

CLIMATE OF ATLANTIC CITY, N. J., LATITUDE 39° 22'; LONGITUDE 74° 25'. CONDENSED FROM A CLIMATIC CHART OF TEN YEARS, IN THE PREVIOUS EDITION OF THIS HANDBOOK, AND FROM UNITED STATES WEATHER BUREAU OBSERVATIONS FROM 1891 TO 1898, EXCEPTING THE YEARS 1895 AND 1896.

Data.	February.	March.	April.	May.	June.	July.	August.	Sep-tember.	Oct-ober.	Average for nine months.
Temperature—Average or normal	34.9°	39.0°	46.9°	57.2°	66.7°	71.6°	72.3°	69.3°	56.7°	56.9°
Average daily range	14.8	14.1	13.7	12.7	14.0	13.6	12.2	12.6	12.9	
Mean of warmest	42.4	45.5	53.5	63.9	74.5	79.9	77.4	74.8	64.3	
Mean of coldest	27.6	31.4	39.8	51.2	60.5	66.3	65.2	62.2	51.4	
Highest or maximum	65.3	67.5	75.8	84.1	91.8	93.5	89.5	89.7	81.2	
Lowest or minimum	2.7	13.6	23.6	37.3	47.0	54.4	55.3	45.0	31.6	Total precipi- tation for nine months. 30.12
Humidity—Average relative	79.5%	79.5%	78.1%	81.1%	82.6%	83.6%	82.8%	80.7%	79%	S.
Precipitation—Average in inches	3.06	3.96	3.59	2.35	2.32	2.99	5.23	3.82	2.80	Total for nine months. 100.3
Wind—Prevailing direction	N. W.	N. W.	N. W.	S.	S.	S.	S.	S.	W.	93.7
Average hourly velocity in miles	10.8	12.0	11.7	10.1	8.7	7.7	9.0	10.4	9.6	194.0
Weather—Average number clear days	6.6	9.5	12.3	10.8	12.3	10.5	13.5	13.0	11.8	
Average number fair days	7.5	9.0	10.6	9.6	12.8	13.6	11.0	10.3	9.3	
Average number clear and fair days	14.1	18.5	22.9	20.4	25.1	24.1	24.5	23.3	21.1	

From the records from which these climatic statistics have been compiled, it is learned further that in 1891, during the nine months of the season from February 1 to November 1, the mercury fell to 32° F. only twice in February and three times in March, and that it did not rise above 90° F. except once, which was in July, when it reached 91° F. In 1892, during the same period, it fell below 32° F. four times in February and three times in March. It rose above 90° F. once only, which was in July.

In 1893 it was below 32° on seven days (which included the nights as well) during the period of nine months—five times in February and twice in March. It exceeded 90° F. once only in that year, reaching 93° F. on one day in July. In 1894 it was below 32° F. on six days and nights in February only, and did not rise above 90° F. even once during that year.

Meteorologically speaking, one of the important advantages of Atlantic City as a winter and spring resort is the small amount of snow there in comparison with other localities in the same latitude and with most places in the Northern and Middle States. This is much more striking than even the figures of the Weather Bureau would lead one to infer, for the reason that in consequence of both the porous sandy soil and the effects of the strong sea air, most of the snow that does fall there is melted almost immediately or within a day or two. It is, as a rule, only in the very exceptionally severe winters that sleighing may be enjoyed for a week or two, and even then usually early in the winter before the season has fully opened. A handsome ocean promenade forty feet wide, elevated twelve feet above the beach on steel supports, and known as the board walk, skirts the front of the town and its nearby suburbs for five miles, and on this snow is never allowed to lie, even when it lingers longer than usual elsewhere, so that the throngs of invalids on foot or in wheeled chairs may always be able to enjoy an outing under comfortable and cheerful conditions. During the busy season these throngs of health-seekers pass continually to and fro with the ever-attractive breakers rolling in on the one side (at some points even under their feet), the sun shining down in full force from above as well as reflected from the water so as to have double power, and the continuous buildings on the landward side affording an efficient shelter from the winter winds which blow from the north or west when cold enough to be annoying. This board walk, extending for miles along the edge of the water, is the chief attraction of Atlantic City in all seasons of the year, but in winter it is of marked advantage to invalids in enabling them to spend most of their time in the open air and sun, except in the worst weather. When it actually storms, invalids may sit in the comfortable sun parlors or glass-enclosed porches connected with a large proportion of the nine hundred hotels and boarding-houses which Atlantic City now possesses, and a part of which are open all the year. The board walk and omni-

present sun parlor are two almost unique features of this popular resort.

There is an abundant supply of pure water drawn mainly from springs and creeks on the mainland, but also in part from a number of deep artesian wells. Underground sewers, deeply placed according to a novel system, convey the sewage to a central point on the meadow back of the town, where it is pumped to a sufficient elevation to admit of its flowing by gravity to the waters of the bay so far away from the hotels and residences, as well as from the bathing grounds, that it never causes the slightest offence or inconvenience.

The population of Atlantic City is now about 30,000, and it may be interesting to add that besides the nine hundred houses that entertain guests, including a number of first-class hotels with all the modern conveniences, there are in the town twenty-six churches, a casino, a number of good theatres, and numerous minor places of amusement (the number of such in the height of the summer season having been estimated as high as two hundred), three daily papers and five weeklies. Sixty-five physicians of all kinds, including some unusually able men, look after the needs of the sick and ailing, while twenty-eight drug stores see to it that no one suffers for lack of medicines. There are also a fully equipped hospital and several well-managed hot-and-cold sea-water bathing establishments. The Atlantic City Country Club with golf links affords recreation for guests in the spring and summer, and there are also abundant facilities for rowing, sailing, and fishing in the waters all around.

A fine level driveway near the beach from Atlantic City to Longport at the lower end of the island is much appreciated by coaching parties as well as by bicyclists. In short, very few if any health resorts even in Europe offer a larger total of advantages or a greater variety of ways in which invalids may agreeably pass the time while wooing back their lost health.

Boardman Reed.

ATOTONILCO.—Municipality of Chiconcuautla, Puebla, Mexico. This spring is located near the town of Tlaltenango. According to an examination made by Zuñiga the water has a sulphurous odor, is slightly unctuous to the touch, limpid in appearance, and contains the carbonates of lime and magnesia, sulphurous acid, and carbonic acid and sulphureted hydrogen gases. It is recommended in rheumatism, neuralgia, and diseases of the skin.

N. J. Ponce de León.

ATOTONILCO DE SAN ANDRES.—Municipality of San Andres, Zacatecas, Mexico. The waters of these springs are lukewarm and contain sodium sulphate and other ingredients. They are recommended for syphilis and skin diseases, but no bathing facilities have been provided.

N. J. Ponce de León.

ATRESIA.—(Imperforation, closure, or absence of a natural opening or passage.) There may exist an atresia of any one of the external orifices or internal passages of the body: Atresia pupillæ, A. palpebrarum, A. oris, A. auris, A. tracheæ, A. œsophagi, A. bronchii, A. intestini, A. recti, A. ani, A. vaginae, A. urethrae, A. vesicæ, A. uteri. The imperforation may be the result of disturbances of development in fetal life, or it may arise secondarily to local inflammatory processes either before or after birth, or may be produced by mechanical obstruction, pressure, etc. According to the etiology we may therefore distinguish two classes of atresia, the congenital and the acquired.

Atresia Pupillæ.—Congenital closure of the pupil of the eye not infrequently occurs, and is usually the result of a persistence of the pupillary membrane which in fetal life covers the lens and as a rule disappears in the last month of pregnancy. Various forms of this malformation occur: the pupil may be entirely covered by a thick grayish membrane containing blood-vessels, or by a network of fine threads in which vessels run, or irregular brown or grayish patches may appear in the pupil. Acquired atresia of the pupil is of rather frequent occurrence in adult life as the result of inflammations of the iris and choroid, but it may take place at any time, even before birth. In chronic iritis the pupil may be partially or completely closed by vascular connective tissue.

A. Palpebrarum.—Total imperforation of the eyelids is not of frequent occurrence. The congenital form is usually associated with grave defects of development which do not permit of extra-uterine life. The edges of the lids may be firmly adherent to each other and to the eyeball (symblepharon). The condition may be caused by a failure of separation of the conjunctivæ, intra-uterine inflammations of the eye, or it may be caused by amniotic adhesions. The latter cause is probably the most frequent. One or both eyes may be affected. Remains of the amniotic adhesions may be found in the shape of tags, bands, or firm membranes covering the lids and adherent to them. Acquired atresia of the eyelids (symblepharon, ankyloblepharon) occurs after severe ulcerations, diphtheritic conjunctivitis, burns caused by lime, hot metal, and explosives. In cases in which there is complete occlusion the edges of the lids are firmly united to each other and to the eyeball.

A. Narium.—Complete atresia of the nostrils is rare and is usually found in association with cyclopia. In this type of monster the nostrils are represented by one or two fleshy imperforate tags which are usually placed in the forehead above the solitary eye. The atresia of one nostril through a congenital obliquity of the septum is not infrequent, and is of great practical importance because of the habit of mouth-breathing and the chronic catarrhs of nose and pharynx which are associated with it. Acquired stenoses of one or both nostrils are also not rare. The closure may be caused by new growths, polypi, injuries, chronic catarrhal conditions, etc. This condition is likewise of great practical importance.

A. Oris.—Complete absence of the mouth is a very rare occurrence, and is always associated with marked defective development of the head and face. It is most frequently the result of amniotic adhesions, or of an abnormal tightness of the cephalic cap of the amnion. Partial atresia (microstomia) is of more frequent occurrence, but is rarely found in a viable fœtus. Congenital closure of the fauces is likewise of rare occurrence.

A. Auris.—Complete failure of development of the external auditory meatus occurs very rarely. The lumen of the meatus may be filled with compact bone or cartilage, or it may be closed by a firm membrane of connective tissue in which small islands of bone or cartilage may be present. With this malformation there is almost always associated a defective development or entire absence of the external ear, and imperfect development of the tympanum and internal ear. The site of the ear may be indicated only by a slight indentation. In other cases a cartilaginous canal may be present which is closed

at a slight depth by bone or membrane. Partial atresias, hour-glass or symmetrical narrowing of the external canal, are of rather frequent occurrence. In these cases the external ear may be normally developed or show greater or less malformation.

Acquired atresia of the external canal is not rare. Inflammations may cause thickenings of the wall of the meatus, and stenosis or constriction may result from the formation of connective tissue. Very frequently there is a polypoid growth of granulation tissue into the canal, and through the adhesion of the granulating surfaces complete atresia of the canal may result; or bands, bridges, and septa of connective tissue may be formed. A subperiosteal formation of new bone may lead to osseous atresia; in other cases exostoses may block the canal. Detached osteomata sometimes develop in the granulation tissue formed in inflammatory processes. Further, cholesteatomata are rather frequently found blocking up the external canal. In these cases all parts of the ear may be perfectly developed and the tympanum intact. It is therefore probable that these formations owe their origin to a desquamative inflammation of the lining of the canal. In very rare instances they may develop from epidermoidal cells which during the period of embryonic life have found their way into the meatus. Plugs of cerumen, foreign bodies, tumors, parasitic growths, etc., may also lead to an acquired atresia of the auditory canal.

A. Tracheæ, Bronchii, etc.—Atresia of the larynx through the formation of connective-tissue membranes or through the adhesion of the walls is of very rare occurrence, and has been observed only in cases showing marked malformations of the face. There may be complete absence of the trachea, the bronchi being given off directly from the larynx. In other cases the trachea may be represented by a fibrous cord-like structure, or its walls may be united by the formation of connective tissue. Similar formations of connective tissue may block the main bronchi, the trachea ending in a blind tube. Partial narrowing of the respiratory passages is not uncommon. The acquired forms of stenosis of the trachea and bronchi are for the greater part produced by conditions external to these structures, new growths in the neighboring lymph glands, aneurisms, etc. Obstruction of the passages themselves may be produced by inflammatory conditions, foreign bodies, etc. New growths within them are of rare occurrence.

A. Œsophagi.—Atresia of the œsophagus throughout its entire length is very rare. Congenital imperforation of this organ is most frequently found in the lower two-thirds, the upper third being open and ending in a blind tube, while the lower closed portion is represented by a thin cord-like structure. Associated with the congenital atresia there is almost always an abnormal communication with the trachea either at the lower end of the upper portion or at the upper end of the lower portion, which may be continued as an open canal from the point of communication. In other cases the middle portion of the œsophagus may be obliterated, so that the upper and lower portions are separated from each other by an imperforate cord of connective tissue. In these cases no connection with the trachea may exist. As a rule this form occurs late in fetal life and is most probably due to inflammatory processes. Acquired stenoses of the œsophagus are of relatively frequent occurrence and are of great clinical importance. They may be caused by pressure of tumors in the cervical or mediastinal lymph glands and thyroid, by mediastinal tumors, aneurisms, etc. The lumen may be obturated by polypoid growths of the mucosa, carcinoma, thrush, foreign bodies, etc. Strictures are produced by contractions of scars resulting from the effects of alkalies, acids, carcinomatous and syphilitic ulcerations, etc.

Complete occlusion of the stomach is very rare. Occasionally the organ is very small, resembling a portion of the intestine. Congenital occlusion of the pylorus is very rare, while acquired stenosis at this point is relatively frequent. In almost every case the latter is due to the obstruction or constriction of the orifice by new

growths, but it may be caused by healing ulcers or by pressure from without. Partial constriction of the stomach may occur in any part of the organ through the contraction of healing ulcers, new growths, etc. (hour-glass constriction).

A. Intestini.—Congenital atresia or stenosis may occur at any portion of the intestinal tract. There is usually only a single such closure, but occasionally multiple atresias may be found. The intestine may be entirely absent for a portion of its course, or be represented by a cord-like band of connective tissue. The portion of mesentery belonging to the obliterated intestine is also absent. The entire jejunum and ileum may be absent, the duodenum ending in a blind sac. In such cases both stomach and duodenum may be greatly dilated. The most common site of intestinal atresia is in the region of the opening of the ductus choledochus. If it is below the opening the collection of secretions together with the swallowed amniotic fluid may cause an extreme dilatation of the duodenum and stomach. The lower portion below the imperforation begins in a blind sac. In other cases the atresia is located above the opening of the common duct, so that bile passes into the lower portion of the intestine, as shown by the presence of meconium. The genesis of the larger congenital defects of the intestine has not yet been satisfactorily explained. Peritoneal adhesions, embolic infarction of the mesentery, etc., have been thought to be primary causes, but no conclusive evidence has yet been shown. It is more probable that some essential defect of development, such as an abnormal axis rotation, lies behind these malformations. The smaller localized atresias occurring in late fetal life are most probably the result of pathological processes in the peritoneum, and in some cases this has been definitely shown. Such conditions are most frequently found in children with congenital syphilis who die a few days after birth. Acquired obliteration of the lumen of the intestines is not uncommon, the most frequent causes being new growths, constriction of healing ulcers, peritoneal bands and adhesions, etc. They may be found in any portion, but are more common in the large intestine, particularly in the region of the sigmoid flexure and rectum.

A. Ani.—Of all the congenital atresias the most common and important is that of the rectum and anus. According to the location of the imperforation a number of varieties of this malformation exist, the most important of which are:

(a) **A. Ani Simplex.**—In this form the anus is closed by a connective-tissue septum of varying thickness. It may be a very thin membrane so that the contents of the rectum may be easily felt through it, or the rectum may end in a blind sac some distance above the anus. In other cases the free end of the rectum lies in the pelvis and is usually greatly dilated. This malformation is not always a primary defect of development, but may be caused by an abnormal growth of connective tissue. In other cases there may be a complete failure of development of the lower end of the intestine. In place of the anus there is usually only a slight depression in the skin. The sphincter is usually formed.

(b) **A. Ani et Recti.**—The large intestine may end in a blind sac far above the anus, which is usually not indicated at all, or only by a very slight groove in the skin.

(c) **A. Recti.**—The anus may be perfectly formed, but the rectum fails entirely or is converted into a solid strand of connective tissue.

In these forms the sinus urogenitalis may be normally developed, or the original communications between the intestine and the anterior portion of the cloaca may remain preserved, or the rectum may open into the perineum anteriorly to the anus, or into the scrotum, penis, bladder, vagina, uterus, or urethra. We may, therefore, further distinguish such forms as: *atresia ani vesicalis*, atresia of the anus with fistula of the bladder; *atresia ani urethralis*, atresia of the anus with opening into the urethra—usually the membranous portion, as this malformation is found almost exclusively in male individuals; *atresia ani vulvo-vaginalis* and *uterina*. atresia

of the anus with communication of the rectum into the vagina, vulva, or uterus. In other forms both the rectum and the sinus urogenitalis may open into a common closed space which has no external opening and which through the collection of urine and meconium may become greatly dilated. The more marked malformations of this class preclude life, but some of the cases are capable of surgical cure. Acquired atresias of the anus or rectum are not infrequent and are produced by new growths, cicatricial contraction of healing ulcers, syphilitic processes, etc.

A. Urethra et Vesicae.—Total atresia of the male urethra occurs rarely, and is found in association with complete absence of the external genitals. As a result of the collection of urine in the bladder an enormous dilatation of the abdomen may occur which may be so great as to prevent normal delivery. Rüber observed an adult male with complete absence of penis whose urethra communicated with the rectum. The most frequent localized atresia of the male urethra is at the external meatus and orifice of the prepuce. Imperforation of the anterior urethra occurs rarely as a result of defective development of the urethral septum, and in the posterior portion as a result of proliferations and adhesions. Congenital atresia of the female urethra also occurs rarely, and may affect the entire length of the urethra or only a portion. As a result of the congenital imperforation of the urethra in both sexes, congenital dilatation of the bladder, ureters, and pelvis of the kidneys results from the retention of urine. Occasionally the urachus remains open and there is an escape of urine from the umbilicus, or there may be abnormal communications with the intestines, vagina, uterus, etc., by which the urine passes. Acquired atresia of any portion of the urinary passages may occur as the result of cicatricial adhesions and contractions, new growths, tuberculosis, syphilis, external pressure, etc. Gonorrhœa and direct injury are the most common of these factors.

A. Vaginae et Uteri.—A congenital total atresia of the female genital tract may exist in connection with a total defect of the external genitals. The vagina may end in a closed space in common with the bladder and rectum (persistence of the cloaca). The most common site of congenital atresia of this tract is at the opening of the vagina, which is closed by a membrane of greater or less thickness (gynatresia). The imperforation may be due to an abnormally thick hymen (atresia vaginalis hymenalis). The closure may extend throughout the entire length of the vagina or occur at any portion. Complete absence of the vagina is rare, more frequently the organ is represented by a fibrous cord. The closure is due to a failure of the epithelial layers to separate or to secondary adhesions. Congenital atresia of the uterus is also rare. The occlusion occurs usually at the cervix, which may be closed partly by mucosa or partly by muscle and connective tissue. This condition may exist without other malformations and remain undiscovered until puberty, when the collection of the menstrual discharges within the dilated uterus and tubes may give rise to very important symptoms. The atresias of the vagina may similarly assert themselves. Complete absence of the tubes occurs in connection with marked malformations of the uterus. Atresia of either the abdominal or uterine end may occur, or an imperforation may exist in any part of the tube.

Acquired atresias of the female genital tract may be the result of cicatricial contractions following ulcerations, etc. (gangrenous vaginitis, tears, use of caustics, cervical amputations, retained pessary, tumors, etc.). The majority of the atresias of the vagina and uterus which are not associated with marked malformations are amenable to surgical treatment. *Alfred Scott Warthin.*

ATROPHIA PILORUM PROPRIA.—By this term is meant simple atrophy of the hair uncomplicated with apparent disease of the scalp. Under it are included at least three forms, namely: fragilitas crinium, trichorrhexis nodosa, and monilethrix. They have one feature

in common, which is that the hairs are friable, splitting or breaking with slight traction.

FRAGILITAS CRINIUM.—This is also called scissura pilorum. The characteristic of this disease is that the hair is dry and splits either at its ends or in its continuity. It may be symptomatic or idiopathic.

1. **Symptomatic Fragilitas Crinium.**—This is a very common affection of the hair, and is met with in many diseases of the scalp, such as eczema, ringworm, favus, and seborrhœa. Whenever the scalp is abnormally dry, and also in general constitutional diseases in which the nutrition of the body is lowered, the hair may become dry and split. It is seen chiefly in the long hair of women. If the hair is viewed in mass it looks as if it had been singed, if the case is a severe one. In any case, if the hair is held in the hand in a good light it will be noticed that the ends of the hair are split into several diverging filaments.

2. **Idiopathic Fragilitas Crinium.**—In this form, which is much rarer than the preceding, the hair splits at the end without any apparent disease of the scalp. The split may be at the free end, in the continuity of the shaft, or within the bulb. The hair may be cleft only at the end, or the cleft may run up the shaft for a variable distance. If the cleft occurs in the continuity of the shaft the filaments may hold together or separate widely. The disease is seen most often in the long scalp hair of women. It occurs also in the beard. There may be but a few hairs affected or there may be many, giving the singed appearance spoken of above. In some cases, as the hair splits and breaks off before it has attained any great length, the woman is unable to put up her hair, and has to wear it cut short.

Pathology.—Usually, nothing further abnormal is found about the hair than that it splits. The hair bulbs may be normal or atrophied.

Etiology.—We do not know what the cause of the disease is. We assume that it is a disturbance of nutrition. In very long scalp hair it may be due simply to a lack of nutrition on account of the length of the hair.

Treatment.—The split hairs should be cut off above the cleft. Every effort must be made to improve the nutrition of the patient, and to cure any disease of the scalp. A little oil, vaseline, or pomade should be rubbed into the scalp several times a week. In massage we have the best stimulant, when properly done.

TRICHOORRHESIS NODOSA.—Also called clastothrix, and nodositas crinium. This is a disease of the hair characterized by the appearance along its shaft of one or more nodose swellings, and by the breaking of the hair through the nodes.

Symptoms.—The disease affects most often the hair of the beard. The patient notices, when handling the beard, that there are irregularities upon some of the hairs; or else he sees that his beard looks ragged. On examining the hair there will be found one or more whitish, gray, or normal colored, shiny, transparent, nodular swellings, not unlike the nits of pediculi, excepting that they are oval and involve the whole circumference of the hair, not pear-shaped and fixed on one side of the hair as in pediculosis. There have been found as many as five nodes on one hair. The diameter of the nodes varies with the diameter of the hair. The nodes are usually on the upper third of the hair. The hair is very brittle and

FIG. 378.—Trichorrhexis Nodosa.



easily broken by combing it or by handling it, or the break may occur seemingly spontaneously. The fracture takes place almost invariably through the node. When the hair breaks completely the remaining end will have a frayed-out appearance. If the ends do not separate, but the break is through the node, then the appearance will be that of two small paint brushes pressed end to end. The fracture may be longitudinal through the node. When many hairs are affected we see the same singed appearance met with in fragilitas crinium.

While the disease was first described as affecting the beard, it is seen also on the scalp hair, especially in women. The scalp hair being so much finer than is the hair of the beard, the nodes are very much smaller and more apt to be overlooked. Sometimes the nodes on the scalp hair are found only with the microscope. The disease has also been met with on the pubic hair, the scrotal hair, and the hair of the labia majora, the axilla, and the eyebrows.

Etiology.—The cause of the disease has not been determined. It may be a disturbance of the nutrition of the hair. By some it is thought to be a neurosis. McCall Anderson has reported a case in which the disease seemed to be hereditary. In some countries, as about Constantinople, it is far more prevalent in the scalp than in other countries. By some investigators parasites are believed to be the cause of the disease, and a micro-organism is said to have been found. Others deny the presence of a micro-organism. Simple handling of the beard has also been credited with producing the disease.

Treatment.—Thus far treatment has been most unsatisfactory. Mercurial ointments may be tried. Gamberini recommends bathing with a lotion of three drachms of subcarbonate of potassium in four ounces of distilled water; or using inunctions of tannic acid or oil of cade. Schwimmer advises an ointment of seven grains of oxide of zinc, fifteen grains of washed sulphur, and two drachms and a half of simple ointment. This is to be rubbed in night and morning. As far as the beard is concerned the chief reliance is upon shaving, with the hope that after a time the hair will grow in properly.

MONILETHRIX.—This is also called aplasia pilorum propria.

Symptoms.—This form of atrophy of the hair is often mistaken for trichorrhexis nodosa, because like it it is marked by the presence of nodes on the hair. It differs from it in that the nodes are the normal parts of the hair, and in that the fracture in it takes place through the internodular part.

In the vast majority of cases the disease is congenital, though it may come on late in life. The subjects are therefore usually infants. They are commonly born with normal appearing hair, but after a few weeks the hair breaks off from the whole head or from patches, giving a stubby appearance to the hair, similar to what is seen in ringworm. In some cases the scalp is reddened and has on it a number of small, scaly, elevated cones, or perhaps pustules. From the little cones protrude short, stubby hairs. Many of them are bent, and all break easily on slight traction. They are seldom longer than a quarter of an inch, and often are no more than black points. By the naked eye, or under the microscope, these little hairs show fusiform swellings with contractures between, through which the fracture has occurred. Sometimes complete baldness results. All the hairy regions may be affected. A general keratosis pilaris may be present.

Pathology.—Under the microscope the hairs will be

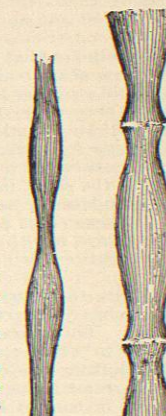


FIG. 379.—Monilethrix.