

and Greenbrier White Sulphur Springs, of West Virginia, are familiar examples.

The following well-known European spas possess celebrated thermal springs: Aix-la-Chapelle, Baden Baden, Ems, Nauheim and Wiesbaden, Germany; Aix-les-Bains, Bagnère-de-Luchon, La (Reine) and Bourbonne, Haute-Marne, France; Karlsbad and Töplitz, Bohemia; Gastein, Salsburg, Austria; Leuk, Switzerland, and Bath, England.

Neutral or indifferent waters of which many well-known examples are found in the American markets cannot, properly speaking, be classified as mineral waters as they contain, as a rule, a smaller percentage of mineral ingredients than is to be found in the potable water supplied to most of our cities. The use of these waters is not to be discouraged, however. Practically without exception they are pure and wholesome, and entirely free from bacterial contamination. There are not wanting numerous reputable medical men who attach a distinct medicinal value to some of these excellent but finely attenuated beverages.

There are a number of well-known springs, some of which are not mentioned in any of the above groups, which owe their virtues to some one particular ingredient. Among these may be mentioned the arsenical, lithia, acid, and iodo-bromated waters.

James K. Crook.

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MINI-NI-YAN SPRINGS.—Kendall County, Illinois. POST-OFFICE.—Bristol. Accommodations at private residences.

The village of Bristol is located on the main line of the Chicago, Burlington, and Quincy Railroad, forty-seven miles from Chicago. Five springs exist within a short distance of each other, but only two have been used medicinally. No. 5, the principal one (an artesian spring), yields 10,000 gallons a day, which can be increased to 100,000 by pumping. Two analyses have been made, the first by the chemist of the State University and the second by the chemist of the Chicago, Burlington, and Quincy Railroad. Both of the analyses have been lost. We are informed by Mr. G. G. Hunt, the proprietor, that the water contains about ninety-two grains of solid matter per United States gallon, consisting principally of the carbonates of sodium, magnesium, iron, calcium, and lithium, and the phosphate of lithium. It is also said to contain small but perceptible quantities of iodine, bromine, and manganese. The water is said to exert a very favorable influence in cases of nervousness, headache, insomnia, and functional disorders of the liver and kidneys. In the form of a hot bath it has been found decidedly efficacious in painful swellings of the joints, glandular enlargements, and rheumatic and gouty conditions.

James K. Crook.

MINNEQUA SPRINGS.—Bradford County, Pennsylvania.

POST-OFFICE.—Minnequa. Hotel.

ACCESS.—Via Northern Central Railroad, a connection of the Pennsylvania Railroad, forty-one miles north of Williamsport, Pa., and thirty-seven miles south of Elmira, New York.

The Minnequa Springs are located in a rich farming and dairy country at an altitude of 1,500 feet above the Atlantic Ocean. The pure mountain air, romantic scenery, delightful drives, and shaded walks afford abundant opportunities for the enjoyment of outdoor

life. The location is within easy driving distance of Mount Pisga, the highest point in Pennsylvania. The hotel at Minnequa is a commodious structure, containing ten thousand feet of wide verandas, and is well fitted with steam heat, electric bells, elevators, etc. In the building the visitor will find a post-office, telegraph office, and railroad ticket office. Many well-known New York and Philadelphia families have their summer homes in the neighborhood. The mineral springs are three in number, and yield about six hundred gallons per hour. The waters have been examined by several chemists, the following most recent analysis having been made by Charles M. Cresson, M.D., of Philadelphia:

ONE UNITED STATES GALLON CONTAINS:	
Solids.	Grains.
Calcium	0.99
Magnesium20
Sodium72
Lithium	Trace.
Aluminum12
Iron	Trace.
Manganese23
Chlorine14
Silica03
Zinc	2.05
Carbonic acid70
Boric acid	2.13
Oxygen (with silicates)14
Loss15
Total	7.60

It will be observed that the terms of this analysis are expressed in the radicals found. The combinations would be made up of carbonates and chlorides. An analysis of one of the springs made by Dr. Gregg some years ago showed the presence of sulphate of potassium and hydrogen sulphide. The waters of these springs have been used, for medicinal purposes, since the early settlement of this region. They are mildly antacid, tonic, and diuretic in their action. Owing to the presence of zinc and manganese they have been recommended by some physicians in the treatment of certain nervous affections, including epilepsy and chorea.

James K. Crook.

MISTLETOE. See *Loranthaceæ*.

MITOSIS. See *Cell*.

MOLASSES. See *Sugar*.

MOLLIN is a potassium soap containing about thirty per cent. of glycerin and fifteen per cent. of free fat in emulsified condition. It is a smooth, soft, yellowish-white, unctuous material, which is miscible with water so that it may be washed off the skin.

Carbolated and creolinated mollin and mollichthyolin are mixtures of mollin with carbolic acid, creolin, and ichthyol, respectively.

W. A. Bastedo.

MOLLUSCUM CONTAGIOSUM.—Despite the belief, shared at one period by most teachers of dermatology, that this disease is not contagious, the name given by Bateman has clung to it, and is to-day more appropriate than others which have been suggested, such as sebaceum, epitheliale; verrucosum, epithelioma contagiosum, and acné varioliforme. The last-mentioned designation, given it by Bazin, should be definitely dropped because of the other acné varioliformis, an affection which has been generally accepted as best designated in this way.

Although the lesions are usually of small size and distributed chiefly over the face, neck, chest, and genitals, it is well to bear in mind that a single tumor may at times attain the size of a large orange, and that the lesions may, from their size and long duration in unusual situations, be mistaken for malignant growths. I have removed from the cheek of a young girl a lesion which had existed singly and with so considerable an amount of surrounding swelling that sarcoma had been suspected. Balzer and Alquier¹ report a slowly increasing papillomatous tumor of the sole of the foot in a boy,

which was excised after seven or eight months, and was found to be a molluscum contagiosum.

Upon the penis I have seen a fibert-sized growth which had been mistaken for an unusual form of chancre. Occasionally the lesions are so abundant as to be scattered over almost the entire body, especially when some pruritic affection coexists, favoring dissemination by reason of scratching. Such a condition I have seen in prurigo, and the distinction must here be carefully made between the skin-colored, intradermic, firm lesions of prurigo and the "pearl-button"-like, sessile, pinkish and softer molluscum lesions.

Hallopeau² speaks of lesions so closely aggregated that they resembled bunches of grapes, and other groups suggesting frambesiform nævi. I believe I was the first to call attention to lesions upon the mucous surface of the lips. Abraham³ records the presence of lesions in the mouth resembling large patches of leucoplakia, which were found on close inspection to be made up of numerous small papules merged together. This condition, which I have never seen, might be confounded with an affection of the lips and buccal membrane often observed by myself, and to which Fordyce has directed attention.⁴

Description of the Lesion.—Recent lesions are miliary in size and are to be discovered only upon close observation, and better with the aid of a lens. When they are a few weeks old they have somewhat the appearance of milium, but the color is more pinkish. They are more elevated and have rather the appearance of waxy warts, but differ from the latter in showing a central opening through which slight lateral pressure will cause a milky fluid or a soft cheesy material to exude. While the base is usually somewhat constricted, this is not always the case, and, as has been already stated, lesions which attain a great size may be almost wholly intra- or subcutaneous. There are usually no subjective symptoms, aside from those occasioned by secondary inflammatory processes.

There is at the present day no doubt of the transmissibility of the affection, clinical data having been sufficiently substantiated by experimental inoculation.

DIAGNOSIS.—While this is a very simple matter after one case has been attentively observed, my experience teaches that not only is the diagnosis rarely made by students in the clinic, but that practitioners frequently fail to recognize the condition or let it pass as something unworthy of notice, thus favoring the spread in the family, school, or institution. It is to be distinguished chiefly from molluscum fibrosus, the tumors of which are much firmer and, in addition, lack the central opening and the semi-solid contents.

The tumors of *M. fibrosus* are deeply embedded in the skin and tissues beneath it. They are much more common upon other regions of the body than the face, and are often found associated with pendulous masses. At times there projects from the central portion of an epithelial molluscum a horny mass. Pathological anatomists are now inclined to place the origin of these soft, semi-globular growths in that portion of the rete mucosum which is continuous with the sebaceous glands, or which dips down between the papille. The view formerly entertained, that the tumors originated in the sebaceous follicles, is still held by some, who look upon them as a transformation of the gland itself into horny amorphous structure surrounded by thickened walls. At times changes can be made out at or near the neck or root of the hair. There seems to be no question that the affection should be classed with new growths.

ETIOLOGY.—There is abundant reason for the belief that in time the parasitic nature of the disease will be established. A tender and delicate skin; a cutaneous surface subjected to continuous perspiration; the presence of a pruritic affection—all these are factors which favor the development and spread of the disease. The lesions may exist in large numbers upon the penis, scrotum, and female genitals, especially in young subjects, without reference to venery, although sexual contact favors dissemination.

PATHOLOGICAL ANATOMY.—The tumors are made up of diverging lobules opening into a central cavity.

Delicate fibrous partitions separate these lobules, and a fibrous capsule envelops the whole. When the contents are squeezed out of the external capsule, the appearance of the extruded mass is that of a diminutive brain or of an enlarged sebaceous gland. The separate lobules are lined with palisade cells continuous with those of the adjacent rete. They are filled with nucleated epithelium, cuboidal or rounded. In the changes which are taking place in these cells, the outer portion



FIG. 3360.—Molluscum Contagiosum. (From Dr. George H. Fox, American Journal of Obstetrics.)

seems to show numerous granules of kerato-hyalin. Cornification rapidly takes place, producing a capsular covering for the cell. The interior changes are similar to those of colloid or amyloid degeneration.

Molluscous corpuscles or bodies, which have long been recognized, are oval-shaped, homogeneous in their composition, and enclosed in a horny capsule. It is the accumulation of these bodies in the central opening of the molluscous tumor which forms the milky fluid which is noticed when the latter is pressed upon.

These peculiar double-contoured, globular elements resembling psorosperms, and thought at different times to be allied to them, were believed by Virchow to be degenerated epithelium. This eminent scientist believed the molluscum growth itself to be a lobulated glandular epithelioma.

Boeck, who found a strong resemblance between these tumors and sebaceous glands, noted evidences of vascularity in them. In the semi-fluid contents he discovered, beside the molluscum bodies, epidermic cells with peculiar formation, often without nuclei and with sharply defined outline. He believed that the first type of oval, non-nucleated body developed from the second. He claimed that the bodies arose from a change in the protoplasm beginning next to the nucleus. No fat is to be detected by chemical or physiological tests, and these tests also show that these bodies are not amyloid in their composition.

Renaut regards the process as a hyaline degeneration in the perinuclear zone of the rete cells. Geber held the same view in regard to their origin from a hyaline degen-

eration of a hyperplastic growth in the interpapillary rete cells.

Török and Tommasoli, while strong believers in contagion, were unable to obtain cultures from the contents of the little tumors. They found, also, that the strongest acids and alkalis had little or no effect upon these contents. In their opinion these bodies are the result of colloid degeneration.

Pick gives an instance of successful inoculation and ranges himself amongst the believers in the parasitic theory.

Neisser believes that the bodies are parasitic because no products of degeneration look like them; because analogous bodies may be observed in other psorosperma; because the cells, which are without analogy in human pathology, are met with in a truly contagious and inoculable process; and because the conditions existing in this tumor, as compared with those of other epithelial new growths, are unique. As regards this latter point it may be said that we are dealing with a new growth whose cells are in part only affected with degeneration, whose nucleus, although pushed to one side, remains always intact, and whose mode of growth is quite different from that which occurs in carcinoma and all other epithelial hyperplasias.

Bender calls attention to another point of difference from other epidermal new growths, viz., that whenever mitosis occurs it is limited to the palisade layer. He believes also that the molluscum body is a parasite because it takes the aniline gentian-violet stain as do other parasites; because it is so sharply separated from cell protoplasm; and, finally, because the large number and the great variety in the shapes of these bodies in a given cell point only to segmentations of a parasite.

Drs. White and Robey,⁵ of Boston, find that the new growth is formed by hyperplasia of the rete cells which push the mass downward and outward, producing a globular tumor. They fail to find any bodies which by any possibility they can call gregarinae, or anything like a division of a nucleolus. The so-called molluscum bodies are, in their opinion, simply keratin, identical with the horny layer, except in the shape of the individual cells. Dr. Robey's bacteriological study resulted in finding only the staphylococcus epidermidis albus of Welch. The result, then, of this most recent careful investigation leads to the conclusion that, although a parasite probably exists, it has thus far not been successfully demonstrated, and that "the change is not a colloid or hyaline degeneration, but rather an extraordinary metamorphosis of rete cells into keratin."

TREATMENT.—Internal treatment is never required, and while it may be possible at times to remove the lesions with applications of ammoniated mercury, sulphur, or resorcin ointments, or by the free application of green soap, still the simpler and easier method is to scoop out each separate lesion with a curette, and wash the parts with bichloride solution (1 to 500-1 to 1,000). The contents of the lesions may be squeezed out readily between the finger nails of opposite hands, preferably the thumb nails, but this makes the operator liable to infection, and I have been called upon to treat an ophthalmologist for a lesion upon the thumb which he had acquired in this way.

Unless the lesion is large or of long standing and wart-like, removal by the knife, scissors, or ligature, or by the application of a caustic after curetting, is not called for. Electrolysis may be used, but is seldom required. After the removal with the scissors or knife there is apt to be free bleeding from the base, just as there is after the removal of warts, to which mollusca bear such similarity. The silver stick may be employed with the object of checking annoying hemorrhage.

Charles Warrenne Allen.

¹ Annales de Dermat. et de Syph., No. 4, 1900.
² Journ. des Maladies Cutanées et Syphilitiques, July, 1899.
³ Trans. British Journal of Dermatology, December, 1899.
⁴ Trans. Amer. Dermat. Assn., 1898.
⁵ Journal of Medical Research, vol. vii., No. 3, April, 1902.

MOLLUSCUM FIBROSUM.—This affection has been variously designated as *M. simplex*, *M. pendulum*, *M. areolo-fibrosum*, *M. albuminosum*, and *fibroma molluscum*. It is a chronic hypertrophic affection of the skin which manifests itself in the form of multiple soft, sessile, or pendulous tumors; rarely in that of a single,

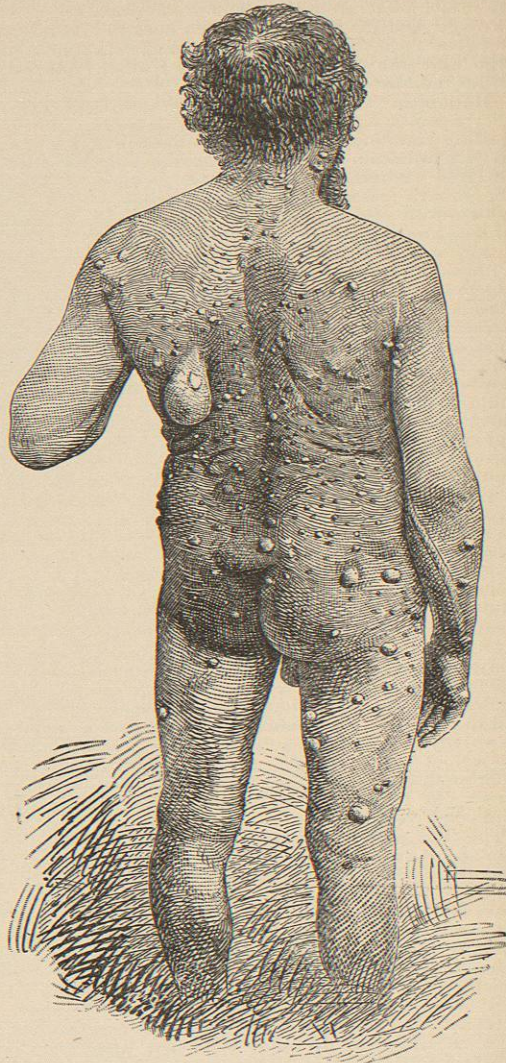


FIG. 3361.—Generalized Fibroma Molluscum. (After Wigglesworth.)

pendulous mass of connective-tissue structure. The two varieties are often found in association; the patient presenting perhaps one or more large pendulous masses from the side of the head, neck, or trunk, with smaller lesions scattered over other surfaces.

The lesions are solid or semi-solid, more or less rounded or elongated growths varying from the size of a pea to that of a tumor weighing perhaps several pounds. The younger lesions occur as subdermal nodules, while those of long standing may hang by a thin pedicle. Pear-shaped lesions, hanging, as it were, by the stem, are not

uncommon. The color is that of the natural integument, and the skin covering is usually soft and supple, though perhaps marked with blood-vessels and enlarged openings of sebaceous glands. Subjective symptoms are usually wanting.

When grasped between the fingers, the tumors are found to be firmly elastic, soft, lobulated, somewhat like a fatty tumor, or they present the feel of a cord-like body which can be rolled under the finger between the folds of skin. When they have existed for a long time, degenerative changes, of a fatty, calcareous, or (very rarely) bony nature, may occur. While they may exist from birth, in most instances they are of later development. They begin at times as a slight uplifting of the skin over a circumscribed rounded area. Pressure upon this pinkish soft spot gives the impression of an atrophy or thinning of the skin beneath, or of a pitting, in the deeper central part of which the raised area may be invaginated. When tumors have attained some size they may present to the touch the sensation of containing bundles of fibres. As a rule, the younger the subject the softer the lesions, those of old age being usually firm. Besides the circumscribed and disseminated forms of fibroma, we have closely allied conditions of pachydermatocele (dermatolysis, chalzodermia), which may occur as a sequence or as a condition *per se*, or it may result from states other than that of *M. fibrosum*. Pendulous masses of thickened skin or even areas showing no marked thickening are endowed with such elasticity that they may be drawn far away from the body's surface, and when released they spring back into place. This condition is not to be confounded with the changes which occur in senility, pregnancy, etc. While it is usually congenital, it may be, though rarely, an acquired state.

DIAGNOSIS.—The occurrence of protruding and pendulous tumors, pink or flesh-colored, occasionally reddish or brownish, is not to be confounded with multiple sarcoma which has a violaceous or more markedly red hue, and the lesions of which are not pedunculated. Moreover, sarcoma shows a tendency to ulceration, and other evidences of malignancy are not long absent. Sebaceous cysts, which if present in large numbers simulate the disease, contain a soft material which can be pressed out. Multiple fatty tumors (a comparatively rare condition) are characterized by the peculiar lobulation of these growths and by being flatter and usually much broader at the base. Leprosy is to be excluded by its general constitutional effects, by the tendency of the lesions to become confluent, and by their peculiar brown and reddish hues and at times waxy appearance. Molluscum contagiosum is the least likely of the affections enumerated to be confounded with it. As a rule, the lesions in generalized molluscum contagiosum are decidedly smaller, and close inspection reveals the central opening, while pressure causes at least a milky drop to ooze from it. Neuroma is distinguished by the pain attending the tumors, and gummata by the evidences of constitutional lues. Verrucae have their characteristic warty summit and practically never occur in such a generalized way.

PATHOLOGY.—While there is still a question of the exact tissue in which the growth originates, some cling to Rokitsansky's view of its origin being in the connective tissue of the corium, and some hold, with Virchow and Kaposi, that it starts around the fatty tissue or about the hair follicles, as Fogg believed. It is now generally accepted that the connective-tissue elements undergo a transformation into bundles of fibres and that fibrous tissue predominates in the outer, while a protoplasmic mass makes up the inner portion of the tumor, which is bound down by its pedicle to the subcutaneous tissue. Incision shows an encapsulated fibrous mass of peculiar whiteness. The central portion is soft and pulpy, and on pressure a small amount of yellowish fluid exudes. Old tumors show dense fibrous tissue and at times are quite vascular about the base. Newly formed tumors show spindle cells in a loose fibrous network. There unquestionably exists a variety of fibroma originating from a nerve sheath, and because of nerve-contained filaments it

is worthy of the name neurofibroma. Other mixed forms contain vessels, glandular structure, and muscle.

ETIOLOGY.—While little is known of the true cause for the development of these peculiar formations, Hebra's acute powers of observation were well displayed when he directed attention to the physical and mental condition of subjects of this affection. Patients are either dwarfish or poorly nourished individuals showing a low grade of mentality. The disease is at times seen in several successive generations and its heredity seems quite well established. The thyroid gland is often so poorly developed as to be with difficulty palpated.

PROGNOSIS.—Fibroma is a life-long affection, unless relieved by surgical procedure, or, as extremely seldom happens, it disappears spontaneously. Life is in no wise jeopardized by the progress of the tumors even to an enormous size, unless in so growing they encroach upon some vital organ or important function. Naturally, an enormous tumor acts as a drain upon the constitution, requiring blood supply for its nutrition, and it may so deplete an already frail constitution as to occasion marasmus or pave the way for an intercurrent deadly affection. A further source of danger lies in the possibility of a degenerative process or of septicæmia.

TREATMENT.—If the number of growths is limited, they may be removed by excision or by the galvanocautery. Very small, pendulous tumors are best snipped with scissors. Large single growths may be treated upon surgical principles, while widely disseminated multiple lesions, especially when heredity is a factor and there are marked constitutional symptoms, are best left to themselves.

Charles Warrenne Allen.

MONO-ACETYL-RESORCIN, $C_6H_3(OH)_2CH_3CO(OH)_2$, is used like resorcin in skin diseases. W. A. Bastedo.

MONOBROMACETANILID.—(Antiseptin, Asepsin.) Very soon after the therapeutic value of acetanilid had been recognized, this bromine compound was introduced as an anodyne, analgesic, and antiseptic. It is formed from acetanilid, $C_6H_5NHCO_2H$, by the substitution of one atom of bromine for one of hydrogen, its formula being $C_6H_4BrNHCO_2H$. It occurs in white acicular crystals, and is tasteless; it is insoluble in water, slightly soluble in glycerin, and very soluble in alcohol and ether.

In doses of five-sixths of a grain, four times a day, it lowered the temperature in phthisis, typhus, and typhoid fever, slowing the pulse at the same time, but not affecting the respiration. In pneumonia it was found liable to produce cyanosis. It was also used in neuralgia with success, in doses of from five to eight grains.

The employment of this compound has failed to become general, as it was found that prostration and cyanosis frequently accompanied its use. Cases have been reported in which two doses of five grains, taken at long intervals, produced very alarming symptoms (*British Medical Journal*, February, 1890, 357). Beaumont Small.

MONO LAKE.—Mono County, California. This remarkable body of water is located near the centre of Mono County, about ten miles south of the town of Bodie. The length of the lake from east to west is about fourteen miles, and its greatest breadth nine miles. Its altitude is 6,370 feet above the sea level. In his article on the "Mineral and Thermal Springs of California," read before the Ninth International Medical Congress, Prof. W. F. McNutt likens this lake to the Dead Sea of the Holy Land. The analysis shows, however, that the waters of this lake (see below) are not so salty as those of the ancient Palestine sea. The lake receives much of its water and its salts from the rivers and creeks which flow through volcanic soil and empty into it. Numerous springs are found all over the lake. The most curious of these are some of the fresh-water springs, holding in solution small quantities of calcium carbonate, which precipitate and deposit around the openings of the springs, forming irregular tubes clustered together in columns. These vase-shaped structures are from ten to forty feet