and below the breasts, less constantly, however, than in the ovarian region.

DIAGNOSIS.—The diagnosis of hysteria from organic disease of the nervous system is of the greatest practical importance, and is in general not difficult, especially when the course of the disease is known. The predominance of subjective symptoms over objective disturbance is noteworthy. There is, in general, absence of such definite signs of organic disease as local atrophy, electrical change, pupil irregularities and loss of light reflex, of ankle clonus and the Babinski reflex, of bedsores and cystitis, as well as of facial, ocular, and bulbar paralyses. There may be rapid and complete change in seat and character of the symptoms, a nervous history and nervous antecedents. The presence of globus, clavus, ovarian and spinal tenderness, hemianæsthesia, segmental anæsthesia, aphonia, convulsive attacks, and characteristic contractions, assist in the differentiation of hysteria from most organic diseases with which it is liable to be confounded. Hysterical hemiplegia differs from the common form of organic hemiplegia in the exemption of the facial muscles, in the absence of spasticity, and in the sharp boundaries of the anæsthesia if present, whether occupying half the body, a single extremity, or spots of irregular distribution. The anæsthesia of organic cerebral disease is most marked at the extremities and shades off gradually as the trunk is approached; it is more apt to impair the power of recognizing objects in the hand with eyes closed (stereognostic sense, with its factors, spacing, localization, and posture senses) than the sense of pain, of touch, or of temperature. The latter are more often lost in hysterical anæsthesia, and the hysterical patient will often handle intelligently, and use with dexterity, an instrument which she states is not felt. This offers marked contrast to the hemiplegic, who states that the knife or pen is felt, but who neither recognizes its character nor uses it naturally.

Hysterical hemianæsthesia is easily recognized by its typical distribution, and by the fact that the special senses are generally involved to a corresponding degree. It is important to avoid mistaking the transient loss of power accompanying *myasthenia gravis* (pseudo-bulbar paralysis) for hysterical paralysis. The paralyses of myasthenia gravis are prone to appear in the latter part of the day, and are peculiarly liable to attack the ocular and bulbar muscles, regions ordinarily spared in hysteria. It must always be remembered that hysteria does not preclude the coexistence of organic disease, as tumor, abscess, or meningitis. Hysterical symptoms occurring in elderly women, not hitherto subject, should always suggest the possibility of malignant or other exhausting disease. The diagnosis should never be limited to hysteria till organic disease has been carefully excluded. Convulsions of hysteria are generally distinguishable from epileptic seizures by their longer duration, by the absence of the characteristic clonic spasms of epilepsy, and by the greater excursion of the movements. The hysterical patient rarely injures herself in falling, and only exceptionally bites the tongue or froths at the mouth. Stupidity rarely intervenes, but a large quantity of pale urine with low specific gravity is often voided directly after an attack. Doubtful cases are more apt to prove epileptic, and should generally be given bromide treatment. Aphonia, of hysterical origin, may be distinguished by the rapidity of onset and recovery, together with the absence of symptoms pointing to organic disease of the larynx. The diagnosis between hysteria and other functional nervous diseases is not so important, and the line is often hard to draw. The hysterical has many symptoms in common with the neurasthenic patient. The presence of paralyses, contractures, convulsions, hyperæsthetic regions, and of well-marked circulatory, secretory, and excretory symptoms, places the case under hysteria, the name *neurasthenia* applying to patients suffering from nervous exhaustion and irritability without the so-called hysterical stigmata. On the boundary line fall certain irritable, worn-out patients, prone to laughing and crying, and other lighter emotional symptoms. In such cases it is difficult and unnecessary to make an accurate classification. The essential peculiarity of the *hypochondriac* is his undue attention to, and anxiety regarding, his own condition. Either the hysterical or the neurasthenic patient may, therefore, suffer also from hypochondria.

PROGNOSIS.—Life is threatened only in the rarest instances. Patients have died with hysterical symptoms, but it is doubtful if hysteria itself can be said ever to be fatal. Radical cure of well-established tendency to hysteria, when primary and degenerative, is hardly to be expected, though separate attacks are likely to disappear spontaneously or under treatment. Attacks of hysteria with definite exciting cause, as trauma, or exhaustion, without predisposing tendency, promise more favorably than cases of the same severity resulting from hereditary tendency. Cure may be generally expected in such cases in a period varying from a few months to a few years. Litigation seriously delays recovery. In general, the longer the disease has persisted the worse the prognosis. This is especially true when convulsive attacks are present.

TREATMENT.—The early training of children predisposed by inheritance to functional nervous disease is important. Too great indulgence and solicitude are as bad on the one hand as severe punishment and ridicule on the other. Every means should be taken to cultivate the child's self-control, and for this purpose removal from its home will often be found beneficial, inasmuch as bad example is there added to faulty training. Physical development should be encouraged. Anæmia should be treated if present. Early marriage should not be encouraged, for it is as liable to aggravate as to lessen the tendency.

Given a case of hysteria once developed, the first aim is to remove the causes which foster it. Anæmia and debility must be combated; arsenic in small doses may prove of benefit, besides the ordinary tonics. The German Eisenzucker (ferrum oxidatum saccharatum) will be found an agreeable preparation of iron for persons of delicate digestion. Disease of the uterus and its appendages, when present, must be rectified, although scepticism is always in place regarding local disease as an etiological factor, and unnecessary manipulation of the genitals should be avoided. Flatulence, indigestion, and constipation should be treated. Atony of the alimentary canal may be benefited by nux vomica, strychnine, or quinine. If the presence of family and friends is believed to be deleterious, the surroundings should be changed. The patient should neither receive excessive sympathy nor be ridiculed as an imaginary sufferer. An endeavor should be made to gain the patient's confidence and rouse her to the systematic exercise of will power and self-control, not only regarding her symptoms, but also in the ordinary duties and disturbances of her life. Regular employment and physical exercise, such as bicycling or horseback riding, should be encouraged. Valerian and asafœtida will be found useful in spasmodic conditions, the latter especially in hysterical tympanites and colic. As a rule, neither bromide of potassium nor chloral will be found of sufficient benefit to justify continued use, though they must sometimes be resorted to for sleeplessness. Opium and alcohol are likewise to be avoided. To relieve individual attacks of pain by morphine is only to weaken the patient's own power of resisting pain, and perhaps to add a craving for the drug. Hyoscyamus, conium, and cannabis indica may be substituted. Good diet, cold baths, the douche to the back, massage, regular exercise in the open air, mental diversion, and avoidance of excesses are important. Electricity sometimes proves of value, especially the static current. Application of the magnet and of various metals, while of great physiological interest, as in the study of "transfer," will hardly prove of much therapeutic value. During convulsive attacks over-solicitude will tend only to aggravate and render them more frequent, excepting when the consciousness is entirely lost. The severer attacks can sometimes be cut short by a sudden shock, as pouring

cold water on the face, and the memory of such treatment doubtless lessens the probability of recurrence; there are, however, many objections to this proceeding, and it will rarely be found advisable. The inhalation of ether or the subcutaneous injection of apomorphine may cut short an attack. Judicious neglect will often hasten recovery. Firm pressure over one or the other ovary will sometimes cause cessation of hystero-epileptic or other convulsion. Removal of the ovaries must be kept in mind as a last resort when disease of those organs is present. Nutrition should be kept up during cataleptic conditions, rectal alimentation or the stomach tube being resorted to if necessary. In obstinate cases, especially when malnutrition exists, after other methods have been tried in vain, it will be often advisable to adopt the plan (perfected by Mitchell) of seclusion, rest, massage, electricity, and full feeding. *George L. Walton.*

IBIT, bismuth oxy-iodo-tannate, a close relative of airol, bismuth oxy-iodo-gallate, is an odorless, tasteless, fine, greenish-gray powder. It is permanent in diffuse light, but in direct sunlight or in contact with water or animal fluids slowly decomposes with the liberation of iodine. This change is more rapid with warm water. Ibit is insoluble in ordinary solvents, but dissolves in acids or alkalies. It is used for wounds as a dusting powder, salve, or lotion. *W. A. Bastedo.*

ICHTHALBIN, ichthyol albuminate, is an odorless, almost tasteless, fine grayish-brown powder, insoluble in water and acid solutions, and soluble in alkalies and the intestinal fluids. It is prepared by adding ichthyol to fresh albumin and washing the resulting precipitate till it is free from ichthyol. It sets free in the tissues ichthyol, of which it is said to contain seventy-five per cent.

On account of its antiseptic and stimulating properties it has been used by Mack, Binder, Martin, and others internally for gastric and intestinal fermentation and for enteric fever. Sack says it sets free ichthyol in the intestine, but not in the stomach. It is claimed to be neither irritating nor toxic. Locally it may be applied in powder form. Binder uses it by insufflation for gonorrhœal or catarrhal vaginitis, endometritis, or erosions of the cervix. For chronic hypertrophic rhinitis it may be used as snuff two or three times a day. Mack obtained good results in eczema and furunculosis from the internal dose of 0.12–0.3 gm. (gr. ij.–v.) three times a day. Rollay places the dose at 0.3–0.7 gm. (gr. v.–x.) for a child of one year, while Homburger considers 0.1–0.2 gm. (gr. iss.–iij.) sufficient. No untoward effects were noticed from administering 0.5 gm. (gr. viij.) three times a day to a five-months-old child.

W. A. Bastedo.

ICHTHARGAN, ichthyol silver, silver thio-hydrocarbo-sulfonate, is a brown, odorless, amorphous powder of neutral reaction, containing thirty per cent. of silver and fifteen per cent. of sulphur. Its odor is wanting, or slight, suggesting chocolate, and it is somewhat sternutatory. It is easily soluble in water, glycerin, or dilute alcohol, slightly soluble in ether or chloroform, and insoluble in absolute alcohol. On exposure to light it is slowly decomposed, so must be kept in dark bottles. It is precipitated by sodium chloride or albumin, the latter precipitate dissolving in excess of albumin.

Aufrecht showed this drug to be more strongly antagonistic to anthrax, gonococcus, and other bacteria than is silver nitrate. In 0.3–0.5-per-cent. solution it prevents the decomposition of meat, bouillon, etc. With frogs, guinea-pigs, rabbits, and dogs it is much less toxic than silver nitrate. It is also more penetrating. Lohstein uses it in gonorrhœa as an irrigation in 1 to 4,000 to 1 to 2,000 strength. Leistikow considers its results in gonorrhœa remarkable; he uses a 0.02 to 0.2-per-cent. injection. For posterior urethritis Fürst employs an instillation of six to ten drops of three-per-cent. solution by Guyon's urethral syringe. As a prophylactic following suspicious coitus he instils three or four drops of a ten-per-cent. solution. It is said to be much less irritating than silver nitrate, and to be followed by no desire to urinate. Unna says that, unlike silver nitrate, it does not favor granulation, but favors rather the production of epithelium. The best results are obtained in clean ulcers and in old hard ulcers with callous margins after the horny layer has been removed by salicylic plaster mull. It is a strong astringent for indolent, œdematous, or hemorrhagic granulations. Falta uses a half to three per cent. solution for granular conjunctivitis. *W. A. Bastedo.*

ICHTHOFORM is a blackish-brown, amorphous, almost odorless and tasteless powder, resulting from the action of formaldehyde on ichthyol. It is insoluble in all ordinary solvents. Aufrecht has made a comparative study on bacteria and animals, especially frogs, rabbits, and dogs, and finds it to have a greater antiseptic power than iodoform and analogous compounds, and to be comparatively innocuous. Goldmann uses it locally for endometritis in ten-per-cent. glycerin mixture on tampons, and as a deodorizer in ozæna. Internally he employs it in atonic or functional digestive disorders. Five grains (0.35 gm.) may be given every three hours for acute gastro-enteritis and intestinal tuberculosis, in which conditions it is highly recommended. Polacco employs 0.5 gm. (gr. viij.) in capsule up to twelve capsules a day for enteric fever. It has no action on the nervous system, and its continued use in large dose is said to be without effect on the kidneys. In conditions of indicanuria with headache and malaise, its administration is quickly followed by disappearance of the indican from the urine and the relief of the symptoms. On account of its irritating properties in vaseline mixture, Unna prefers it made up with zinc ointment in one-per-cent. strength as an application in eczema capitis of children, psoriasis, eczemas of seborrhœic origin, and in pityriasic forms of eczema. As its hardening powers lead to superficial necrosis, it can be used only in affections which tolerate the desquamation of the horny layer. *W. A. Bastedo.*

ICHTHYOCOLLA. See *Isinglass.*

ICHTHYOL.—This is the trade name of a compound described as ichthyo-sulphonic acid in combination with ammonium. It is obtained by the distillation of a bituminous mineral deposit of the Tyrol, which contains an abundance of the fossil remains of fish and other marine animals. During dry distillation there passes over, between 100° and 225° C., a crude volatile oil. This is treated with an excess of concentrated sulphuric acid, which forms ichthyo-sulphonic acid, and this is precipitated by the addition of brine. The product, in addition, contains an uncertain percentage of unchanged oil, which cannot be removed without producing decomposition of the whole compound.

Ichthyo-sulphonic acid forms salts with ammonium, sodium, zinc, lithium, calcium, iron, silver, and various other metals, but the ammonium salt is that generally understood by the title ichthyol.

Ammonium-ichthyol-sulphonate, $C_{28}H_{36}S_2O_8(NH_4)_2$, is a thick, brownish fluid, with a smoky bituminous odor and taste. It is soluble in water, oil, glycerin, and a mixture of alcohol and ether. Its virtues are ascribed to the large amount of sulphur that is present, about sixteen per cent. It has a great affinity for oxygen and is a powerful reducing agent. It is stated to be an active germicide and to be free from any toxic action, but an instance is recorded in which the applications of one part of ichthyol to two parts of glycerin, to the curetted surface of the uterus, produced very alarming symptoms. The patient complained of the taste of the drug, tachycardia, and depression, and remained prostrated for twelve hours.

The therapeutic value of ichthyol depends upon three factors: its antiseptic action, a contractile effect which it exerts on the vascular system, and its reducing property.

It was introduced in 1883, by Unna of Hamburg, as a

remedy for the treatment of various forms of skin disease. He described it as the remedy *par excellence* for acne. He advised fifteen drops twice a day internally, and a ten-per-cent. lotion to be painted on the affected parts at night; each day the lesion was to be bathed with hot water and ichthyol soap. In eczema and other forms of skin disease he advised it to be used more cautiously and in weaker solutions. In all these conditions its internal administration is also advised, as it is supposed to possess valuable alterative properties, which assist its local action. Ichthyol has come into very extensive use for all forms of skin diseases, and for the removal of the product of inflammatory processes, in chronic rheumatism and in cases of enlarged glands. In skin diseases it is applied as an ointment of the strength of five to ten or fifteen per cent. A varnish of ichthyol is a favorite method of using the drug. It is made of ichthyol 10 parts, starch 40 parts, solution of albumin 1 part, and water to 100 parts. The starch is mixed with the water, the ichthyol is then well rubbed up with it, and lastly the albumin is added. For inflammatory deposits stronger preparations are employed; ointments containing fifty per cent. may be used, or a mixture of ichthyol and glycerin is applied and the part is covered with lint and bandaged. Ichthyol plasters and ichthyol wadding may also be obtained.

The remedy has not been much used in general surgery, but in gynæcology it is a favorite application in all uterine and vaginal inflammations. It may be applied in a glycerin solution, or in its pure state on tampons, or medicated pessaries may be introduced after antiseptic and astringent douches have been used. When gonorrhœa is a factor the drug is thought to be especially beneficial. It has also been employed in inflamed states of the prostate gland, a ten-per-cent. solution being injected into the rectum.

In a paper presented at the Fourth International Medical Congress, Unna dwelt upon the value of ichthyol in the treatment of leprosy. His conclusions were: (1) Lepra tuberosa, even of universal extension and of more than one year's standing, can be cured; (2) the cure can be effected in a comparatively short time by the energetic internal and external employment of reducing remedies; (3) among these may be specially recommended ichthyol, chrysarobin, pyrogallol, and resorcin; the only one of which that can be administered internally, for a length of time, without danger, is ichthyol. He advised the application of a fifty-per-cent. ointment, and also the internal administration of fifteen to twenty-four minims (1.0 to 1.6) during the day.

Internally ichthyol is administered in pill form in capsules, the dose being up to twenty minims (1.3) daily for an adult. The dose for a child of two years is given as two minims (0.13) daily. *Beaumont Small.*

ICHTHYOSIS.—Definition.—Ichthyosis is a congenital cutaneous deformity in which the skin is dry and rough and the epidermis thickened and scaly.

Etiology.—Almost all observers agree in regarding ichthyosis as a congenital disease, and the arguments in favor of this view are: That the disease commences early in life and endures throughout life, is only temporarily benefited by treatment, and immediately recurs on the cessation of treatment; that the disease is not inflammatory, as infective and toxic diseases are, but acts more like an anatomical deformity; that it is often a family disease, two or more brothers or sisters being frequently similarly affected, and even when the immediate family is free, more distant relatives may be found afflicted.

It is hardly necessary to draw attention to how characteristic this skipping over individuals is in hereditary affections, one or two members of one branch of a family and one or two of some other branch being picked out, the rest escaping. Nevertheless it must be admitted as remarkable how frequently cases of severe ichthyosis are reported in which the parents are said to be perfectly healthy, and this has been noted even when several of the children have ichthyotic skins.

An objection has been raised to calling ichthyosis a congenital disease, because it usually does not appear until the second or third year of life or even later. This, however, is not a valid objection, because ichthyosis agrees exactly in this particular with other congenital deformities. Nævi, for example, although certainly congenital, frequently do not appear until a considerable

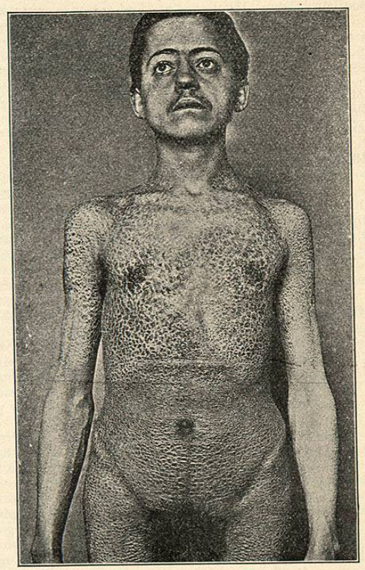

Fig. 2786.—Ichthyosis. (From A. Neisser's "Stereoscopischer medicinischer Atlas.")

time after birth; not, indeed, until the gradual development of the affected individual or the growth of the lesion itself brings the blemish to view.

Undoubtedly ichthyosis depends in a great measure on defective action of the sweat and sebaceous glands. Three of its features point decidedly in this direction, viz.: the dryness and lack of unctuousness of the skin; the improvement of the symptoms during the summer months when the sweat glands are most active; and the tendency to the localization of the disease in those parts where the sweat and sebaceous glands are least active, as on the extensor surfaces of the limbs, leaving the articular folds, such as the bend of the elbows, the axillary, inguinal, and popliteal folds, unaffected.

Although ichthyosis is an hereditary and congenital affection, yet it probably may be accentuated by diseases which are not in their true sense hereditary. Syphilis is not in the true sense of the term an hereditary disease. What we call hereditary syphilis is an "infective disease" caught congenitally. The way that syphilis, for instance, may possibly accentuate ichthyosis is shown by two cases reported by Gaston and Emery. The father of these children had a slight ichthyosis and also had syphilis. The children acquired syphilis congenitally, and became after birth markedly ichthyotic. Besides ichthyosis, however, the children had microsphygmia, and the authors entertained the opinion that the small pulse was owing to a generalized, congenital, syphilitic arteritis, and that this affection of the arteries so interfered

with the nutrition of the fœtus as to accentuate the hereditary tendency to ichthyosis.

Recently Edward Fournier has collected from the literature nine cases, and has added one of his own, in which patients having hereditary syphilis also had ichthyosis. The author clearly states, however, that he does not believe ichthyosis to be a symptom of hereditary syphilis, but explains the coincidence by the theory that hereditary syphilis is at times one of the causes of degeneration in the individual, and that ichthyosis is a symptom of degeneration.

Interesting, particularly in its connection with treatment, is the relationship between defective development of the thyroid gland and ichthyosis. As one of the symptoms of cachexia strumipriva is a rough dry skin; a mistake in diagnosis might easily occur, or defective action of the thyroid gland might accentuate an already existing ichthyosis.

Symptoms.—As ichthyosis is a congenital deformity there are necessarily all grades of it, from almost inappreciable manifestations up to disgusting monstrosities. Dryness of the skin and desquamation are, however, never absent in ichthyosis, and in fact in the most attenuated form of the disease, in xerodermia, extreme dryness of the skin, a very fine desquamation, and obstruction with epithelial cells of the pilo-sebaceous orifices are the only symptoms present. It is this last symptom, the accumulation of epithelial cells about the points of emergence of the hairs, that gives those having ichthyosis their "goose-flesh" appearance. This same permanent "goose-flesh" appearance constitutes the disease called keratosis pilaris, and it is because the same appearance is produced by the same kind of plugging of the same orifices, and also because the favorite situation of both keratosis pilaris and ichthyosis is on the extensor surfaces of the upper arms and thighs, that some authors regard keratosis pilaris, when it exists alone, as constituting the very lightest form of ichthyosis, even lighter than xerodermia.

Of the two symptoms, dryness and desquamation, Thibièrge considers dryness the more essential, even thinking dryness without desquamation often indicative of ichthyosis; therefore he would classify congenital permanent anidrosis as a form of ichthyosis, and this for the following reasons: In both diseases the skin is unusually dry, both are congenital, both occur in families as hereditary diseases, and some members of the same family may have anidrosis while others have ichthyosis. He thinks that many cases of ichthyosis which are supposed to develop during adolescence or later, are simply cases in which anidrosis was at first the sole symptom and which remained comparatively unnoticed, the more disagreeable symptom of scaliness supervening later.

Apart from the two general characteristics of dryness and a tendency to adhere and form masses, the superficial epithelium in ichthyosis shows many variations. It is sometimes powdery, and the cheeks for example may look as if dusted with white face powder; this constitutes a variety of the pityriasis simplex of some authors. This form of ichthyosis when more marked shows a diffuse granular coating, chalky and white, which is particularly apt to show itself on the outer surfaces of the upper and lower extremities. Instead of the granular powdery condition there may be scaling, and the scales may be clear gray or grayish-black, thick or thin, lustreless, hard or soft, but as above stated they frequently show a tendency to adhere with their flat surfaces tightly to one another, sometimes forming thick, uniform, lamellated, corneous deposits. When the epidermis accumulates in thick horny masses as it does in ichthyosis hystrix, pigment may develop in it, which may be a dirty green, a bright green, dark green, or greenish-black. The green may be so bright as to be startling, even seeming to have been artificially applied. The edges of the scales may be separated from one another by little furrows, or they may overlap like fish scales. Sometimes the surface of the skin looks like the finely crumpled tissue paper called crêpe paper used for lamp shades, where the ridges run in every direction, crossing one another and dividing the surface into a vast number of quadrilateral areas. The wrinkled epidermis in such cases looks as if too large for the cutis. Sometimes instead of there being ridges there are fine shallow cracks, passing through the superficial layers only. These cracks fill with dirt and, just as under the finger nails, this dirt assumes a dirty greenish-gray color, marking the skin off into lozenge-shaped areas by a dirty greenish-gray network. The lines may crack down deeper than indicated above, and the superficial epidermis may be broken and upcurved along the edges of the enclosed lozenge-shaped areas resembling the bark of some trees. The surfaces of these lozenge-shaped areas may glitter and reflect light like the facetted skin of some reptiles. Sometimes the surface looks unnaturally smooth and polished, with lines running across it at all angles, as if the surface had been varnished or had collodion poured over it, and had cracked in the drying.

Frequently the skin does not crack, but has running across it a vast number of criss-cross furrows dividing the surface in the same way into quadrilateral or irregular areas. These furrows are really the natural markings of the skin exaggerated, and are frequently chalky white and powdery; in such skins if the finger nail be drawn sharply across the surface it will leave a chalky white, crumbly, permanent mark.

Sometimes the papillary layer of the skin is hypertrophied, and when this occurs, and corneous masses or spines are formed over them, it gives rise to one of the varieties of ichthyosis hystrix. Another variety of such horny spines is formed by a great accumulation of the epithelial cells projecting from the pilo-sebaceous orifices, constituting the keratosis pilaris above named; this occurs generally on the extensor surfaces of the arms. Ichthyosis hystrix is never universal, although it may occur over large tracts of the skin. Usually it occupies only certain regions, while the intervening skin is xerodermatic. A child at present under treatment in the University Clinic has ichthyosis hystrix only on the ankles, while other regions show several different varieties of ichthyosis. This condition of ichthyosis hystrix, literally "hedgehog, fishy disease," is considered particularly undesirable in a bed-fellow.

The true skin may be atrophied, tightly stretched, and thin, and the subcutaneous fat layer may be thin and poorly developed.

The face is frequently unaffected except by a transitory powderiness, a pityriasis. The palms and soles are dry and powdery but not scaly, with the furrows more marked and more numerous than normal, and this condition may remain after treatment has improved the skin in every other locality.

The hair is frequently normal, of good color, lustre, quality, and quantity, but it may be dry, frail, and thinly scattered, constituting an expression of the same fault of development that gave rise to the ichthyosis. Sometimes there is nearly complete alopecia, even the eyebrows and eyelashes being almost entirely absent (Thibièrge). The nails may be strong and in every way normal. They may, however, be thin, brittle, and either transversely or longitudinally ridged, or there may be an accumulation of dry, brittle, corneous substance under the nails.

These patients sometimes give off a flat, stale, penetrating, disagreeable odor, such as is met with in other cases of generalized hyperkeratosis with maceration of the epidermis, as in Darier's disease for example (Thibièrge).

Usually the only subjective symptoms of ichthyosis are itching and a sensitiveness to cold; chilly feelings being experienced on the slightest lowering of the atmospheric temperature.

A patient usually presents examples of a number of the conditions enumerated above; for instance, the hair may be good, but the scalp is usually in a condition that cannot be distinguished from dry seborrhœa. The outer surfaces of the arms and thighs and the skin of the trunk