

CHAPTER XXII.

AFFECTIONS OF THE FINGERS AND TOES. DACTYLITIS
SYPHILITICA.

BESIDES being the seat of primary and secondary lesions, the fingers and toes are, in the tertiary period, attacked by gummy deposit in their subcutaneous connective tissue and by infiltration and inflammation of their bones. This affection was little known until recently, and was formerly called syphilitic panaris. I use the term *dactylitis*, derived from the Greek *δακτυλος*, a digit or finger, as being more correct and expressive.

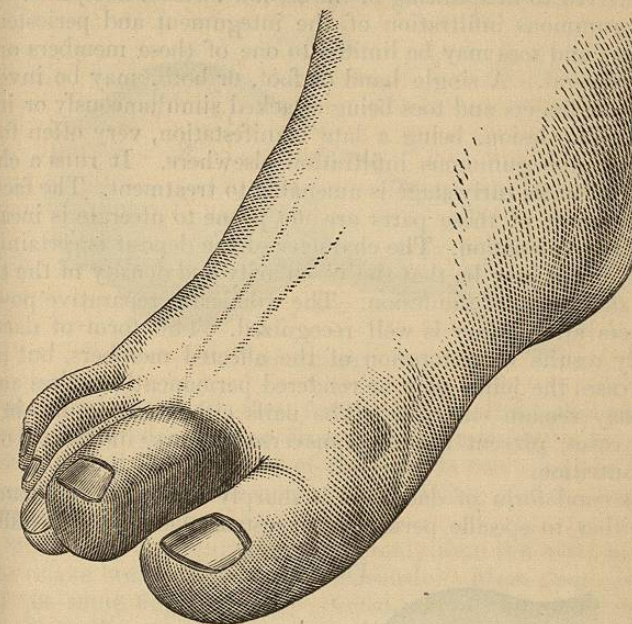
To Chassaignac, in 1859, is due the credit of first calling attention to it, but his description was vague. In 1860, Nélaton, in a clinical lecture, reported one case and referred to another. In 1866, Prof. Lüche, of Berne, published two cases; in 1869, Archambault one; in 1870, Volkmann and R. Bergh, of Copenhagen, each published one. In 1871, I reported two new cases in a monograph, containing briefly all the cases up to that time published, with a description of the disease. Since then I have seen ten cases and others have been published.

The affection is caused both by acquired and by hereditary syphilis. The cases due to the former are much less numerous, there being under two dozen reported up to the present time, whereas hereditary dactylitis is by no means uncommon. In this section the acquired form will be described. Of this there are two varieties: first, that in which the subcutaneous connective tissue and the fibrous structures of the joints are involved; second, that in which the morbid process begins in the bones and periosteum, secondarily implicating the joints, and perhaps accompanied by deposit in the subdermal connective tissues. These varieties are constantly found, and their adoption will simplify description. The size of the affected member is materially increased and its mobility is more or less interfered with. The lesion comes on slowly, and first attracts the patient's attention by the slight enlargement of one or more fingers or toes. The swelling gradually increases and the member becomes hard and firm. When the toes are affected, their whole length is generally included; but when a finger is attacked, the lesion may be quite sharply limited to one phalanx, almost invariably the proximal one; or the adjacent phalanx may be involved to a less degree; or, finally, the whole finger may be affected. Fig. 123 shows this infiltration into the second toe of the right foot of a patient who was under our care, and whose history is given in full in our original article.

A finger or a toe thus attacked presents a reddish, violaceous ap-

pearance, and to the touch is quite resistant and tense, the normal lines of the integument being effaced. Unlike gummy tumors developed where the connective tissue is plentiful, and which are isolable and movable, these infiltrations of the fingers and toes are firmly attached to the skin, the process apparently involving the corium

FIG. 123.



even to its papillary layer. In most cases the thickening is greatest on the dorsal aspect, very rarely being equally free on the palmar or plantar surface. The swelling ends abruptly at the metacarpophalangeal joint.

These swellings are usually developed slowly and painlessly, but in some cases a dull aching pain is present. When the infiltration is complete it is impossible, on account of the density of the tissues, to determine accurately the condition of the bones, although they seem to be thickened. As the affection subsides, the bones and joint-structures can be more thoroughly examined, and we then find more or less periosteal thickening. In most cases, however, the bones are quite superficially involved, whereas, in the second form of dactylitis, they are profoundly attacked. It is impossible to say whether the morbid process begins in the periosteum or in the connective tissue over it; it is certain that the lesion is sometimes sharply limited to the tissues over one or more phalanges, and, again, it may involve the whole member.

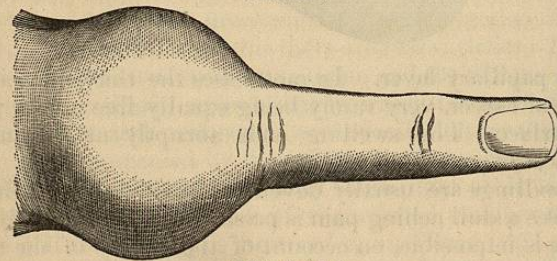
Within a few weeks after the development of the affection, symp-

toms of joint implication appear. At first, flexion of the joints is impaired by the swelling. In the course of one or two months, if no treatment is followed, the joints become flaccid and unnaturally mobile. Sometimes in this variety of dactylitis there is slight hydrarthrosis and often crepitation in the metacarpo-phalangeal joint, or between the articular surfaces of two phalanges. This will be again referred to in speaking of the second form of dactylitis.

This gummous infiltration of the integument and periosteum of the fingers and toes may be limited to one of these members or may involve several. A single hand or foot, or both, may be involved, one or more fingers and toes being attacked simultaneously or in succession. The lesion, being a late manifestation, very often follows or accompanies gummous infiltration elsewhere. It runs a chronic course, and in its early stage is amenable to treatment. The fact that gummy tumors of these parts are not prone to ulcerate is incapable of positive explanation. The character of the deposit is certainly not peculiar, but it may be that the vascularity and density of the tissues modify the course of the lesion. The wonderful reparative power of the fingers after injury is well recognized. This form of dactylitis generally results in restoration of the affected members, but in neglected cases the joints may be rendered permanently useless and the bones may remain enlarged. The nails either escape, or, in very chronic cases, present minute transverse furrows, indicative of impaired nutrition.

The second form of dactylitis is sharply limited to the bone, and is due either to specific periostitis or osteo-myelitis. The affection

FIG. 124.

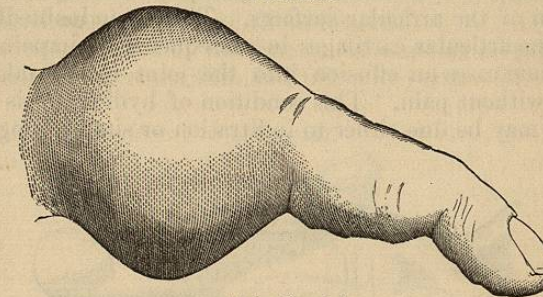


(After Bergh.)

may progress rapidly, slowly, or with intermissions. The earlier after the infection the lesion occurs, the more acute is its course. The degree of its induration is generally in proportion to the chronicity of its development; a rapidly formed swelling may be so soft as to be susceptible of indentation by firm pressure. The affection may be speedily cured by energetic and early treatment, but if unchecked it may progress to an extreme degree. Fig. 124, taken from Bergh's case, gives an idea of the size and shape of a swollen phalanx, whose normal circumference of about two inches was increased to five by this lesion. A similar case was under my care several years ago. It

seems to be the rule that when only one bone is affected, the swelling is greater than when several are. The shape of the swelling depends upon the phalanx attacked. When the first is involved it may assume an acorn-shape, or the appearance of a balloon; the second and third phalanges may be fusiform or cylindrical. In most cases the whole bone is involved. The disease may be limited to the extremity of a phalanx adjacent to one already the seat of dactylitis.

FIG. 125.



(After Bergh.)

The proximal phalanx is most frequently, the distal phalanx least frequently, involved. I have seen in two instances enlargement of the second phalanx only, and of the third in one case. In hereditary syphilis it is not uncommon to find swelling of the second and even of the third phalanges.

The fingers are attacked more commonly than the toes; in a few cases they have been involved simultaneously. More than one phalanx of the same finger may be affected, as well as several fingers, either unilaterally or symmetrically. In the latter case swelling of one or more toes is likely to occur at the same time. Other osseous lesions may coexist, and articular affections and gummous infiltrations of the skin may be associated with these lesions of the fingers.

The metacarpal, and less frequently the metatarsal, bones become swollen coincidentally with a dactylitis, or they alone may be affected. The extremity adjoining the phalanx or the opposite extremity may be involved.

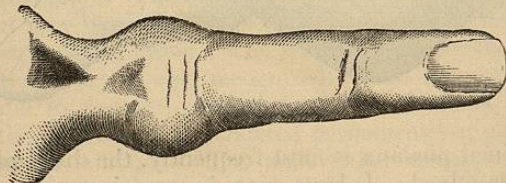
The mode of invasion and the course of these swellings are similar in the metacarpal bones and in the bones of the fingers. The metacarpal bones of the thumb and index finger are those most frequently the seat of dactylitis.

The integument is rarely infiltrated in this form of dactylitis, gummous deposit having been found in the subcutaneous tissues in but two cases of primary lesion of the bones. The skin may undergo very little change, unless the swelling is excessive, when it becomes tense and thinned, and the normal furrows are effaced. When the process is rapid the skin becomes red and inflamed; when the growth of the lesion is slow the skin accommodates itself, and very slight if

any inflammation occurs. In some cases ulceration takes place or an incision is required to relieve the tension. The inflammatory focus is always on the sides of the fingers. In case an opening forms or is made, a soft cheesy detritus mixed with pus comes away. Necrosis may occur, but the destruction of bone tissue is usually limited, and after a short time the fistula closes. In the majority of cases resolution of the bony swelling takes place.

The joint structures are generally much thickened. After the dactylitis has existed about a month, crepitation may be detected from friction of the articular surfaces. This is undoubtedly due to erosion of the articular cartilages in consequence of impaired nutrition. In some cases an effusion into the joint cavity takes place, slowly and without pain. This condition of hydrarthrosis varies in degree, and may be due either to infiltration or simple congestion of

FIG. 126.



(After Bergh.)

the synovial membrane. This complication is not serious, and generally ends in absorption. The thickening of the ligaments and joint-structures results in impairing the motion of the joints or in rendering them preternaturally mobile.

These bony swellings may remain in an indolent condition for a long time, and finally the gummy deposit may be absorbed, or it may soften and be discharged through a sinus. The shaft of the bone may resume its normal size, or it may be rendered thinner and lighter, as shown in the accompanying illustration of Bergh's case (Fig. 126). Sometimes it is shortened, and in other cases again it is slightly longer than normal. The bone may be left in a condition of eburnation, being decidedly thickened.

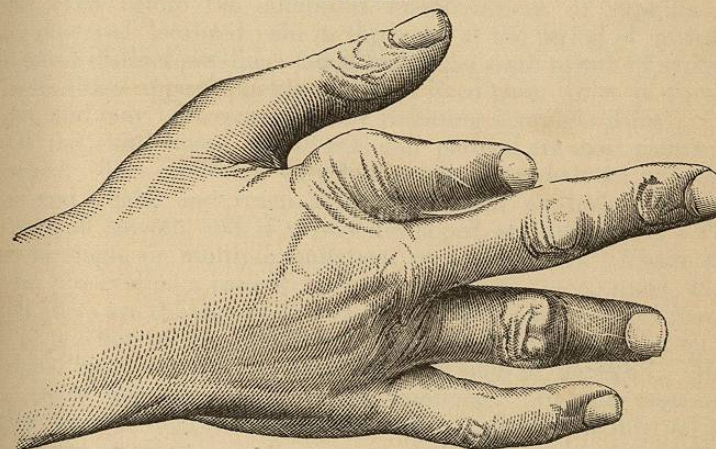
The process of involution may be slow or quite rapid, and seems to be in proportion to the rapidity of the development of the lesion. In most cases the deformity is not very marked; in some cases of necrosis a less fortunate result is obtained (Fig. 127). The illustration, taken from my paper on the subject, shows deformity and shortening of the index finger, so that its extremity scarcely reaches the first phalangeal joint of the middle finger. In this case the greater part of the first phalanx and the distal extremity of the metacarpal bone had been absorbed, and the remnants of the two bones were connected by fibrous tissue. In a similar manner the second phalanx of the ring finger had been reduced to about one-fourth of its original length. After the process of absorption is

complete, the contiguous bones are always united by a ligamentous band, which serves as a joint. The function of a finger in such a condition is of course greatly impaired, and excessive deformity may result. The manner in which the soft parts adapt themselves to the altered condition is very remarkable, their contraction being of great service in giving steadiness and solidity to the false joints.

In spite of the extent of the osseous lesions, pain is either very slight or altogether absent. In no case have the tendons or their sheaths been found implicated. The absorption of the bones is unaccompanied by ulceration of the soft parts.

This affection is one of the late manifestations of syphilis, occurring usually between the fifth and fifteenth years. The average age

FIG. 127.



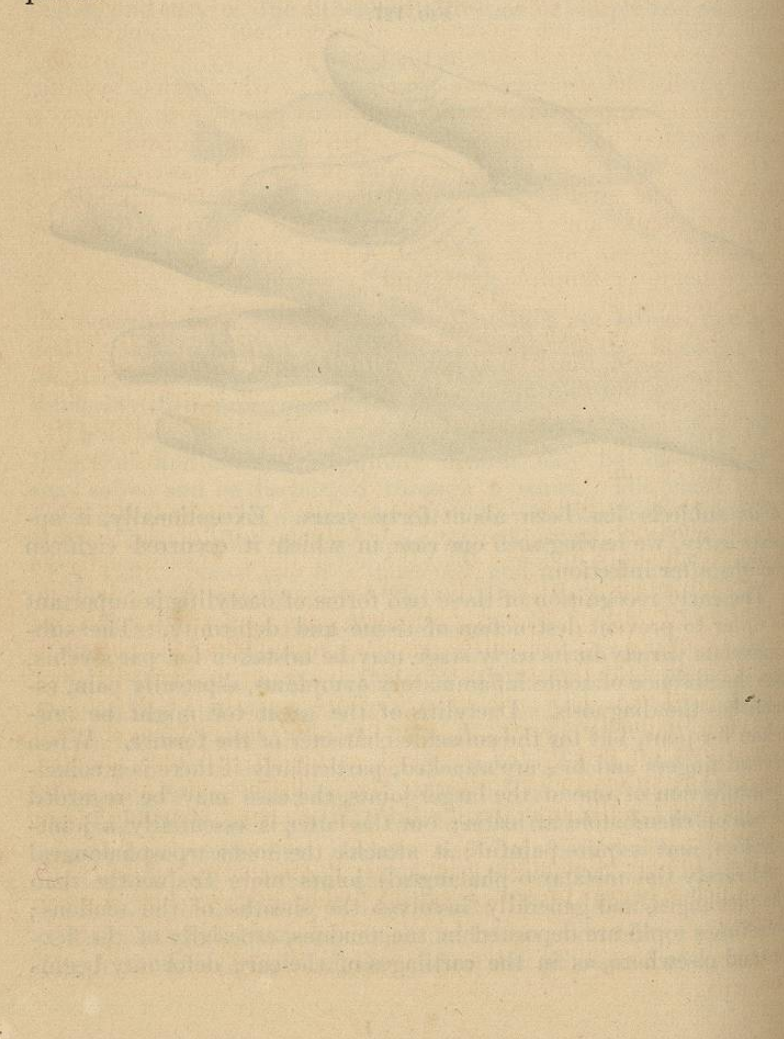
of its subjects has been about forty years. Exceptionally, it appears early, we having seen one case in which it occurred eighteen months after infection.

The early recognition of these two forms of dactylitis is important in order to prevent destruction of tissue and deformity. The subcutaneous variety in its early stage may be mistaken for paronychia, but the absence of acute inflammatory symptoms, especially pain, establishes the diagnosis. Dactylitis of the great toe might be mistaken for gout, but for the subacute character of the former. When several fingers and toes are attacked, particularly if there is a coincident affection of one of the larger joints, the case may be regarded as one of rheumatoid arthritis; but the latter is essentially a joint-affection, and is quite painful; it attacks the metacarpo-phalangeal (and rarely the metatarso-phalangeal) joints more frequently than the phalanges, and generally involves the sheaths of the tendons; sometimes tophi are deposited in the tendons, especially of the flexors and elsewhere, as in the cartilages of the ear; deformity begins

early, and there is a tendency of the fingers to be drawn to the ulnar side of the hand and to be flexed and extended at various angles. Dactylitis syphilitica may be confounded with enchondroma or exostosis, but in each of the latter the swelling is more localized, being limited to a portion of the circumference of the bone.

The prognosis depends in a measure upon the period at which the lesion is recognized. When the swelling is developed quickly, rapid involution follows the use of energetic treatment. The longer it has persisted the less amenable to treatment it becomes.

The treatment is that of late syphilis, a combination of the iodide of potash with a mercurial; locally, mercurial ointment or plaster applied with pressure is beneficial. Sometimes an incision is required.



CHAPTER XXIII.

AFFECTIONS OF THE BONES, CARTILAGES, AND THE JOINTS.

PRECOCIOUS OSSEOUS AFFECTIONS.

THE bones may be attacked in the early months of syphilis, although osseous lesions are generally quite late. The bones most liable to early affection are those of the cranium, the ribs, the sternum, the clavicle, and the tibia. According to Mauriac¹ these lesions may occur even before the cutaneous manifestations of syphilis. I have observed localized pain in the bones at the period of invasion, but never distinct swellings much before the sixth month of syphilis. The swellings appear quickly and with fixed pain, which is worse at night, and may be accompanied by radiating neuralgic pains.

Of the skull bones, the frontal and parietal are most commonly attacked. The swellings vary in diameter from half an inch to an inch and a half, and reach a height of half an inch. They are round and smooth, and if slowly developed are quite hard. They may be single or multiple, unilateral or symmetrical. I have now under observation a patient infected six months ago, upon whose skull there are thirteen of these nodes. They may occur at the angle of junction of the frontal bone with the orbital plates, or on the occipital bone, but they are usually on the sides of the skull. Mauriac states that they are sometimes confluent. In some cases cerebral symptoms indicate that similar lesions exist on the internal surface of the cranium.

The clavicle is usually affected at its sternal extremity, the articulation sometimes being involved. The upper third of the sternum is more commonly involved than the lower third. Occasionally its borders are attacked with portions of the costal cartilages, when the patient may complain of severe dyspnoea and pain on deep inspiration. In such a case a localized pleurisy has probably been excited. In severe cases the ribs themselves may be invaded, especially their anterior portions. Its subcutaneous surface is the portion of the tibia most frequently the seat of these tumors. They vary in size and number, but are usually not as salient as similar swellings of other bones. The radius and the ulna are also sometimes attacked. The swellings are usually near the joint, the wrist more commonly than the elbow.

These tumors often attain a large size in one or two weeks. The pain which is always present, is aggravated by pressure, and is worse at night.

¹ Mauriac, Mémoire sur les affections syphilitiques précoces du système osseux. Paris, 1872.