysis of trophic power, so that nutrition cannot be restored, or if with improving bodily condition the mind does not improve, the prognosis is unfavourable. Convulsive (including cramps, twitchings, involuntary grimaces, as well as general

Fig. 9.—Acute Mania.

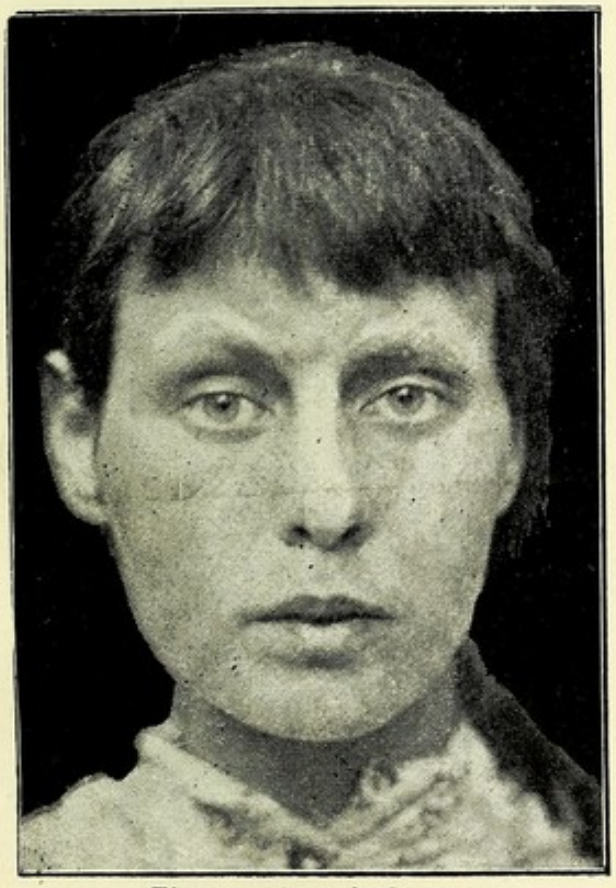

Fig. 10.—Anergic Stupor.

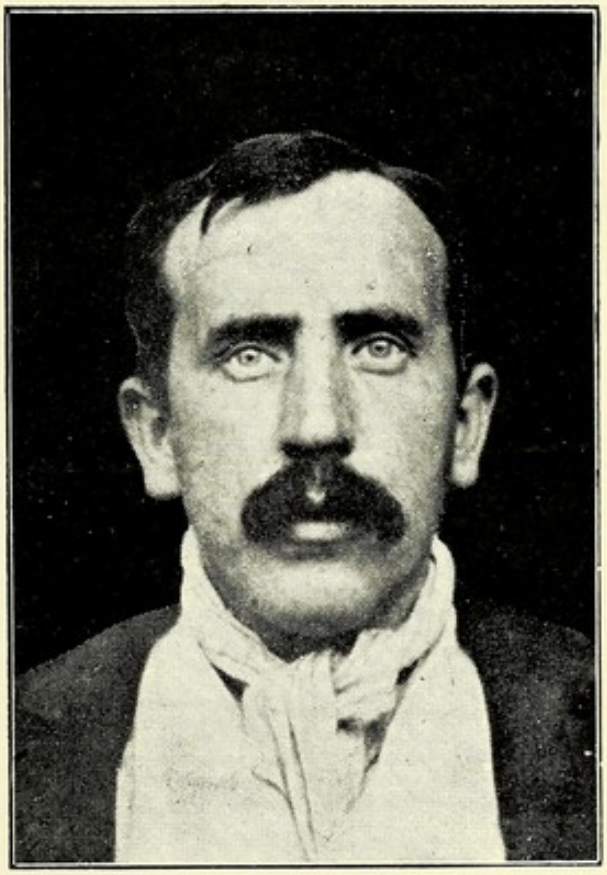

Fig. 11.—Delirium Tremens.

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convulsions), paralytic, or paretic symptoms are of ill omen; amongst these must be included inequality of the pupils, marked asymmetry (acquired during the illness) of the facial lines and wrinkles, whether similar to that occurring in organic dementia or not. Hair pulled out and skin picked denote perverted sensations, and are bad signs. If the deterioration in the facial expression is extreme and persistent, and especially if it be towards vacuity, the prognosis is unfavourable.

In cases tending towards chronicity there are often noticed, owing partly to unequal or inco-ordinated innervation of muscle groups associated in their action in the normal state, partly to contracture, incompatible facial expressions, *e.g.*, lower part of face laughing with raised and retracted oral angles and raised cheeks, whilst the eyes have simply a vacant stare, due to fixation and altered tension of the eyeballs and retraction of the eyelids, instead of being bright and pressed on by the rising lower lid and cheek; or a frowning angry brow with open fatuous mouth and pendulous nether lip.

Chronic Mania.—The patient, if left to himself, is dirty and neglected-looking. In any case, it is often difficult, if not impossible, to make him look clean.

The hair is often prematurely grey; in many cases it is harsh and bristling. The skin of the scalp is often loose.

The face is in many case deeply wrinkled, in most

old and withered. The patients, especially the female ones, are almost always very ugly.

There is sometimes convulsive twitching of the head or of the orbicularis palpebrarum, or other facial muscle. Rhythmical and stereotyped movements are not infrequent.

One patient is constantly in motion; another preserves ecstatic stillness to listen to his hallucinations; a third turns his back on any person who approaches him.

In some cases there is a fixed expression of anger, fear, hatred, defiant pride, sullen obstinacy, smirking vanity, or leering sensuality. There are often incompatible expressions, such as have been already described.

Some of these patients, with their grey or white hair, unusually sunburnt faces, deep facial lines, and distorted and ill-balanced features, have a weather-beaten, uncanny, and scarcely human appearance. Othæmatomata or shrivelled ears are sometimes observed.

The prognosis is almost hopeless.

Senile Mania.—There are facial signs of senility, together with suspiciousness and some exaltation. Symptoms worse at night. There is often senile tremor.

If there are any paralytic, paretic, or convulsive signs, the prognosis is very bad; it is not good at the best.

Periodical Mania, including maniacal phase of

Circular Insanity.—There are degenerative signs, *e.g.*, somatic stigmata, tendency to occur at physiological periods, bad heredity. The countenance is expressive of exhilaration, combined with roguishness and mischievousness, and the patient is more irritable than in simple mania.

The prognosis is very unfavourable.

Insanity of Grave's Disease.—There are exophthalmos, proptosis, and enlarged thyroid.

The prognosis is improved by recent advances in therapeutics.

Hysterical Mania or Acute Hysterical Insanity.—There are often degenerative stigmata. The pupils are dilated; sometimes, though rarely, unequal. Frequently there are visual hallucinations. There is often a languishing, amorous expression about the eyes.

Pubescent and Adolescent Insanities.—The auricular muscles, the nasal, the platysma, the occipital, are more often capable of voluntary movement in the insane than the sane; voluntary power over the last-named muscle, causing mobility of scalp, is frequently seen in *hebephrenia* and *katatonia*. Facies of youth and exaltation.

Where there is masturbation, as in first and third stages of *Masturbational Insanity*, there are often facial signs of olfactory and auditory hallucinations. In masturbational insanity, the complexion is pale and pasty. There are lack of emotional depth, silliness, insincerity, haggard thin face, averted eye, and impaired sight.

In adolescent insanity, mental improvement, accompanied by signs of manhood (beard growing, size and weight increasing), warrants a favourable prognosis.

Dementia Præcox, under which many or most of the cases hitherto referred to the forms mentioned in the three previous paragraphs, are now grouped by Kraepelin and others, displays attacks of excitement and fits of boisterousness (see pp. 16–18, 41).

Puerperal Mania.—When the disease threatens, the countenance of the patient becomes dull and self-absorbed. Anæmia exists where there has been much hæmorrhage. There is a more pronounced erotic expression than in most cases of acute mania.

Podagrous Insanity.—Gouty diathesis, somewhat advanced age.

Expansive Syphilitic Insanity.—Frequently ptosis, strabismus, or other symptom of partial and limited paralysis.

Mania a Potu.—Facial reaction absent during its short duration.

Epileptic Mania.—During these paroxysms or attacks, the facial expression denotes anger and suspicion, and, as a rule, there is either no facial reaction, or one indicating an outburst of rage.

Fig. 8 shows a patient, aged twenty-three, in her first attack of epileptic mania, precipitated by drink ; *Fig.* 7 the same person at the age of twenty, prior to the greatly increased frequency of her epileptic fits, consequent on marriage, child-bearing, and

alcoholic excess, with its attendant worries. In the maniacal attack, she accuses those about her of poisoning her, and abuses them, repeating phrases many times (verbigeration). The angry, suspicious look is shown in the lower part of the face and slightly in the eyes. There is some facial asymmetry.

Chapter IV.

ACUTE DELIRIUM, ETC.

FACIAL reaction is nearly always absent. There is constant agitation, but no facial expression of elation or of continuous acute mental pain.

Acute Delirium (Acute Delirious Mania, or Acute Maniacal Delirium).—Prodromata are facial signs of inquietude and apprehension.

In the early stages of the developed disease, there are often expressions denoting terror and affright, similar to those described under the head of delusional melancholia.

Later, the face is pale and earthy looking, with red malar prominences; the skin is sometimes dry, sometimes bathed in sweat; the countenance is expressionless, like that of a drunken man, or wears an expression of anxiety. There is constant motor agitation; there is also tremor, and frequently there are slight muscular contractions or clonic spasms; there is grinding of the teeth; great loquacity.

Later still, there are sores on the lips and teeth. In some cases the hair falls out, and there are desquamation and cyanosis. The patient is apathetic, and lies with a staring or startled look.

Finally, there are the facial signs of drowsiness and coma.

On account of the great gravity of the prognosis in acute delirium, it is important to diagnose it from acute mania and agitated melancholia. With the help of non-facial signs, such as temperature, it may be distinguished from the former by the total absence of facial reaction, as well as by the facial colouring and expression, and from most cases by the tremor ; from the latter by the facial colouring, the tremor, and the absence of persistent expression of acute mental pain.

Insanity from Bright's Disease.—There is delirium with impaired consciousness. There may be puffiness about the eyes, the characteristic "Bright eye."

In a case of Bright's disease, combined with well-marked morbus Addisonii (facial discoloration, etc.), there were impaired consciousness and painful nocturnal hallucinations (coffins, etc.).

The Delirium of Young Children.—There is absence of facial reaction with, in some cases, signs of terrifying hallucinations. Sometimes there are signs of depression with agitation, violent screaming, and tearless weeping.

Chapter V.

STUPOR.

THE physiognomical signs are absence of facial expression (*Figs.* 4 and 10), or monotony and fixation accompanied by mutism, absolute or nearly so ; total absence of facial reaction to words ; dilatation and sluggishness of pupils ; general bodily immobility.

Melancholic Stupor (Stuporous Melancholia or M. Attonita). Patient immobile with bowed head (*Fig.* 4). The complexion is sallow ; the skin is harsh ; there is emaciation.

The facial expression is vacant, or more frequently, with pinched contracted features, indicates intense wretchedness and misery (*Fig.* 4) ; or, in delusional melancholic stupor, anxiety or terror.

The eyelids may be drooping (*Fig.* 4), or the eyes widely open, with " the far-away look " given by the dilated pupils and parallel or slightly divergent axes. They may be directed towards the horizon or to the ground (*Fig.* 4). The pupils are dilated, and contract slowly, or not at all, to light.

The patients are resistive, and if food is put to their lips they compress them tightly. They also resist removal, dressing, or undressing.

There is no difficulty as to diagnosis from previously described forms.

The prognosis is fair, about half the patients recovering.

Anergic Stupor (*Acute Dementia*).—The muscles are diminished in tone, and flabby, *e.g.*, lower part of face in *Fig.* 10; in the upper part of this face there is muscular asymmetry, the right eyebrow being higher than the left.

The whole demeanour denotes laxity and weakness (*Fig.* 10). The patient if attended to and fed often remains plump (*Fig.* 10).

Facial expression is absent or vacant, puzzled (*Fig.* 10), confused listless, or stupid. The eyes are either widely open, staring into vacancy (*Fig.* 10), or half closed, with the eyeballs turned up.

The mouth is generally open; the extremities are blue and cold; all parts obey the laws of gravity; there is complete passivity, contrasting with the resistiveness of melancholic stupor. The patient, if not attended to by others, has a very dirty, dishevelled appearance, with unwashed face, unkempt hair, flowing nasal mucus, and dribbling saliva.

The prognosis is very good, nine-tenths of the typical cases in young persons recovering.

Cataleptic Stupor.—There is absence of facial expression. The patient is non-resistive. There is the cataleptic condition, the limbs remaining where they are placed by the observer.

The prognosis in incidental forms, maniacal, general paralytic, epileptic, periodical, etc., is the same as that in the general condition to which they belong.

Chapter VI.

HALLUCINATORY AND CONFUSIONAL PSYCHOSES.

HALLUCINATIONS constitute the predominant symptoms, and affect the countenance according to their nature (pleasing, terrifying, etc.), or the sense or senses (sight, hearing, etc.) involved.

Delirium Tremens.—The face is pale, or flushed and perspiring. There is tremor of the facial muscles when in action, and in severe cases when in repose.

The demeanour is restless, the expression anxious and terrified, the eyes are injected, the pupils dilated, but sensitive. *Fig.* 11 represents a mild case, photographed when the symptoms were least marked, viz., in the daytime. This patient displays facial asymmetry and widening of the fossæ scaphoideæ superiorly.

In severe cases, the facial expression may be haggard, inclining to vacancy, and the eyes sunken. Owing to the hallucinations, and especially at night, the patient looks about him in a frightened way, or with startled glances, and assumes attitudes of watching intently and listening, accompanied and followed by facial and verbal expressions of fear, pain, anger, or surprise.

Unlike mania, there is no exaltation; unlike melancholia, no permanent mental pain; and unlike

acute delirium, the attention is capable of being aroused and retained for a short time, there is facial reaction unless in very severe cases, and in these the anamnesia must be taken into account.

The immediate prognosis is good, except where there is much tremor or pyrexia.

Chronic Alcoholic Insanity.—The patient looks neglected; there is a general laxity of muscular tone, the head droops forward, the eyes are dull, the face is defective in expression (*Fig.* 12).

The arteries are atheromatous.

There is labial tremor, which diminishes under the imbibition of alcohol. In the case shown in *Fig.* 12, there is constant twitching of the right side of the face.

Beer drinkers tend to be stout and florid, spirit drinkers emaciated and pale (*Fig.* 12), and the latter greatly preponderate amongst the chronic alcoholic insane.

There are the usual facial and ocular evidences of visual and auditory, painful, mobile, nocturnal hallucinations. There are also the furrowed forehead and pinched features of persecutional delusion (*Fig.* 12), the thwart glance of suspicion, the averted eye of envy and jealousy.

Insanity from Absinthe and Opium is markedly hallucinatory, and resembles delirium tremens; but in the case of absinthe there is more motor excitement, with a greater tendency to convulsions; in

opium insanity, the skin has a parchment-like appearance, and the pupils are contracted.

Insanity from Cannabis Indica is mostly hallucinatory, but there are purely impulsive cases.

Confusional Insanity.—In acute fully developed cases (Amentia of some authors), there are hallucinations and illusions of all the senses, those of sight predominating.

There is no facial expression of any emotion, thus distinguishing the disease from mania and melancholia; and no marked tremor, such as is observed in delirium tremens. Consciousness is more or less blurred.

In acute or primary confusional cases, the prognosis is good.

Pure cases are rare, but the puerperal melancholiac represented in *Fig.* 3, suffers from—in addition to anxiety, inquietude, bodily pain, and some depression or mental pain—many and various hallucinations and illusions of sight, hearing, and all the senses, and much confusion as to place, time, and persons. The pained, tearful expression, and widely open, staring, bewildered eyes are well represented in the photograph. The appearance of staring is given by the fixation of the eyeballs and retraction of the eyelids. I have met with cases of puerperal insanity which were almost purely confusional.

Chapter VII.

MORBID OBSESSIONS AND IMPULSES AND RESULTING PSYCHOSES.

THE predominating symptoms are either obsessions (fixed ideas, imperative conceptions) or morbid impulses. The facial reaction is normal or nearly so. These cases are grouped together as rudimentary paranoia by some, and included under the head of monomania by others.

In severe cases of some duration, there are stereotyped automatic movements and gestures, such as clutching, writing in the air, praying, etc.

The obsessions, which in the early stages of *obsessional melancholia* constitute the most prominent feature, are obscured later by the symptoms of agitated melancholia (q.v.).

Pathophobia, or morbid fear, may present itself as agoraphobia, claustrophobia, astraphobia, mysophobia, etc., and the facial expression of distress is limited to the conditions under which each pathophobic form is aroused. There are often neurasthenic symptoms.

Folie du doute.—These patients at first present a sombre, apprehensive, and dreamy aspect. Their facial expression varies afterwards according to their special craze—that is to say, whether they are meta-

physicians, "why and wherefore" men, over-scrupulous persons, morbidly timid, touch-defiled, counters (Napoleon I.), touchers (Dr. Samuel Johnson), or realists. Sometimes there is pallor, occasionally incompatibility of expression of the frontal, ocular, and infra-ocular regions, sometimes a care-worn look, frequently nothing. The prognosis as to complete mental recovery is not good, though these patients seldom reach asylums or become demented.

Impulsive Insanity.—The dipsomaniacal impulse is generally, and after a time always, accompanied by the alcoholic physiognomy; the sexual is denoted by the suffused eye and lascivious look; the aggressive frequently by the broad face, high malar bones, and sullen, angry expression; but it also often lurks under a smiling countenance, as in *Fig.* 25, which represents a young weak-minded deaf-mute, who is at times suddenly, and without provocation, violent and aggressive; occasionally, however, he may be seen sullenly biting his nails.

Persons who are of what has been called the *Insane Diathesis* often suffer from some form of obsession. They frequently have, in addition to some of the degenerative signs already mentioned, irregular features, facial twitchings, vacillating eyes, with an abstracted, timid, suspicious, or animal look in them.

Chapter VIII.

DELUSIONAL PSYCHOSES.

THE facial expression varies with the kind of delusion. Granted the truth of the delusion or delusions, the facial reaction is normal.

Paranoia (*Delusional Insanity*, *Monomania*).—In the ambitious and expansive religious cases, there is often an expression of satisfaction and contentment, as in *Fig.* 13, representing an old lady who is, as her own story goes, a relative of Queen Adelaide and other exalted personages. This patient talks coherently and well, but has a weakness for cups, surrounding herself and her bed with them.

In the religious cases, there is often an ecstatic expression. The ambitious patients may show facial signs of auditory hallucinations, the religious of visual and auditory. There may be the raised backward-tilted head, the staring eye, the dilated nostril of pride; the retracted and elevated oral angles constituting the smirk of self-conceit, with the glance directed first over the patient's own person, and then towards others to see the effect; the unilateral elevation of lip and nostril, the slight raising of the eyebrows, and the downward direction of the eyes, comprising the supercilious sneer.

The strong sexual propensities of expansive

religious paranoiacs are indicated facially sometimes by the suffused eye, more frequently by the languishing look, the casting of sheep's eyes. The remarks in the last sentence apply also to erotomaniacs. In that form of erotomania which attacks middle-aged single women, the subjects are mostly either dwarfed, deformed, red-nosed, blear-eyed, hairy-faced, or otherwise ugly; in some cases, there are the unnaturally bright eyes of ovarian disease.

Persecutional, jealous, and depressive religious paranoiacs wear, as a rule, a care-worn, worried look, and show, especially the first-named, the facial signs of auditory hallucinations, widely open eyes, or half drooping eyelids, or the expression and attitude of listening intently. Persecutional cases have at first an expression of surprise and inquietude, with some anxiety.

In hypochondriacal paranoia, there are combined the half-worried, half-surprised look of paranoia with the pained one of hypochondriasis. *Fig.* 15 shows the furrowed forehead, the widely-open eyes displaying, especially on the right side, the sclerotic nearly all round the iris (hence the appearance of staring), the drawn-in, pained expression of the lower lip; the sallow complexion is of course not represented. The patient believes that nearly all his bones have been twisted, broken, and partly removed, metal having been substituted, by outside agencies, and that he is worked upon by batteries; he particularly blames one person for causing all his troubles, and

Fig. 12.—Chronic Alcoholic Insanity.

Fig. 13.—Expansive Paranoia.

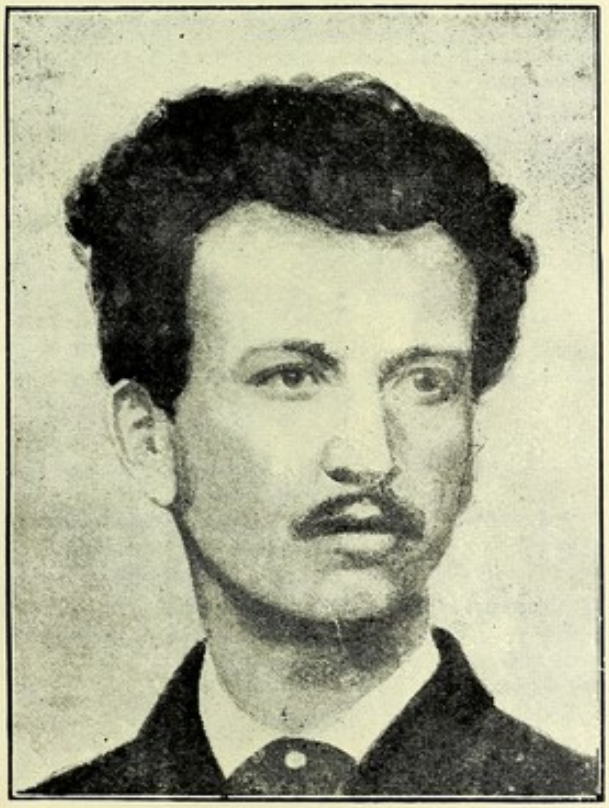

Fig. 14.

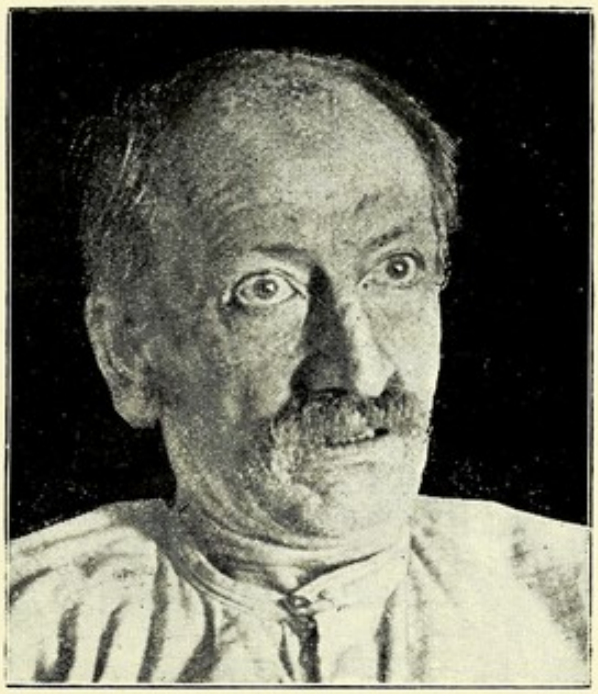

Fig. 15.

HYPOCHONDRIACAL PARANOIA.

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has threatened (in his absence) to do him serious bodily injury.

Fig. 14 represents the same patient twenty-six years ago, when he was twenty-seven, just before a slight transitory hallucinatory attack (his first attack of actual mental disorder), owing to business losses and drink. He was always eccentric, helpless, and unreliable, though a clever musician and linguist ; until the commencement of his present illness, nine years ago, he drank to excess. Allowing for the difference of age, a very great alteration is observable about the eyes and mouth.

His sister, an eccentric, very loquacious, and, in some respects, clever person, traces their pedigree back to Oliver Goldsmith's sister. But whether this is the flight of an expansive paranoiac, or another instance illustrating the affinity between madness and genius, especially eccentric genius, I am at present unable to say.

Expansive paranoia may be diagnosed from acute mania by the disordered features and ever-changing expression of the latter ; from chronic mania, with delusions, by the mental weakness and absence of systematization, hardly in all cases by the facial expression alone ; the same applies to what has been called chronic confusional insanity.

The depressive forms may be distinguished from melancholia, not always by the facial expression, which generally indicates more intense mental pain in the latter, but almost always by the fact

that the melancholiac blames himself, the paranoiac others.

The frequency of the presence of degenerative stigmata must be kept in view where the diagnosis of paranoia is concerned; but in rare congenital cases of paranoia there is often a close approach to imbecility with delusions, a resemblance heightened by the presence of somatic stigmata in both. *Fig.* 27 represents an imbecile with expansive delusions (that he is a general, and has got medals for killing "blacks" in battle); he presents the following degenerative signs, compression of sides of head, asymmetry of face, large lobeless ears, with Darwin tubercles and continuous fossæ scaphoideæ, deviation of nose, twitching about eyebrows and nose; his mental weakness serves to locate him; although at a good school for imbeciles, he could only be taught to count as far as eleven, to read his own name, and write it.

The prognosis, as in all forms in which stigmata of degeneration are common, is bad.

Chronic Hysterical Insanity.—This form occurs mostly in females. The patients are anæmic, thin, even marasmatic. There is often swelling of the upper lip. The facial expression often indicates the presence of migraine. Somatic stigmata are frequently present, and there are exacerbations at the menstrual periods.

Phthisical Insanity.—There are phthisical facial symptoms with a facial expression of morbid suspicion.

Folie à deux.—Presence of mental weakness, absence of hallucinations.

Chapter IX.

DETERIORATIVE PSYCHOSES.

THE mental weakness is betrayed by the physiognomy either in repose or in action, or both.

Simple Primary Dementia (Primary Mental Deterioration, Atheromatous Insanity).—Subjects, middle-aged busy men. Premature greyness, pallor, inequality of pupils, laxity of facial muscles.

Prognosis fair, if disease taken in time, and patient not past middle age.

Dementia Præcox.—There are facial signs of apathy and aboulia (lack of will), sometimes of catalepsy or stupor. Excitement and boisterousness often alternate rapidly with expressions of terror and shallow depression. The pupils are dilated and sluggish, sometimes unequal. The skin is often cyanotic. There are often automatic, resistant (negativism), and stereotyped movements (stereotypies) and gestures. There are often exaggerated reflexes, sometimes katatonic rigidity, chorea-like movements, epileptiform, apoplectiform, or hysterical attacks, paralyses, increased saliva.

The disease occurs mostly, though not by any means altogether, during pubescence and adolescence. The anatomical marks of degeneracy are common (Pickett).

The prognosis is unfavourable, the recovery-rate being about 12 per cent (Kraepelin); Masselon gives 8 per cent in the hebephrenic and 13 in the katatonic cases. (See pp. 16, 18, 26.)

Organic Dementia.—There may be a stupid or wall-like appearance of countenance, with brown, greasy-looking skin, or an unhealthy-looking reddish coloration, or flushings. Motiveless weeping is a common symptom, and is more marked when the lesions are in the occipital or temporal regions, or the central ganglia. When the disease is of some duration, there is often little or no facial paralysis.

When the facial paralysis is persistent, and the lesion is above, in, or just outside the corpus striatum, the palsy is partial and incomplete, the buccinator and other straight muscles going to the lip and oral angle are weakened, the cheek looks flat, with the naso-labial furrow less marked than on the sound side, the upper lip is less arched, and the angle of the mouth is lower (*Fig.* 16).

When the patient is made to laugh or speak, the difference in level is more marked, and still more so when the patient smiles or the lip is raised voluntarily to show the upper teeth. Were one side drawn up by spasm or contracture, the other apparently paralysed side would move more than it in the actions just mentioned. When the limbs have become more or less contracted, the naso-labial furrow on the palsied side may be deeper than that on the sound one, although the oral angle on the former is lower

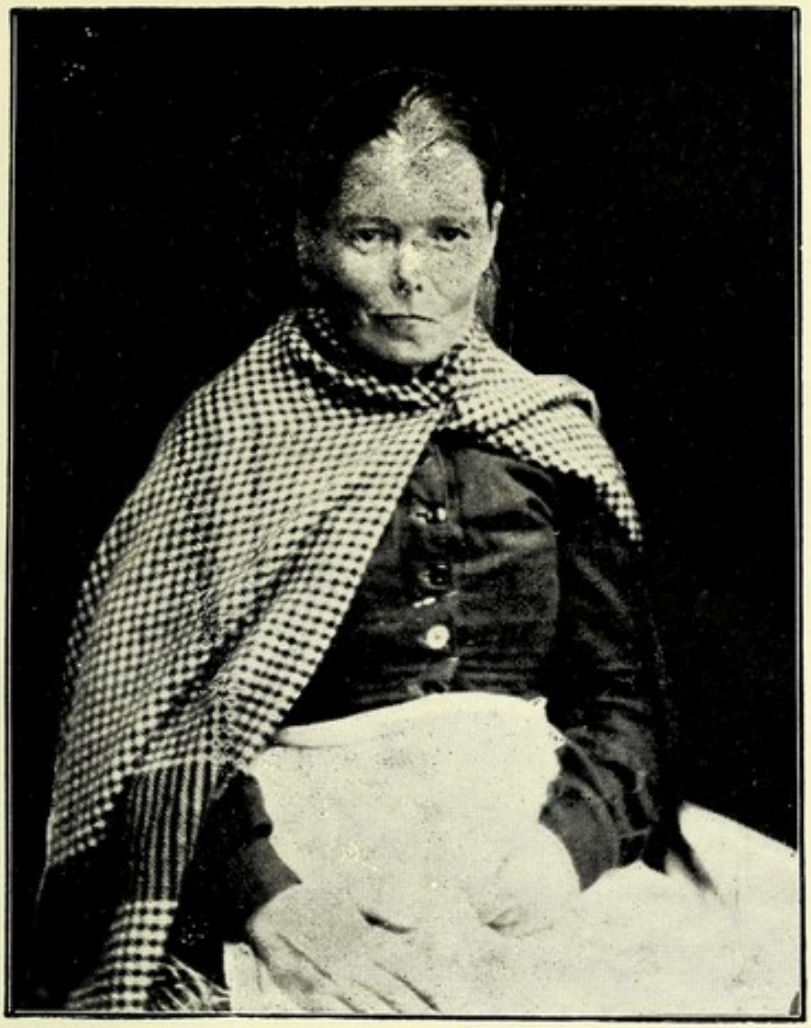

Fig. 16.—Organic Dementia with Hemiplegia and Epilepsy.

Fig. 17.

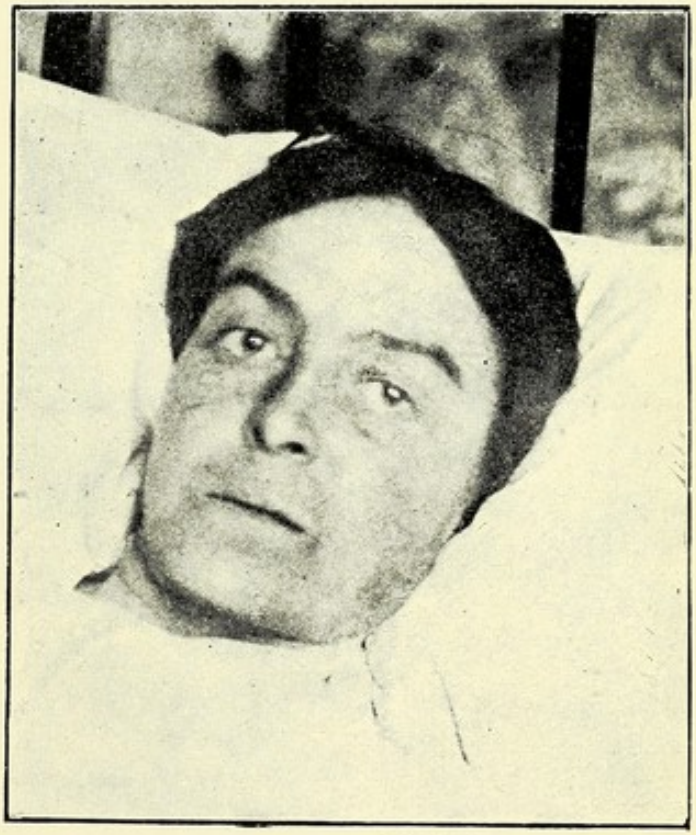

Fig. 18.

ALCOHOLIC PRIMARY DEMENTIA.

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than that on the latter (*Fig.* 16). The patient can easily frown, and can close and open both eyes almost equally well.

In many cases, if the eyebrows are raised voluntarily, the forehead is wrinkled equally the whole way across, whereas during conversation the healthy side may be deeply furrowed, whilst the paralysed one is nearly smooth. In *Fig.* 16 the wrinkles are deeper on the right than on the left, or paralysed side.

The pupils are often unequal, the larger pupil being generally on the paralysed side (others say not, but I have found it so in thirteen of sixteen cases, with hemiplegia and pupillary inequality).

There may be choreiform movements, or epileptiform, or epileptic attacks (patient represented in *Fig.* 16 has suffered from epileptic fits since her paralytic attack twelve years ago).

If there are any lesions situated in or near the pons, the facial paralysis is much more marked. Sometimes the nose is drawn to one side, and the face has a generally distorted appearance. There may be bilateral lesions and symptoms.

The prognosis as to complete recovery is bad.

Senile Dementia.—There are signs of age, such as greyness, baldness, arcus senilis, tortuous temporal arteries, tremor, sometimes opacities of the vitreous or lens. Some of the paralytic conditions of the last form occasionally occur in the course of the disease but merely incidentally. The facial expression

changes with childlike facility from grave to gay, and *vice versa*.

I have notes relating to a patient suffering from a form of mental weakness included, when it is met with in old age, by some alienists under the head of senile dementia, and by many practitioners and the general public more correctly designated "softening of the brain." "Organic dementia without marked permanent paralysis" would be a very appropriate name for this condition.

In this case, there are baldness, greyness, tortuosity of the temporals, slight arcus senilis, emotional facility, very defective memory for recent events, loss of power of orientation; these symptoms point to senile dementia, but, unlike a case of true senile dementia, the patient is strong physically, his complexion is ruddy and healthy looking, and the mental decay dates from a transitory right hemiplegic attack five years ago at the age of fifty-six.

Of the paralytic attack, very few traces are left; the right naso-labial furrow is deeper than the left in repose, and the right oral angle the higher; these conditions are reversed when the patient smiles; the right pupil is just perceptibly larger than the left; there is slight, fine tremor of the right fingers on spreading them out, but not of the left; the dynamometric indications are—right hand-grasp, 101; left, 90; no sensory inequality, gait firm; the case is thus distinguished from one of ordinary organic dementia, with hemiplegia or paraplegia.

From primary mental deterioration it differs in presenting a fresh complexion instead of pallor, and in the facility with which trivial remarks not at all jocular, or circumstances not ludicrous, cause the facial expression to change from one of almost unprovoked annoyance and severity to that of hilarity (paramimia).

Both in true senile dementia and the form of organic dementia just described, which simulates it, the prognosis is bad.

Puerperal Dementia.—The hair is rough and dishevelled, the face dirty and neglected, the facial expression apathetic or slightly emotional. There is absence of normal facial reaction when addressed, or at sight of her infant.

Alcoholic Primary Dementia.—It occurs mostly in women. It is accompanied by paraplegia, and the knee jerks are lost. The expression is vacant or pained, and the pupils are dilated and sluggish. The facial reaction is slow.

Fig. 18 represents a case (age, forty-four), and *Fig.* 17 the same person at the age of thirty-four, before the alcoholic habit was acquired. In the former, the wide insensitive pupils, coarse face, and diminished curving of the features, especially of the lips, are noteworthy.

In many cases, all the symptoms, except the weakness of memory, disappear.

Syphilitic Dementia.—There is marked loss of expression, an apathetic look. Sometimes there is

partial paralysis (ptosis, strabismus, etc.); simultaneous paralysis of the fifth and sixth nerves has been said to be pathognomonic of syphilis. The facial reaction is slow.

The prognosis is doubtful, even when treatment is energetic.

Myxœdematous Insanity.—There are dry, coarse skin, puffy eyelids, thick lips, atrophied thyroid, impaired sight and hearing. There is slowness of facial reaction. There are signs of mental weakness, with others sometimes maniacal, sometimes melancholic, sometimes depressive delusional.

The prognosis is now good, the psychosis, as well as the myxœdematous condition itself, being favourably influenced by recent methods of treatment. On page 398 of the "Medical Annual" for 1893 are two figures representing a case of myxœdema before and after treatment.

Terminal Dementia.—In these cases, the head is, owing to muscular relaxation, often bent forward. The patients look old, and if left to themselves, dirty and neglected. They often present stereotyped attitudes, gestures, and rhythmical movements.

There may be incompatible facial expressions, as described under the heads of acute and chronic mania; there may be marked asymmetry of the facial lines and folds through unilateral muscular weakness or over-action, or unequal innervation; or the face may appear healthy, with florid complexion but stupid, vacant expression, or meaningless frown

(as in case shown in *Fig.* 19); or the patient may be stout, with short neck (*Fig.* 19), and injected conjunctivæ; or, again, the facial expression, when the face is in repose, does not indicate the mental weakness; but, on asking the patient a question, he looks vacant and puzzled, with lack-lustre eye, and weak smile or meaningless laugh (paramimia); or the face may habitually wear an expression of attention which is motiveless; or there is a vacant look, with bursts of laughter and sometimes traces of childish emotion.

In certain dements, fragments of delusions, some hallucinations, and episodical excitement remain and influence the physiognomy; some have a smiling countenance, with an expression of pride, self-satisfaction, or assurance; others wear an expression of grief, and shed many tears; many react abnormally towards the external world, laughing when they should be sad, weeping when they should be merry (paramimia).

In the apathetic form, the countenance is relaxed, or wears an amazed look; or the face may be pale and expressionless, with dull, tear-moistened eyes, and dilated pupils; or, as sometimes happens as the termination of melancholia, the physiognomy wears an expression of heaviness and stupidity; in many cases, there is a dull, apathetic look, with the saliva drivelling from the half-open mouth.

In terminal dementia, there is frequently absence of facial reaction (the face represented in *Fig.* 19,

never changes, even if a piece of tobacco, that *summum bonum*, is placed in the mouth; yet the old man has the sense to make signs with his fingers when he wants a quid). In many cases, both agitated and apathetic, no response, facial or other, can be obtained. There are sometimes othæmatomata, or shrivelled ear or ears.

Fixation, stupidity, and vacancy of facial expression, are characteristic of *epileptic terminal dementia*. Facial asymmetry is frequently observed.

Alcoholic terminal dements are degraded-looking, tremulous, and often suffer from paralysis, convulsions, or twitchings.

Sufferers from *saturnine*, *mercurial*, and other *toxic* forms of terminal dementia, as well as from *cataleptic*, *katatonic*, and *masturbational terminal dementia*, present more or less of the cranio-facial character of the acute diseases which precede these conditions.

Except in a few cases of terminal dementia, a photograph of the patient when in good mental health will show by contrast the facial deterioration, and in these few the abnormal facial reaction (paramimia) will betray the mental weakness. By attention to the facial expression in repose and in action, the diagnosis from acute forms of mental disease, is, as a rule, not difficult.

The prospect of recovery is hopeless.

Chapter X.

PARETO-ATAXIC DETERIORATIVE PSYCHOSES.

THESE are characterized by mental feebleness and motor, sensory, and psychical ataxia with paresis, of which conditions there are always, in the fully developed disease, some facial indications.

General Paralysis.—In the prodromal stage, when the face is in repose, nothing may be noticeable except abnormality of the pupils, such as extreme contraction (pin-head pupils are especially frequent in the ascending form of general paralysis), sluggishness, irregularity, inequality. In about 14 per cent. of cases the earliest augury (Cowen) of general paralysis is that the pupils, though active to light, show to focal illumination a slight initial contraction followed at once by a wide dilatation.

There is sometimes injection of the eyes with unusual vivacity of glance. Sudden flushings of the face are not uncommon. Tremblings of the limbs and epileptiform and apoplectiform seizures occur as forerunners.

There may sometimes be strabismus, ptosis, or facial paralysis (accentuation and persistence of partial paralysis should suggest cerebral syphilis rather than g. p.) ; occasionally, spasmodic twitching

of the lips, lower face, eyelids, or forehead; rarely, spasmodic movements about the mouth, or even teeth-grinding.

But on asking the patient a question, watching his face in a good light whilst he replies, and requesting him afterwards to protrude his tongue, elevate his upper lip, close his eyes, etc., it will often be seen that the voluntary movements of the oral, lingual, and sometimes of the palpebral, zygomatic, and other facial muscles are accompanied and interrupted by fibrillary tremor or twitching, and sometimes preceded and followed by involuntary movements in the same and in the opposite direction, giving rise to slight spasmodic action. This latter, if present, increases, and if not present, appears later on.

Degenerative stigmata and traces of syphilis should be looked for.

In the early stages of established general paralysis, the complexion may be florid, or the skin may show dilated venules, or may be coarse and muddy-looking, or greasy, or resembling parchment to the eye. There may be transitory flushings of the face. Venous stasis with moderate cyanosis of the temples and eyelids has been observed to be one of the most constant signs (Von Niessl). This is accompanied by moderate œdema of the eyelids.

The frontalis is frequently contracted, causing transverse wrinkles of the forehead. There is often twitching of the same muscle. The eyebrows are

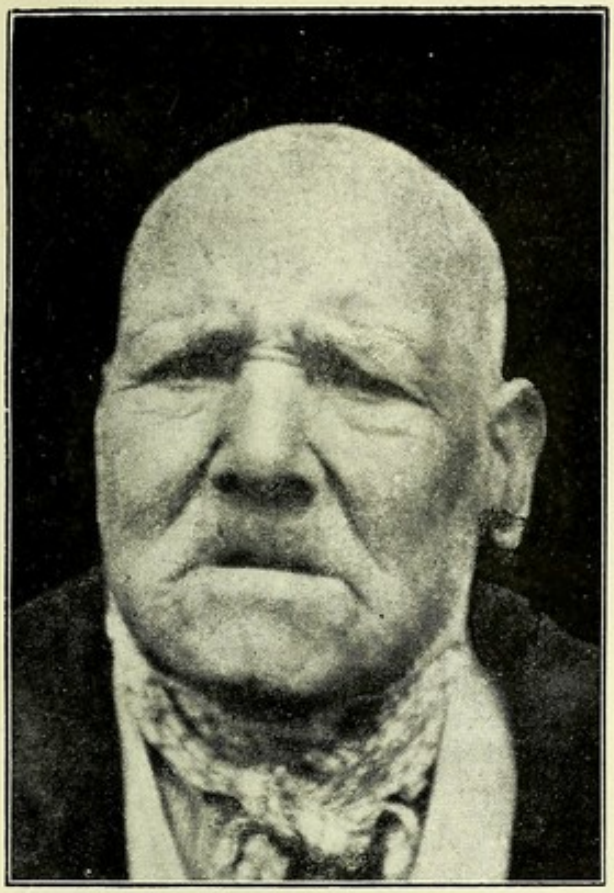

Fig. 19.—Terminal Dementia.

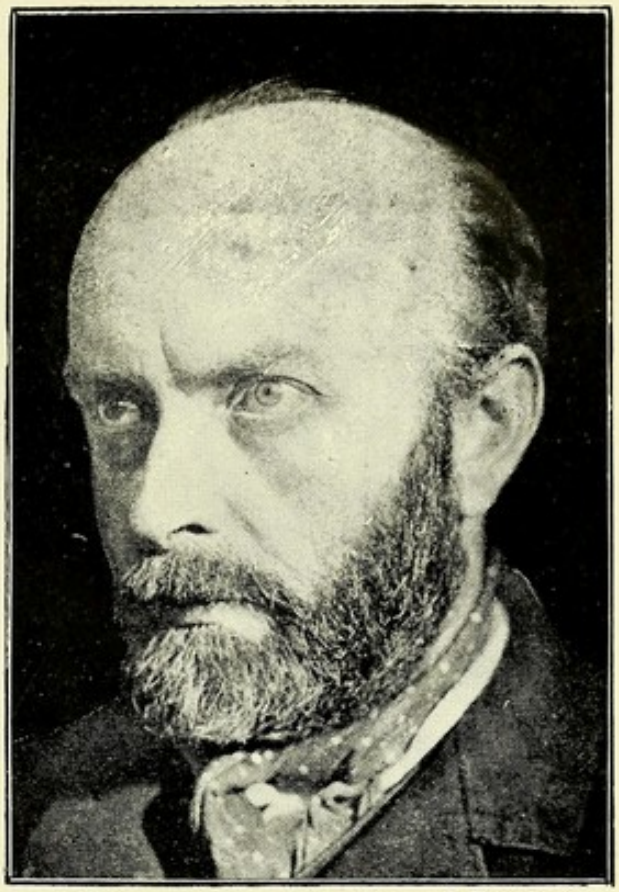

Fig. 20.—Depressive General Paralysis.

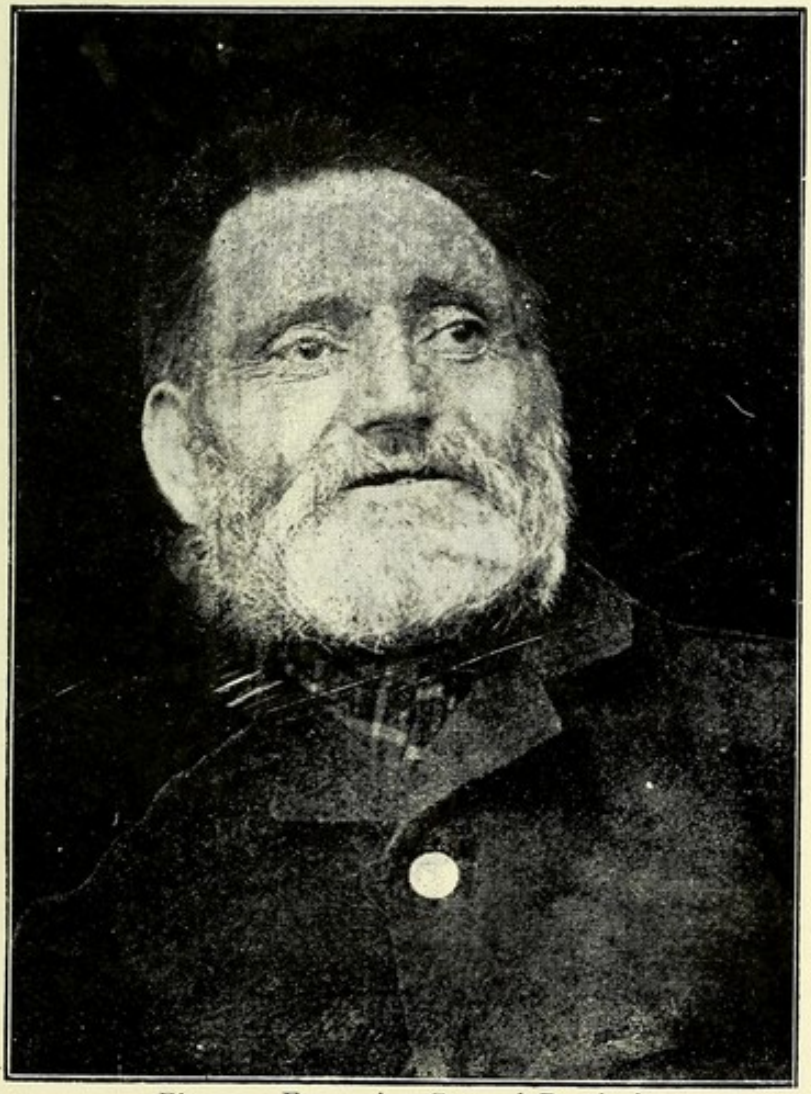

Fig. 21.—Expansive General Paralysis.

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often raised ; the hairs may be turned up on the forehead, or hang down over the eyes like a moustache, or be shaggy and irregular. The lower lines of the face are partly obliterated. Pupillary inequality (*Figs.* 20 and 21) irregularity, contraction, and sluggishness are now frequent ; occasionally there is dilatation.

The conjunctivæ are in some cases injected. There may be even now grinding of the teeth and champing of the jaws, caused by spasm of the buccinator and masseter muscles. Constant tremor of the palpebral and great zygomatic muscles, shown by trembling at the outer corners of the eyes and the corners of the mouth, is almost pathognomonic of the earlier stages. The ataxic disorders, already described as occurring when the patient is made to perform voluntary movements, are now increased. The tremor, twitch, or spasm of the lips and face, is sometimes unilateral. The tongue is jerked out and in convulsively.

Ataxic tremors of the limbs and transitory paralytic attacks are frequent, and give rise to awkwardness in delicate manipulations, and render the gait awkward, stiff, straddling, heavy, stumbling, or too rapid, the patient sometimes leaning to one side, tripping over slight obstacles, or deviating from the straight line.

In *Fig.* 21 is depicted a case of general paralysis with grandiose delusions ; the left angle of the mouth droops somewhat, and the left naso-labial furrow is less marked than the right ; the left pupil is the

larger. The head is thrown back in the attitude of pride, and the face expresses exaltation and satisfaction.

Later on, if the patient is in bed, he keeps his head raised away from the pillow; his hair is coarse, rough, and dishevelled; his skin greasy or coarse and earthy-looking. The forehead is furrowed, whilst the lower parts of the face are flabby, relaxed, puffy, and appear to be swollen, or give the impression of increased fatness; or the face may become thin.

Owing to over-action of the frontal muscles, or corrugators, and weakness of the orbicular, and partly at times to some transient twitching of the former, the upper part of the face expresses astonishment, annoyance, or regret quite unfelt by the patient, so far as one can judge; whilst, at the same time, the lower part of the face, through slight concontraction of the zygomatics and weakness of the oral orbicular, may wear an incompatible expression of satisfaction and contentment. The naso-labial furrow is partly effaced.

The symptoms are accentuated and the patient requires assistance in walking, dressing, and eating. He cannot turn round without staggering or even falling.

In *Fig.* 20 is depicted a patient in the second stage, with corrugated forehead, unequal pupils, and flattened naso-labial fold. He is, as his appearance indicates, a brain-worker, a clerk, and his insanity (the depressive form of general paralysis) resulted

from monotonous mental over-exertion and worry, with (probably) privation.

As the disease progresses, the patient lies gazing stupidly about him, or looking fixedly before him with vacant expression, widely open eyes, and corrugated forehead. Seizures, apoplectiform, epileptiform, and paralytic (facial hemiparesis) are frequent at this stage.

The muscles of articulation, but slightly affected in the prodromal period, are now seriously implicated, as evinced by stammering, stuttering, or even mutism.

The unilateral paresis is more marked in the lower part of the face, and may be limited to the face. Unilateral spasm may cause even more distortion than does facial hemiparesis. There may be choreiform movements of the head, subsultus, or movements resembling those of paralysis agitans.

The pupils are nearly always unequal, sluggish, and irregular. The light reflex is often lost (Argyll-Robertson pupil), and sometimes there is complete immobility. Sometimes there is temporary ptosis, owing or not to spasm.

Paresis of the orbicularis oris may give rise to dribbling of saliva. There is frequently grinding of the teeth. The tongue is protruded only in a jerky, partial, and momentary fashion.

Othæmatomata are more frequent than in other psychoses.

Later still, the skin, however clean, appears dull and dirty, or greasy; the expression is fatuous;

there is emaciation; the tongue is protruded with difficulty, or not at all.

For some time before death, the patient cannot understand any question or order.

In the expansive cases, the prevailing facial expressions are those of contentment, self-satisfaction, and pleased benevolence (*Fig.* 21); in the depressive, sadness, worry, annoyance (*Fig.* 20), fretfulness, tearfulness. In the more than usually demented cases, facial reaction is slow or absent, and the expression is vacant and unemotional.

When the somatic signs of general paralysis are well marked, and regular in their evolution, the diagnosis is sufficiently easy from those signs alone; but when the opposite holds, or where there are tremor, twitching, unequal pupils, etc., accompanying the mental symptoms of mania or melancholia, especially the former, with exalted delusions, all the symptoms and the anamnesia must be brought to bear, and it may even be necessary in some cases to suspend judgment for a time.

In expansive paranoia, tremor and twitching, when present, are generally emotional, appearing only under excitement.

The ataxy of g. p. is not increased on closing the eyes, as in tabes dorsalis, and the knee-jerks are often exaggerated and seldom totally absent.

In organic dementia, the symptoms usually come on suddenly, and do not progress as in general paralysis; tremor (facial, labial, and lingual) is very

much rarer, is not specially evoked by voluntary movements, and is never fibrillary. The form of organic dementia arising from tumour, which most resembles general paralysis, is rare, and there are symptoms, blindness, severe headache, etc., absent or infrequent in the latter. The facial fibrillary tremor on movement, and the pupillary phenomena will help to differentiate the prodromal stage from neurasthenia. Later there is less difficulty.

General paralytic stupor is distinguished from other forms of stupor by the somatic symptoms.

In the diagnosis of general paralysis, it should be remembered that about three-fourths of the cases occur in men aged from thirty to sixty.

When the disease has passed the prodromal stage, or, roughly speaking, when the face in repose betrays the presence of general paralysis, the prognosis is hopeless.

Alcoholic Pseudo-General Paralysis commences more brusquely and advances more rapidly than true general paralysis. Tremor is general and massive. The facial signs of visual hallucinations are worse at night. The disease is curable. Other alcoholic forms are more easily diagnosed from general paralysis by symptoms already given under the head of hallucinatory forms.

Saturnine Pseudo-General Paralysis.—Earthy hue of skin; blue line on gums; visual hallucinations, with ideas of persecution and poisoning. The pupillary inequality is more often absent than in

general paralysis, and the tremor is more intermittent, more pronounced, and more spasmodic. The disease commences suddenly, and often, after a brief course, ameliorates rapidly.

Syphilitic Pseudo-General Paralysis.—There is often very pronounced cachexia. The expression is brutish and stupid. Tremor is rarer, less intense, and less permanent than in general paralysis. The tremor is not jerky and shifting like that of general paralysis. The fine fibrillary tremor is absent. The paralyses are much more accentuated than in general paralysis, and partial paralyses (ptosis, strabismus, etc.) are more frequent and persistent. Cure is possible.

Chapter XI.

FORMS OF ARRESTED PSYCHICAL DEVELOPMENT.

THESE are characterized by mental or moral weakness, depending on arrested development, and generally showing themselves in the face when in repose, but in some cases only when in action. (*Fig.* 24).

Idiocy.—The conformation of the face and head has been used as the basis of one classification ; thus, some idiots with bullet heads, woolly hair, and thick lips are said to be of the Ethiopian type ; others with straight scanty hair, broad flat face, oblique widely-separated eyes and loose yellowish skin, of the Mongolian or Kalmuck ; others, again, of the Malayan.

In another scheme, some of the classes are founded on the size and shape of the head and face, *e.g.*, microcephaly, hydrocephaly, and, to some extent, cretinism. Further, some cases are described as hypertrophic, porencephalic, plagio-cephalic, scapho-cephalic, etc.

Again, resemblances to animals (apes, sheep, swine), in the shape of the head and face, and sometimes in the habits, have been described as occurring in idiots ;

one patient was, on admission, at once named "Pongo" by a rather clever delusional lunatic.

The heads of idiots are small as a rule, and some are very small (microcephalic); the head shown in *Fig.* 32 is only fifteen inches in circumference. On the other hand, some, as the hypertrophic, and most of the hydrocephalic, are abnormally large.

The skin may be of various degrees of pallor, yellow and smooth, or branny, cyanotic, healthy and normal, or infantile in texture and colour. The eyes may be normal and even fine-looking; but they are frequently affected with nystagmus, strabismus (*Fig.* 22), etc. The nose may lead straight down from the forehead, or be depressed at the base. In the worst cases, the tongue lolls out and the saliva dribbles from the mouth.

There are often malformations of the forehead, occiput, or sides of the head, and nearly always other degenerative stigmata; amongst these is frequently, especially in genetous cases, some deformity of the palate (see Chapter XII).

In many cases there are monotonous or rhythmical movements, and in some unprovoked alternations of laughing and weeping.

W. B. had some of the characters of three types of idiocy, *viz.*, microcephalic, scrofulous or "Mongol," and paralytic; he presented the following degenerative stigmata, *viz.*, abnormally small head, only sixteen inches in circumference; receding forehead; small occiput; large face in proportion to size of

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Fig. 22.

PARALYTIC IDIOCY.

Fig. 23.

head; narrow and obliquely placed palpebral fissures; depression of base of nose; asymmetry of face; large size and low position of ears; large mouth; very large tongue; high palate. His tongue was always more or less protruded, and on its dorsum, when moderately far out, could be seen the transverse fissures of the Mongol type. The patient was fifteen years of age, his body was small, and he was bed-ridden, being unable to walk or even stand or sit alone, owing to muscular weakness and defective power of co-ordination; he knew no one, understood nothing that was said to him, could not speak, was unable to feed himself, and the only trace of facial reaction that could be noticed in him was the faint glimmer of a smile when being photographed and sketched; like most idiots he was pleased at being made a fuss over.

Typical microcephalics are active, small in stature, bird-like in movements, pugnacious, often shapely in features, and capable, when the condition is not very pronounced, of some improvement under training. In *Fig.* 32 is depicted a typical microcephalic idiot, aged twenty years, with a cranial circumference of only 15 inches, rapidly receding forehead, and small occiput; his height was 55 inches.

One of the freaks, "Zip," formerly in a well-known show, was a microcephalic.

Craniotomy has somewhat improved the prognosis in these microcephalous cases. The higher grade patients are capable of being trained.

In hypertrophic idiocy, the enlargement is more general than in hydrocephalic. In hydrocephalus, it is most prominent at the temples (*Fig.* 29); in hypertrophy, above the superciliary ridges.

Hydrocephalic idiots, when the effusion is moderate and stationary, and there are no convulsions, are capable of considerable improvement; hypertrophic idiocy is a hopeless condition.

In paralytic idiocy, there may be porencephalic cranial asymmetry; the face may be distorted or asymmetrical, or may only show very slight flattening and drooping on the paralysed side, more marked when the facial muscles are in action. Again, there may be no difference between the two sides of the face, or none except strabismus on the paralysed one (*Fig.* 22). The nose is often slightly aquiline, and the eyes may be large and lustrous.

Fig. 22 represents a paralytic idiot's face in repose; the only indication of facial muscular disorder is internal strabismus of the left eye, yet the patient is suffering (and is bedridden) from paraplegia and left hemiplegia with spastic rigidity. He is, as his facial expression denotes, of a happy disposition, and *Fig.* 23 shows his exaggerated smile on being told that a relative was coming to see him. He is twenty-two years of age, and presents the following somatic stigmata, small head, $18\frac{7}{8}$ inches in circumference, abnormally large mouth, hairless face, very irregular and defective teeth, large ill-formed ears. His intelligence is about equal to that of a child two

Fig. 24.—Eclampsic Idiocy.

Fig. 25.—Impulsive Insanity with Deaf-Mutism.

Fig. 26.—Epileptic Imbecility.

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years old, and, unlike idiots with right brachio-facial paralysis, he can articulate a few words.

Paralytic idiots are capable, with special training, of much intellectual improvement.

As already seen, the paralytic may be combined with other types. In some cases there are choreic movements.

Non-congenital cases can often be distinguished from genetous or strictly congenital cases by the physiognomy alone; *Fig.* 24 represents a non-congenital one, a girl of fourteen, an eclampsic idiot whose comely features and face in repose would hardly lead one to suspect mental defect. However on the slightest excitement (being spoken to, sometimes even looked at, by strangers) she raises the upper lip, cheeks and nostrils in the manner illustrated in *Fig.* 24, and they remain so for an indefinite time, there being strongly marked oblique lines on the nose the while.

The levator labii superioris alæque nasi has already been mentioned as one of the muscles more or less atrophied in the sane, but often active in the insane, especially hebephreniacs. It is also often abnormally active in idiots and imbeciles. In her case (*Fig.* 24) the action is automatic; there are no athetoid movements, but some years ago there were movements thought by the friends to be choreic. It has been said that the face in repose always betrays idiocy when present, but not always dementia;

the above case is one of many disproving the first part of this proposition.

The prognosis as to mental improvement in the non-congenital (eclampsic, epileptic, traumatic, etc.) cases is, nevertheless, not so good as in the highest types of the congenital cases, although not so bad as in the worst.

In examining a child to decide the question of idiocy, the presence of any of the anatomical stigmata mentioned here (Chapter XII) should be taken into account, as well as such physiological stigmata as inability to raise or support head, strabismus, nystagmus, habitually protruding tongue, muscular twitching or over-action, rhythmical movements, absence of hand-reflex, abnormally late walking or talking; the condition of the fontanelles should be noted; the state of all the senses should be investigated; and the facial expression observed under varying conditions of action (attempts at amusement, etc.) and repose.

Imbecility.—The facial signs of imbecility differ only in degree from those of idiocy; type for type, the former more nearly approach the normal.

Imbecility merges gradually into paranoia, the delusional imbecile (*Fig.* 27) already described under the head of paranoia, being a typical half-way case; into simple weak-mindedness; into impulsive insanity (*Fig.* 25); or into moral imbecility, as in the hydrocephalic case (*Fig.* 29) cured, under training in the Royal Albert Asylum, of the mental weakness, or as in the sensorial imbecile (*Fig.* 31).

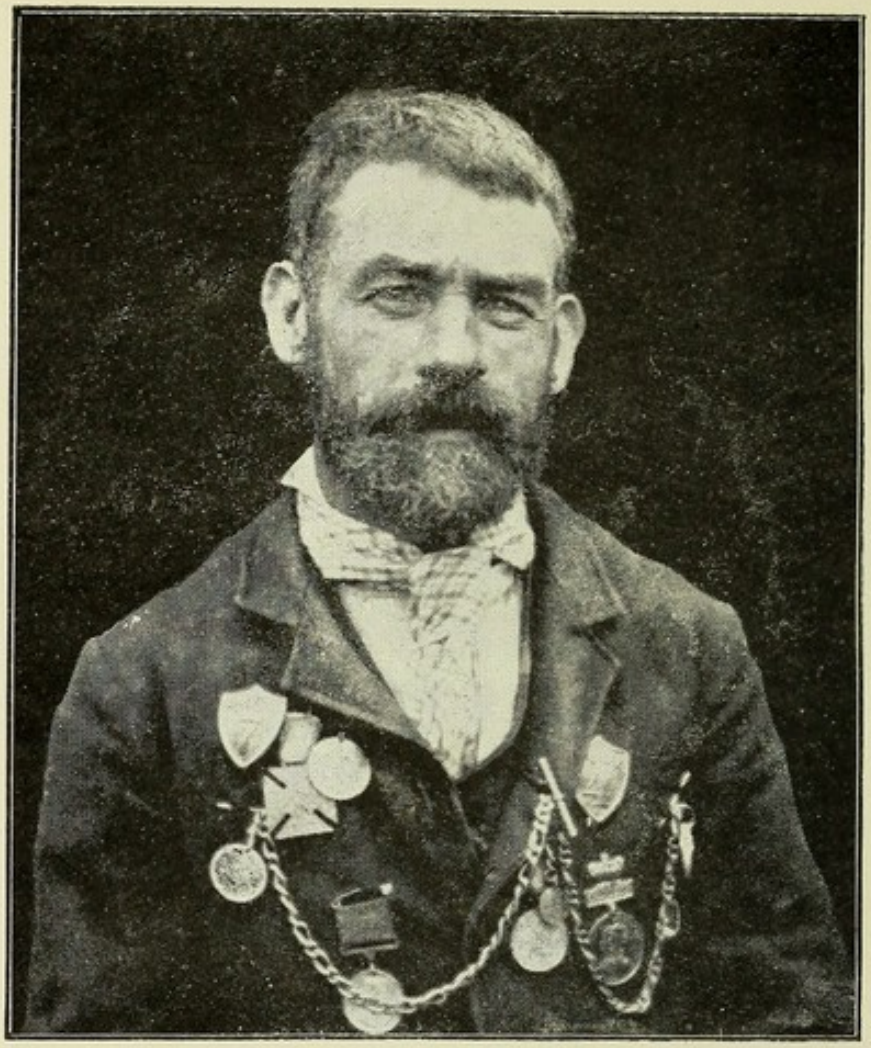

Fig. 27.—Delusional Imbecility.

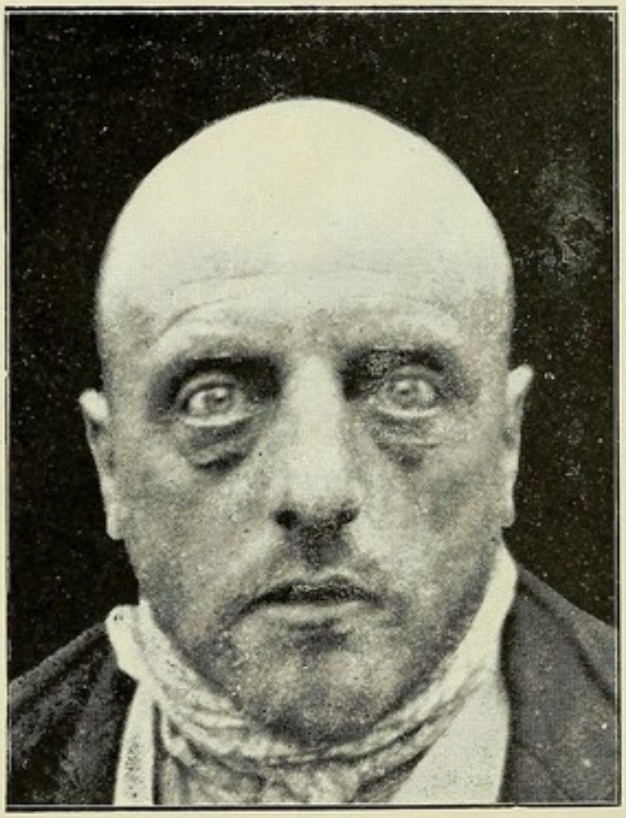

Fig. 28.—Genetous Imbecility.

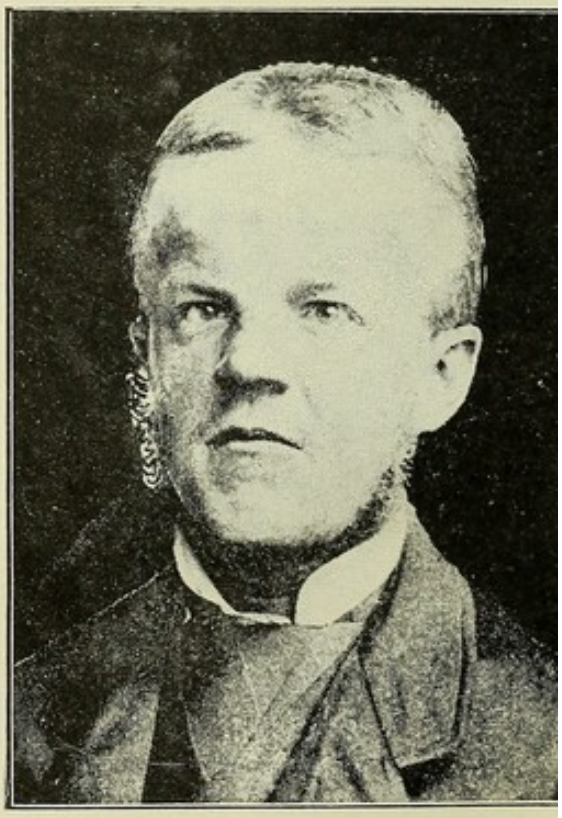

Fig. 29.—Hydrocephalic Imbecility.

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The high-class genetous imbecile (*Fig.* 28) with prominent, staring eyes, half-open fatuous mouth, and slightly asymmetrical face (right angle of mouth lower than left), has a narrow anteriorly pointed upper maxilla, very irregularly placed teeth, and a narrow highly vaulted palate; there is little or no facial reaction either to ludicrous, pleasing, or annoying propositions. Although he is above the average size, his dynamometric indications are, right hand grasp, 35; left, 50.

The large-headed (circumference of head, 23¼ inches), brachycephalic, Darwin-eared, epileptic imbecile shown in *Fig.* 26, when free from the immediate influence of his fits, has a fairly intelligent facial expression, and a true though somewhat slow facial reaction; but a sudden noise, shout, or push will cause him to fall down in a fit.

Cretinism.—In *endemic* cretinism, the head is large as a rule; the face is pale and apathetic; the eyes are expressionless, and generally squinting; the zygomatic arch is very large; the mouth is large; the lips are thick, the lower one pendulous; the superior maxilla is prominent, the inferior small, retreating, and obtuse-angled; deafness is frequent; goitre is generally present.

The girl, aged sixteen, and only three feet high, shown in *Fig.* 30 was a typical *sporadic* cretin; she had a broad face, with a grave, old-fashioned look, pug nose, pouting lips, and protruding tongue; her skin was loose and baggy, her thyroid was not

enlarged, but she had fatty tumours above the clavicles.

The prognosis in cretinism is, as in some other conditions in which the thyroid is generally implicated, much more favourable than formerly.

Moral Imbecility.—Any of the stigmata, anatomical or physiological, already mentioned may be present; there may be facial twitching, eclampsia nutans, strabismus, highly vaulted or cleft palate, or deaf mutism. Stigmata are especially liable to be present when moral and intellectual imbecility are combined.

In the hydrocephalic case, shown in *Fig.* 29, the head measured 23 inches in circumference, and, after seven years' training, there remained but few indications of psychical defect, except in the direction of moral imbecility. Besides the large globular head, there was right internal strabismus, and the base of the nose was depressed.

The young deaf mute represented in *Fig.* 31 is the subject of a mild form of sexual perversion, leading him to object to wear male attire except under compulsion. His face suggests effeminacy, and his sloping shoulders strengthen the impression. It is often the case that male sexual perverts resemble females, and *vice versa.*

Most habitual criminals are partially moral imbeciles, and some are altogether so; they often present marks of scrofula, their heads are frequently badly formed and angular; their features, especially

Fig. 30.—Sporadic Cretinism.

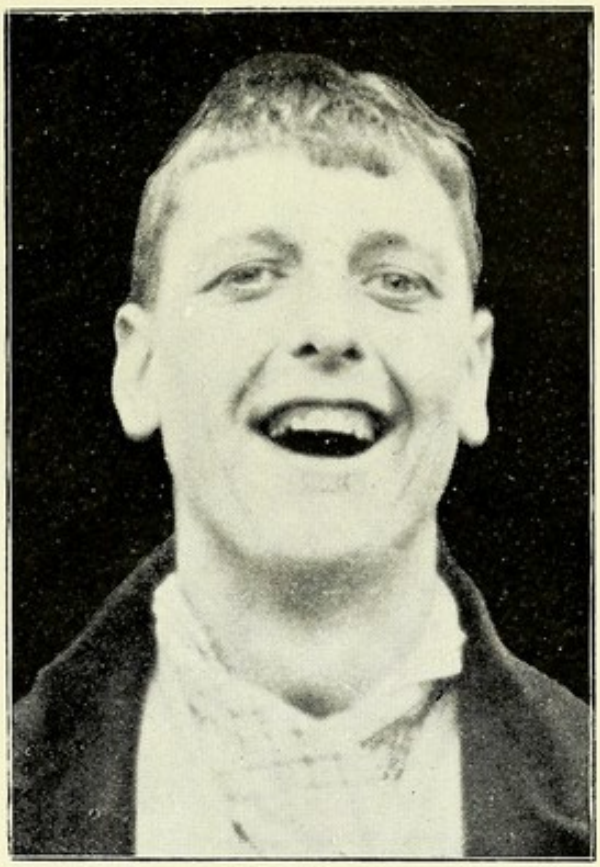

Fig. 31.—Sexual Perversion with Deaf-Mutism.

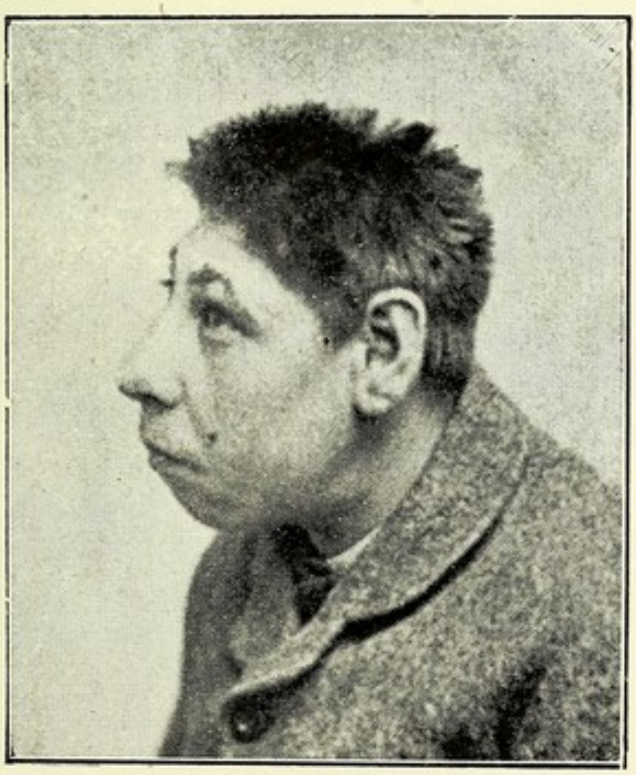

Fig. 32.—Microcephalic Idiocy.

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those of the women, are ugly; they are slow, dull, and stupid.

Men (and women) of genius often present anatomical or physiological stigmata combined with obsessions, perversions, general moral weakness, or other psychical stigmata.

Chapter XII.

THE PHYSIOGNOMY OF DEGENERACY.

DEGENERACY may be defined as a marked deviation from the normal original type or standard. It is recognized, as a rule, in its effects upon the intellectual life, in the deviations from the common standard of intellectual and social conduct. To the class of degenerates belong not only many nervous, migrainous, epileptic, and hysterical persons, many criminals, idiots, and insane individuals, but also the great majority of eccentric people—those who are characterized as feeble-minded, odd, quaint, queer, or singular.

Eccentricity of intellectual habit or conduct may be observed in men of talent or genius who are not degenerates, but when combined with morbid self-concentration it warrants a grave diagnosis.

One of the essential characteristics of degeneracy is its inclusion of elements transmissible to the offspring. Peterson remarks that what is bequeathed to the degenerate child is a fragile and unstable nervous constitution.

Degenerative disorders are more or less interchangeable, and are merely proofs of an unstable nervous organization. Where such conditions do not develop they may still exist in a latent state,

Fig. 33.—Phocomelus of right arm in an epileptic girl. Right humerus several inches shorter than left. Movements of arms perfect on both sides.

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and pass as a legacy to another generation. Whether the neuropathic state be manifest or latent, we are apt to find, on careful examination, indications of degeneracy.

The indications of degeneracy are known as stigmata-hereditatis or *stigmata of degeneration*. They may be defined as anatomical or functional deviations from the normal, which in themselves are usually of little importance as regards the existence of an organism, but are characteristic of a marked or latent neuropathic disposition.

These stigmata are vices of functional and organic evolution—excesses or arrest of development—and must be distinguished from the deficiencies or deformities produced by accidents at birth, by imitation, or by disease.

The functional stigmata may be divided into physiological and psychical. From the physiognomical point of view the anatomical stigmata are, of course, the most important.

ANATOMICAL STIGMATA.

Cranial Anomalies. Such as asymmetry and various deformities.

Facial Asymmetry.—(Congenital, *Fig.* 34 and *Fig.* 52, see below). With this may be grouped excessive prognathism, retrognathism, or malar prominence.

Deformities of the Palate.—Such as bifid uvula, "Gothic" palate, etc. (see below). *Figs.* 36 to 40.

Dental Anomalies.—Such as macrodontism, microdontism, projecting, badly placed, or misplaced teeth, double row of teeth, striated teeth, Hutchinson's teeth (often), retardation of dentition.

Anomalies of Tongue and Lips.—Macroglossus, microglossus, asymmetrical or bifid tongue, undue swelling or puffiness of lips, hare-lip doubtful as stigma, transverse fissuring of upper lip (sometimes imitative).

Anomalies of Nose.—marked lateral deviation, absence of nose, defective osseous development, atresia of fossæ.

Anomalies of the Eye.—Flecks on the iris, strabismus, chromatic asymmetry of the iris, narrow palpebral fissures, albinism, congenital cataracts, microphthalmos, pigmentary retinitis, muscular insufficiency.

Anomalies of the Ear (see below). *Figs.* 41 to 52.

Anomalies of the Limbs.—Polydactyly, syndactyly, ectrodactyly, missing limbs (ectromelus), symelus, phocomelus (*Fig.* 33), anomalous brevity of some digits, *e.g.*, of hallux in criminals (Frassetto), megalomelus, megalodactyly, oligomelus, oligodactyly.

General Bodily Anomalies.—Dwarfishness, giantism, infantilism, feminism, masculinism, spina bifida, lordosis, scoliosis, kyphosis, peculiarities of coccyx (tail-like), malformations of the breasts or thorax, hernias.

Anomalies of the Genital Organs.—Cryptorchism, microrchidia, spurious hermaphroditism, insufficient

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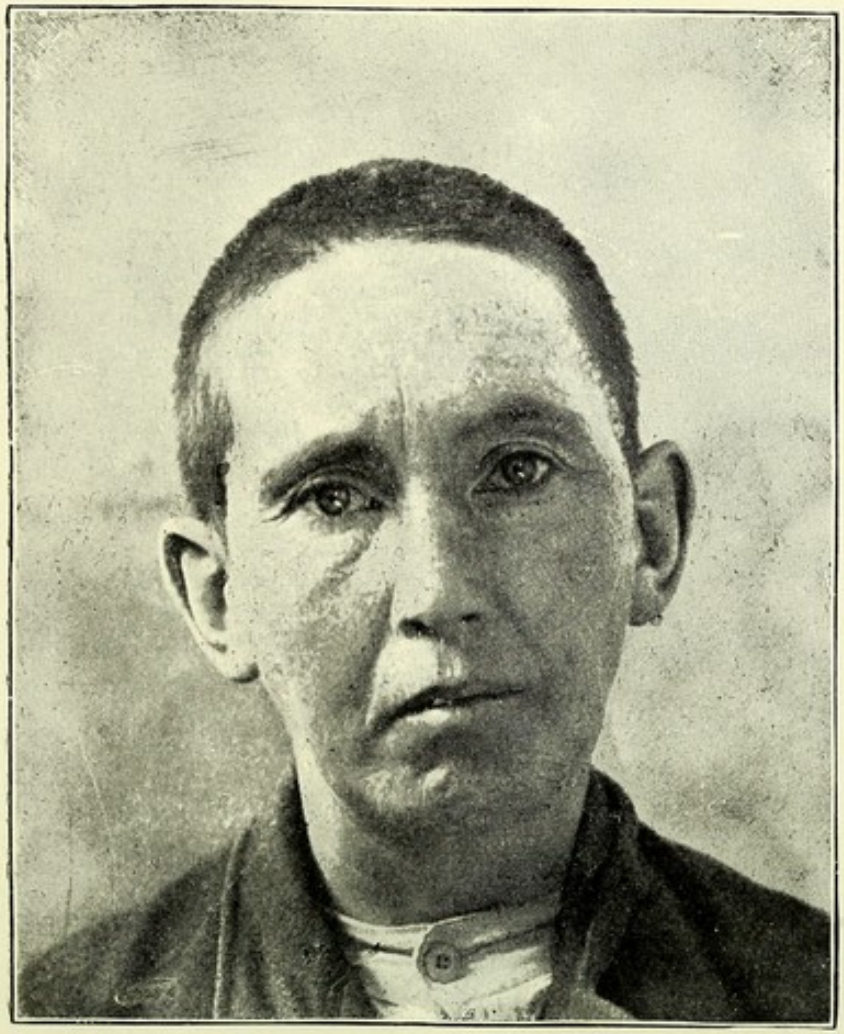

Fig. 34.—Male epileptic, aged 40 years, with glabrous face and chin, and facial asymmetry.

Fig. 35.—Female imbecile, aged 40 years, with hypertrichosis.

development of genital apparatus, hypospadias, epispadias, defect or great volume of prepuce, median fissure of scrotum, imperforate meatus, abnormally large or small labia, very large clitoris or labia minora, folds between labia majora and minora, pigmentation of latter, imperforate vulva, atresia vaginæ, double vagina, uterus bicornis.

Anomalies of the Skin.—Adipose thickening, polysarcia, precocious development of the hairy system, hair along spinal column, glabrous chin in grown men (*Fig.* 34), persistent lanuginous character of hair, excessive growth of hair on chin (*Fig.* 35) and breast in women, complete or partial decolouration of hair, premature, asymmetrical, rapid or abnormally distributed blanching of hair (*Figs.* 53 *and* 54) (see below), partial or complete absence or fœtal state of the nails, transverse striation of nails (*Fig.* 55) (see below), melanism of the skin, pigmentary or vascular nævi, molluscum, ichthyosis, vitiligo, albinism, pigmented spots.

Asymmetry.—Dr. E. Goodall states that in twenty-eight normal subjects the measurements on the two sides of the body showed little asymmetry, whereas in the insane marked asymmetry is the rule.

Anomalies of the Uvula.—Dana found deformities of the uvula in fifty-three out of one hundred and eight insane persons. Thirty-two had the uvula twisted to one side, the left a little the oftener. Nineteen of these patients were found among thirty-five cases of degenerative insanity. The degenerate

uvula is one that has an unequal and defective nerve supply.

Deformities of the Hard Palate.

Peterson holds that the deformed palate is one of the chief anatomical stigmata of degeneration. It is true that from this single indication it would not be strictly scientific to adjudge an individual a degenerate. Occasionally, perhaps, a case presents itself where this anatomical stigma alone would suffice to ensure a diagnosis of this nature, but usually other stigmata co-exist.

Charon found abnormal palates in 10 per cent of apparently normal people, in 82 per cent of idiots and feeble-minded, in 76 per cent of epileptics, in 80 per cent of cases of insanity in general, in 70 per cent of the hysterical insane, and in 35 per cent of cases of general paralysis.

The arch of the hard palate presents considerable variation within strictly normal anatomical limits. A large, wide, moderately high vault is what may be called a normal standard. It means the highest evolution, judging from the fact that the mouth cavity increases in capacity as we ascend the vertebrate series.

Deviations from that standard are not at all infrequent, and yet such deviations may be normal. Thus the palate may be low and broad, or it may be high and narrow; it may be short or long in its antero-posterior diameter; it may be ridged unduly

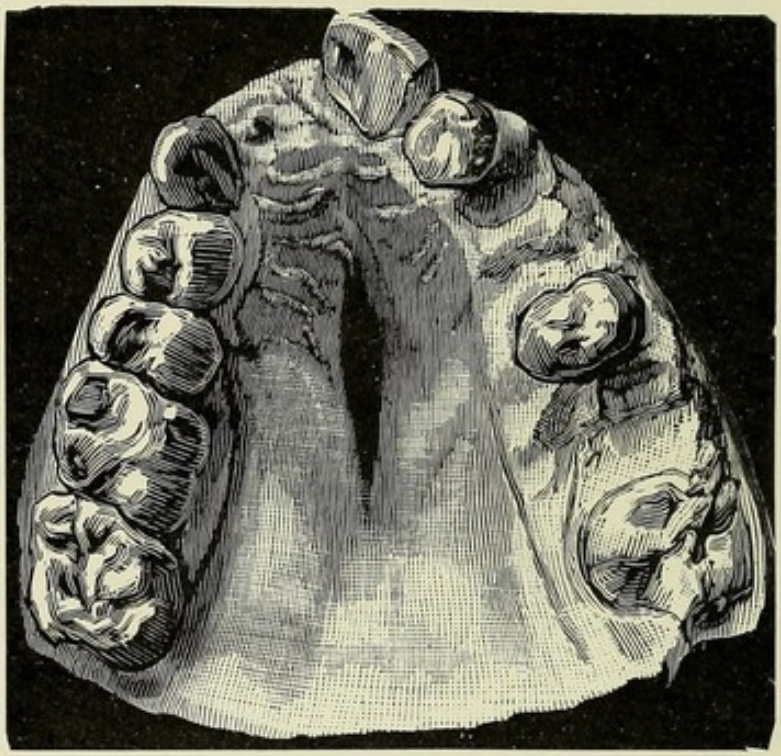

Fig. 36.—"Gothic" Palate.

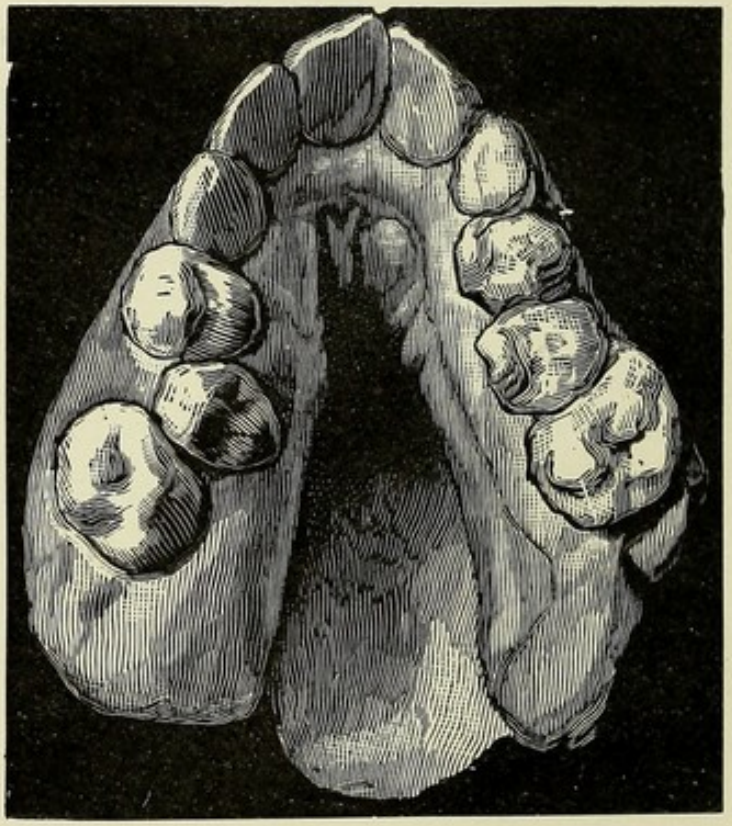

Fig. 37. –Horseshoe-arched Palate.

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along the palatine sutures, or it may present marked rugosities on its surface, especially in the anterior region; yet these variations are normal.

Peterson's classification of pathological palates is as follows: (1,) Palate with Gothic arch ("Gothic" palate, *Fig.* 36); (2,) Palate with horseshoe arch (*Fig.* 37); (3,) The dome-shaped palate (*Fig.* 38); (4,) The flat-roofed palate; (5,) The hip-roofed palate; (6,) The asymmetrical palate (*Fig.* 39); The torus palatinus (*Fig.* 40).

The seven varieties named are to be looked upon as types merely. Each type will be found to present variations and combinations with other forms.

Thus, the Gothic arch may have a low or high pitch and be short or long. The flat-roofed palate may be nearly horizontal, or it may have sloping sides.

The dome-shaped palate may be high or low, and may be combined with asymmetry or torus.

The torus (*Fig.* 40) is a projecting ridge or swelling along the antero-posterior palatine suture, sometimes in its whole length, sometimes in a portion of its course. It varies considerably in its shape and size, so that as many as five or six different species of torus are recognised. It may be wedge-shaped, narrow, broad, very prominent, or irregular. It may cause the Gothic arch to resemble the flat-roofed palate. The torus is always congenital, but probably has less importance as an index of degeneration than some of the other forms of pathological palate.

The hip-roofed palate has sloping sides, and a marked pitch in front and behind; occasionally the antero-posterior pitch is so marked as to almost resemble that of a Gothic roof turned transversely.

Peterson is not sure that cleft palate may be classed among the well marked stigmata of degeneration.

The palatal should not be confounded with the dental arch, as it sometimes is in literature.

Anomalies of the Ear.

Deformities of the ear have been deservedly well studied, for as stigmata of degeneration they take high rank, like anomalies of the hard palate, in the most important—the anatomical—group. Morel, Stahl, Wildermuth, Binder, and Schwalbe, have given us especially good studies of these conditions.

Peterson (following Binder) classifies the anomalies of the ear into twenty-two varieties.

Some of these varieties are:—

Abnormally implanted ears—as in the Morel ear (*Fig.* 50).

Too marked conchoidal shape of the ear (*Fig.* 50).

General ugly shape of the ear, excessive length (*Figs.* 47, 51 *and* 52), etc. Normal ears average 2·5 inches in length, and 1·22 in breadth, and do not grow after twenty-six years (Talbot).

Asymmetrical ears, Blainville ears (*Fig.* 51).

The ear without lobule (*Figs.* 42, 43, 45, *and* 48).

The Stahl ear, No. 1 (*Fig.* 49).

The Darwin ear (*Figs.* 44 *and* 46).

Fig. 38.—Dome-Shaped Palate.

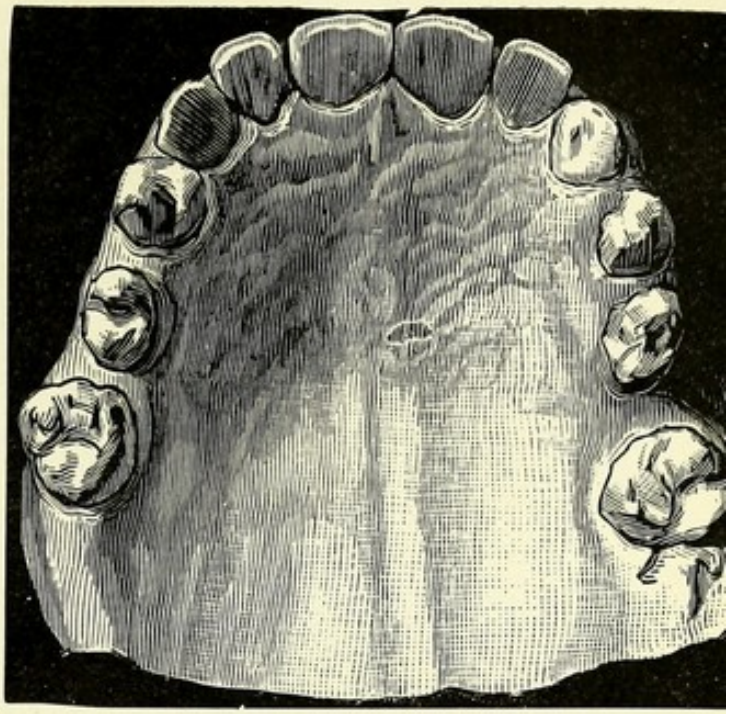

Fig. 39.—Asymmetrical Palate.

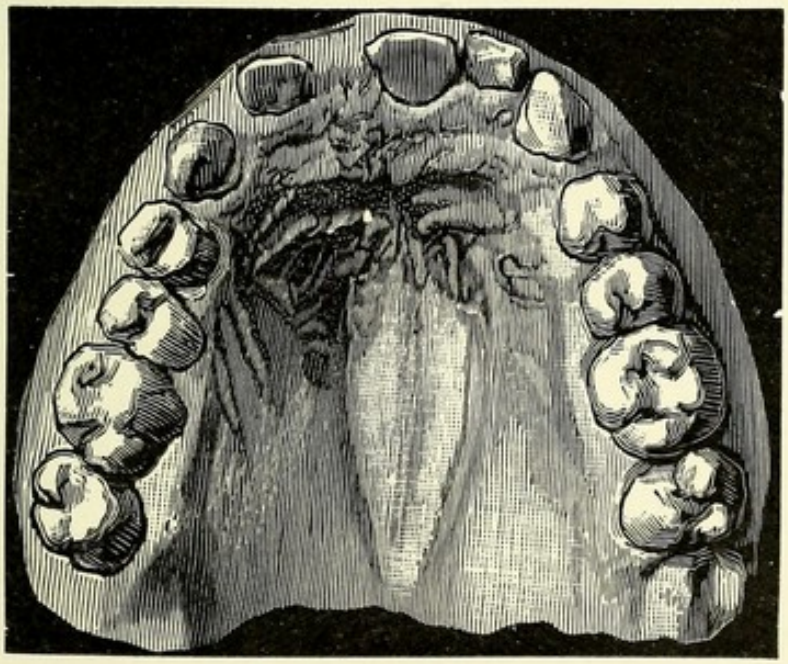

Fig. 40 —Torus Palatinus.

Fig. 41.—No crus superius ; no antihelix ; small fossa concha ; few details of ear.

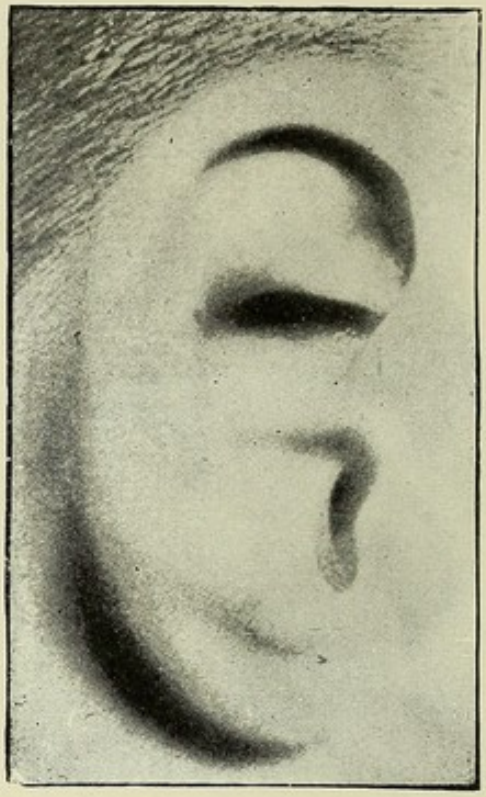

Fig. 42.—No lobule ; almost no fossa concha ; shallow fossa scaphoidea ; fusion of helix, antihelix, and antitragus. A type of Stahl ear No. 3.

Fig. 43.—Prominent antihelix ; maldeveloped helix ; absence of lobule ; diminution of the concha. Wildermuth ear No. 1.

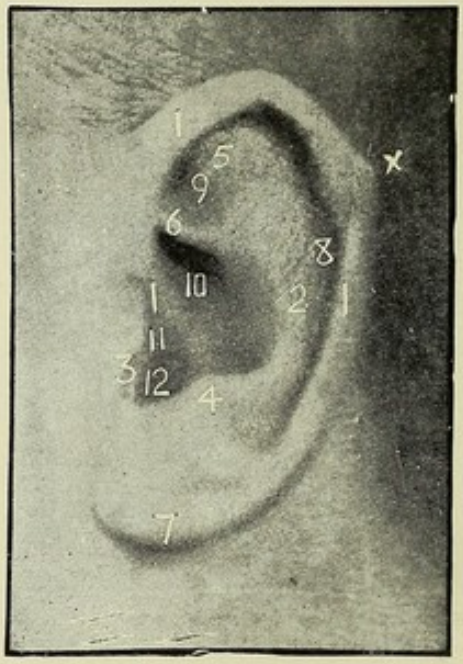

Fig. 44.—Darwin ear in an epileptic. × Darwinian tubercle.

1.—Helix.
2.—Antihelix.
3.—Tragus.
4.—Antitragus.
5.—Crus Superius.
6.—Crus Anterius.
7.—Lobule.
8.—Fossa Scaphoidea.
9.—Fossa Ovalis.
10.—Fossa Cymbæ.
11.—Concha.
12.—Incisura Intertragica.

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The Wildermuth ear, No. 1, prominent antihelix (*Fig.* 43).

The ear without antihelix (*Fig.* 41) or crura furcata.

The Stahl ear, No. 2, trifurcation of the antihelix (*Fig.* 45).

The Stahl ear, No. 3 (*Fig.* 42).

The Morel ear (*Fig.* 50). The normal ear forms with the head an angle of between 15° and 30° (Buchanan, Talbot), the jug-handle shaped or More ear stands at from 45° to 90°.

Dr. Peterson gives the following summary of the most important malformations of the ear (*Figs.* 44 *to* 55)—those that may be regarded as belonging to the stigmata of degeneration, and those, too, which are striking and plain to the eye :—

The deep position of the crus anterius.

Marked prominence of the antihelix (as in Wildermuth ear, No. 1, *Fig.* 43).

Excessive broadening of the ear.

Stunted development or absence of the helix (as in Stahl ear, No. 1, *Fig.* 49).

Trifurcation of the antihelix (as in *Fig.* 45).

Widening of the fossa scaphoidea.

Absence of the crus superius (as in *Fig.* 41).

Complete absence of lobule (as in *Figs.* 42, 43, 45, 48).

Asymmetry of the two ears (Blainville ears, as in *Fig.* 51).

Excessive enlargement or diminution of the concha (as in *Figs.* 41, 42, 43).

Excessive conchoidal structure of ear (as in *Fig.* 50).

Reference is occasionally made in literature to the Cagot ear. The Cagot is a species of cretin in the French and Spanish Pyrenees, in which one of the chief physical deformities is absence of the lobule of the ear.

In asymmetry the left ear is frequently, but not always, the more anomalous. In left-handed people the right is the anomalous one proportionately oftener than in right-handed, according to my experience, but not invariably.

Binder states that the adherent lobule exists in almost one third of normal people, and in the photographs of several hundred distinguished people 15 per cent had abnormal lobules. At the same time more than twice as many adherent lobules are found in degenerates as in normal people. Binder found 64 per cent of degenerate ears in three hundred and fifty-four insane persons.

Knecht found 20 per cent of degenerate ears among one thousand two hundred and seventy-four criminals, 27 per cent among forty-eight epileptics, and 32 per cent among eighty-four insane.

Binder noted degenerate ears in thirty-three persons outside of institutions, supposed to be normal individuals. Enquiring closely into their histories, he discovered that seven of them had near relatives insane; in nineteen there were decided psychic

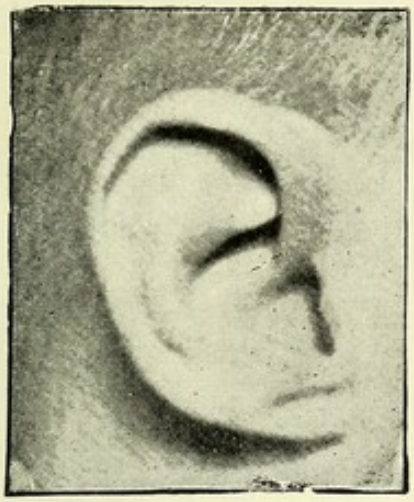

Fig. 45.—Triplication of crura furcata: mal-formed helix and antitragus; absent lobule.

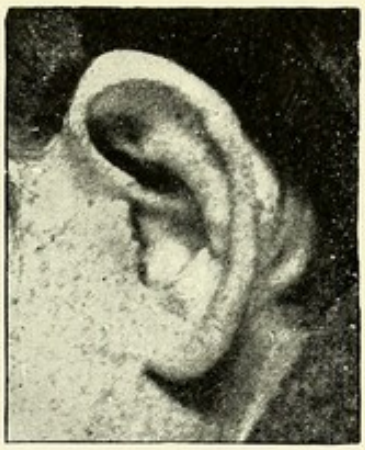

Fig. 46.—Fissure in antihelix; slight Darwinian tubercle; slight antitragus.

Fig. 47.—Excessive length of ear; fusion and distortion of helix, antihelix, antitragus and lobule.

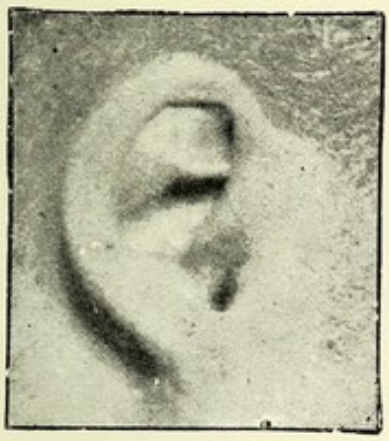

Fig. 48.—Broad band-like helix; no antihelix; no lobule; excessive size of fossa cymbæ.

Fig. 49 —Stahl ear No. 1 Elephant ear.

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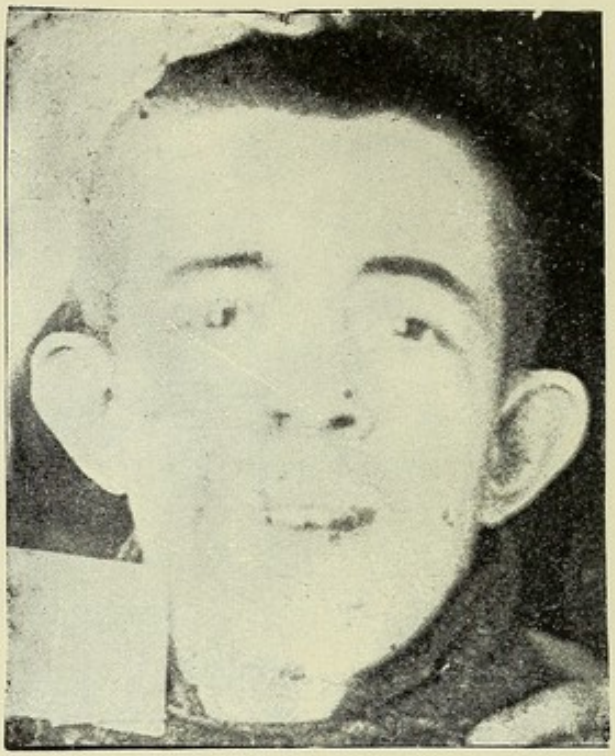

Fig. 50.—Abnormal implantation of ears; too marked conchoidal shape. The Morel ear.

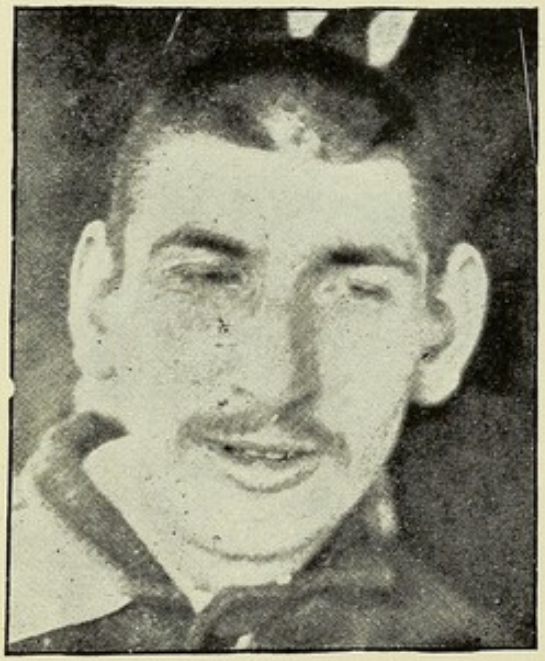

Fig. 51.—Blainville ears, and also excessive length of ears.

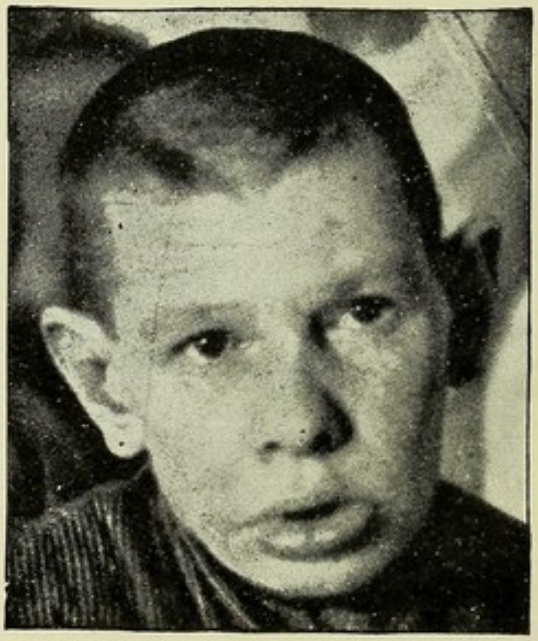

Fig. 52.—Excessive length of ears; facial asymmetry.

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abnormalities, and only seven were apparently normal people.

Talbot (*Degeneracy*) considers that imperfections of the helix, antihelix, scaphoid fossa, and lobule, and in the shape and size of the whole ear are only stigmata when pronounced and multiple. But he finds that where a form of ear is present in which the tip inclines backwards at an angle of 45° and the antihelix is large, degeneracy usually extends deeply. Like Morel, he also attaches much importance to the long narrow ear adherent in its whole length.

Schwalbe remarks that Gredenigo has enumerated twenty-three categories of ears, and examined twenty-five thousand men and women in Turin, eight hundred lunatics, and four hundred and sixty-seven criminals finding very little difference in the form of the ears in these three classes; while Vali found the Darwin tubercle (*Fig.* 44 *and* 46) thrice as common in insane persons and idiots.

Schwalbe thinks this difference of result must be due to race, as he finds a difference on this point between the inhabitants of Lower Alsace and those of Lorraine, Upper Alsace the Palatinate, and Baden. Schaffer found that 55 per cent of Englishmen had the Darwinian tubercle. So that lunatics, criminals, and sane people, when their ear forms are compared, should all belong to the same race.

In this district (Liverpool and environs) not more than 10 per cent present Darwin's tubercle, and at

most one per mille triplication of the crura furcata.

But quite 50 per cent have no real lobule ; at least 20 per cent of these have the fossa scaphoidea continued into the cheek (continuous scaphoid fossa) ; 10 per cent have that fossa interrupted by a fusion of the helix, antihelix, and antitragus ; and 20 per cent have the lobule represented by a narrow band below the antitragus.

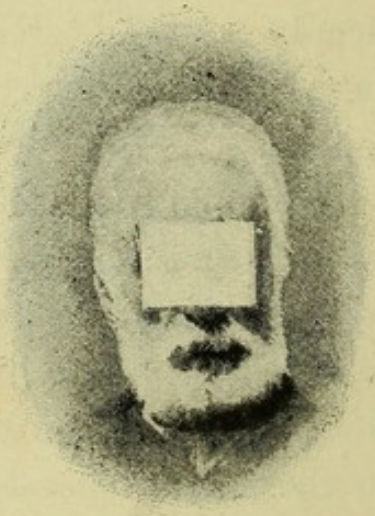

Fig. 53. Rapid blanching of hair. *Fig.* 54.

About 10 per cent of Liverpudlians present lobules adherent and continued down the cheek (adherent lobules) and 10 per cent other anomalies (excessive size, bad shape, etc.) of the lobule.

So that 70 per cent. or thereabouts display lobular anomalies. Many of these persons possess other malformations of the auricle, and 20 of the 30 per cent with nearly normal lobules present various auricular anomalies. Barely 10 per cent, therefore, have normal, or nearly normal, ears—what Talbot

terms the "ideal ear" being extremely rare. As at most not more than 20 per cent have near relatives insane or suffering from degenerative neuroses, too much stress should not be placed on any one or two anomalies of the ear.

The mere diminishing of the lobule may even be a process of evolution. Nevertheless, where the earmarks are pronounced and multiple, one generally finds, when it is possible to inquire, psychical evidences of neuropathic heredity and constitution.

Rapid Blanching of Hair.—Figs. 53 and 54 represent the rapid—within a few weeks—blanching of the hair in a paranoiac, aged fifty-three, under the care of Dr. Robert Jones.

Dr. H. Campbell has likewise observed that blanching of the hair of the head prematurely, asymmetrically, rapidly, or before the beard begins to turn grey, indicates infallibly some nervous defect.

Striation of Nails.—Dr. Marco Treves (*Journ. Ment. Path.*, Jan. 1902) has found transverse striation of the finger-nails and toe-nails in nearly 50 per cent of insane patients and criminals, but only in about 10 per cent of normal subjects. It is very frequent (75 per cent) in the degenerative psychoses (*folie circulaire*, etc.). It is also very frequent in neurasthenia. The striæ are more marked on the thumb than on the fingers.

The number, position, and depth of the striæ indicate to some degree the number, times, and duration of organic disturbances. It should be remembered

that the time required for the regeneration of the toe-nail is from three to six times longer than that necessary for the growth of the finger-nail. *Fig.* 55 (from *Journ. Ment. Path.*) shows the clinical appearance of the striæ.

Finger-Prints.—Sanctis and Toscano (*Journ. Ment.*

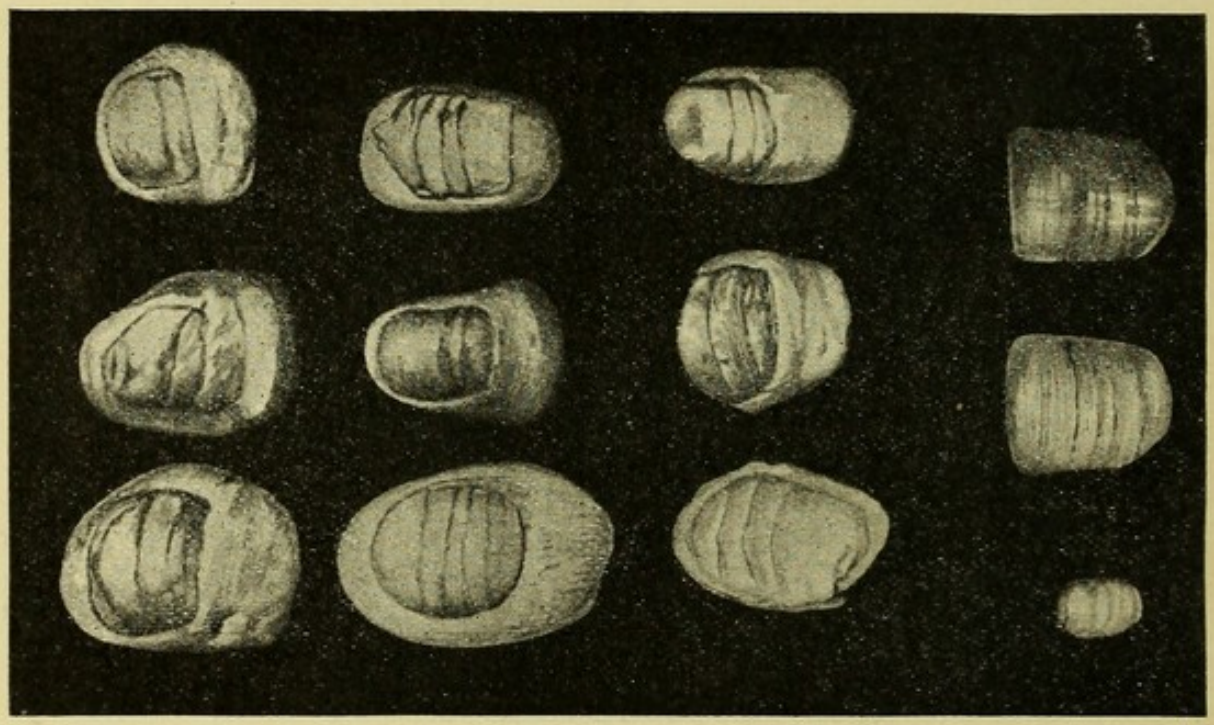

Fig. 55.—Transverse Striæ on Nails.

Sci., July, 1902) found that weak-minded and deaf-mute boys showed greater frequency of abnormal types of finger-prints than normal boys. Simplicity may be said to be the special degenerative characteristic of the finger-prints of the weak-minded and the deaf-mutes. The authors say that the anomalies found by them are not so marked as other writers have found among idiots, epileptics, and criminals.

Mayet has found that anatomical stigmata are much commoner in urban than in rural communities.

PHYSIOLOGICAL STIGMATA.

(Which Affect the Physiognomy).

Anomalies of motor function.—Retardation of learning to walk, also, when ordinary etiological factors may be excluded, tremors, tics, epilepsy, and nystagmus (even when not congenital these often indicate hereditary instability of the nervous system).

Anomalies of sensory function.—Deaf-mutism, neuralgia, migraine, anæsthesia, hyperæsthesia, blindness, myopia, hypermetropia, astigmatism, Daltonism, hemeralopia, concentric limitation of the visual field.

Anomalies of speech.—Delay in acquisition, mutism, partial defect; questionable whether stammering and stuttering are stigmata, but they are most often found in children with neuropathic inheritance.

Anomalies of genito-urinary function.—Sexual irritability, and, especially in the male, retardation of puberty.

Anomalies of instinct or appetite.—Uncontrollable appetites (food, liquor, drugs), merycism.

Miscellaneous anomalies.—Diminished resistance to external influences (strains, etc.) and diseases, great precocity of intellectual development and of certain aptitudes, morbid emotional conditions.

PSYCHICAL STIGMATA.

These—some of which have been termed sociological—include morbid obsessions and impulses, sexual perversions, etc.; single unbalanced aptitudes, *e.g.*, for music, drawing, etc.; extreme oddity of dress, demeanour, etc.

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