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ORIGINAL LECTURES.

TUMOR OF THE BACK; LOST DRAINAGE TUBES IN AN ABSCESS CAVITY; CHRONIC SYNOVITIS OF THE LEFT KNEE; FLOATING CARTILAGE OF RIGHT KNEE.

*A Clinical Lecture Delivered at the Mercy Hospital,
Chicago,*

BY EDMUND ANDREWS, M.D., LL.D.,

PROFESSOR OF SURGERY IN THE CHICAGO MEDICAL COLLEGE, AND
SURGEON TO THE MERCY HOSPITAL.

(REPORTED BY WESLEY G. BAILEY.)

Tumor of Back.—We may have various tumors of the back, especially in this, the lumbar region. As appearances are often deceiving, I will not attempt to say what particular kind of growth this one is. It has a small inflamed base, and a whitish point at the extremity. Sometimes we have a tumor formed by a diseased sebaceous gland or several of them, and gradually growing larger and filling up with pus and sebaceous material, then bursting, and the abscess for a time, seemingly cured; however, these tumors may burrow into the loose connective tissue. This tumor is seen to have a small base, a little *punctum*, also is present.

If patients with this class of tumors would have their surgeon attend to the growth occasionally, they could be easily cured by distending the punctum, and pressing out the contents. The presence of sebaceous substance in the tumor, clearly defines its character. I will now make an incision, working a little slowly, to enucleate the sac. In some cases they readily separate from the surrounding tissues, and can be removed without much difficulty; but in this case, it is firmly adherent, and I am obliged to use the knife to dissect out the sac. We will preserve some of the blood for chemical examination, to add to our record of blood analyses, as a means of diagnosis, after Freund's method.

The interior of this variety of sacs usually presents a "whitish" appearance, indicating its cuticular origin. The sac in the case under consideration, however, does not present much of that "whitish" appearance, but looks as if it was an ulceration, presenting only a small remnant of cutis vera. These tumors, however long they exist, are not generally supposed to be dangerous to life, though they may cause septicaemia or pyaemia, but I never heard of anyone that lost their life on account of such a tumor. In cases

of this nature I have known them to contain numerous hairs. The sebaceous matter in these sacs, resembles, very much, the vernix caseosa of the new-born. These cysts may occur on any part of the body, more especially where the corium is thick. This patient comes from Pecatonica, Ills., which place has interested some of you, as a locality of bones of the extinct mastadon, which once ranged in herds in northern Illinois. This is not a surgical topic, gentlemen, but as you are lovers of anatomical science, it may interest you to recall here, the fact that the gigantic femur of the animal found there, shaped so much like the same bone in man, presents on its huge globular head no trace of the attachment of a ligamentum teres; it proves that no such ligament existed during the life of the quadruped.

2. *Lost Drainage Tubes in Old Abscess.*—This patient has been here before; once, six years ago, when I excised the head of the humerus, and once last spring, with an abscess over the scapula. He now has a fistulous opening over the lower end of the scapula. The fistula presents that peculiar granular appearance which is pathognomonic of the existence of either dead bone, or some other inert substance that is foreign to the tissues. I cannot by probing detect anything of sufficient diagnostic importance through this small aperture, so we will anesthetize the patient and enlarge the opening. This man has had caries of the head of the humerus and glenoid cavity, and a necrosis of the upper border of the scapula. In cases of inflammation of the distal or proximal ends of the long bones of the extremities, you will observe in your practice that those of the upper, recover more readily than those of the lower extremity, the cause being the severe friction and pressure on the synovial surfaces of the latter, which bear the entire weight of the body in walking. I will now open the abscess and examine its interior. I insert my finger and extract two rubber drainage tubes from the cavity. You now see why this abscess would not heal. Last spring the patient was here for two days, and went home with drainage tubes in the orifices of the abscess. It seems that his wife took charge of the dressing on his return home, and must have lost the tubes into the cavity and left them there. I will thoroughly search the cavity for any more drainage tubes, or other foreign articles.

There is a pendulous pocket present in the abscess, that I will connect with the larger cavity, further down. You will please bear in mind that those exuberant granulations so often present in certain

wounds and abscesses, generally indicate the presence of some foreign body in the tissues; it may be bits of clothing, bone, or wood, etc., etc.; however, a bullet seems to act differently, the salts of the metal to a certain extent preventing their formation: I have now dressed the wound antiseptically, and am certain no stray tubing is left in the cavity of the abscess.

3. *Chronic Synovitis of Left Knee*.—Here is a boy that is said to have a chronic inflammation of the knee-joint, due to an accident, which for a time, produced pain without much swelling. For some time the patient was able to go around with but little discomfort. He awoke one night and complained of pain in the part, was supposed to have hurt it against the bed, but was known to have received a kick on the knee some time after, making the inflammation much worse. His father, a blacksmith, has constructed a modification of Sayre's apparatus for making extension, that meets the indications in the case very nicely.

This apparatus instead of having the key at the side, (like Sayre's) for controlling the degree of extension, has a flat piece of steel, with buttons upon it, that fit into holes in a corresponding piece of steel above; and when these are in place, a small band of metal slides over the spliced joint of steel, and thus holds the mechanism firmly in place. At the upper, as well as the lower ends, these flat pieces of steel are strongly attached to bands of brass, that, form, when in place, complete circles around the boy's leg and thigh. These circles are made with a hinge at one part of their circumference, and at a point directly opposite, a slot has been cut in one end, that fits over a small staple on the other end, and when adjusted, a little loop of brass slides down over the joint thus formed, firmly securing it. Sayre puts strips of adhesive plaster all the way round the ends of the apparatus, to prevent any sliding motion of the appliance.

This case of chronic *synovitis* is a result of one or two acts of violence, and the irritation caused by the patient running around considerably upon it. He does not belong to a tuberculous family. The mechanical irritation of constant walking prevents the knee from making a spontaneous recovery, which it would accomplish in most cases, if not predisposed to tubercular infiltration. In rheumatic *synovitis*, we do not make use of extension, but in this case there is no rheumatism and extension is necessary. In this case they have used the ordinary diachylon plaster to hold the apparatus in place; do not use it in your practice for such purposes, for you will find that the common rubber plaster is much better. In walking, this patient should not allow the lame leg to support his weight, but should keep that foot off the ground entirely.

4. *Inflammation of Ligaments and Subcutaneous Tissues of Internal Malleolus*.—This little girl has an injury of her foot, caused by an accident, probably jumping out of bed. There is a large red swelling on the inner *malleolus*. It is not *synovitis*, for it does not hurt the child when I press the synovial surfaces together, and made slight movements under pressure.

There may be a slight inflammation of the ligaments, for she resists a little when I put them on the stretch. Mainly, however, this is an inflammation of the skin and subcutaneous tissues. A good treatment is to apply to the part iodine and glycerine; one part of iodine and three or four parts of glycerine and water. I like better, however, some simple astringent lotion, *e. g.*:

R	Zinci chloridi	gr. xxv.
	Acidi carbolici cryst	ʒiiss.
	Aquæ	f ʒviii.
	M.	

Let her take a few folds of linen or absorbent cotton saturated with the solution, and apply to the parts, and as soon as the moisture evaporates, apply more. There are a great many preparations that could be used to advantage in cases similar to the one before us. Solutions of the following substances are useful: Chloride of iron, sulphate of copper, nitrate of silver, tannic acid, sugar of lead, bichloride of mercury, alum, etc., etc. Several of these preparations are apt to become irritant as the solution concentrates by drying upon the skin; for instance, chloride of zinc, nitrate of silver, and bichloride of mercury—they may at last have even a caustic effect. Hence the skin should be washed with soap and water once in forty-eight hours, when such solutions are used. As this patient will not be under our control, it will be safe to use a solution of alum, which is not caustic in any strength.

The *cellulitis* in these cases has been said of late to arise from malaria, but whether it is so or not I cannot say.

5. *Chronic Synovitis of Right Knee with Floating Cartilage*.—Here is another patient with an inflamed knee, which is also the result of an accident. A horse kicked him there two years ago, though it did not hurt him much. It began to swell, however, almost immediately, and has remained in a swollen condition for the greater part of the time since. There is not much pain in walking or standing, but when the leg is flexed a little more than usual, he has considerable pain. It is a case of *synovitis*, gentlemen. Now, how do we know it is *synovitis*? Because, in the first place, there is a surplus of the synovial fluid in the cavity of the joint; secondly, the *patella* is slightly elevated; thirdly, it hurts him to bend the joint. Motion is limited on account of a thickening of the ligaments. It is essentially a nearly pure *synovitis*. The patient received another blow on the same knee, about a month ago, but this last injury was not sufficient to produce a swelling. A piece of cartilage was dislodged by the first contusion, and was thereby transformed into what is technically termed a "floating cartilage." These loose bodies are supposed to be formed by the breaking off of pedunculated growths of cartilage, which exist in many knee-joints. "Floating cartilages" are very apt to cause considerable trouble. When lying in some pocket or fold of the synovial membrane, they are harmless; but when, from some sudden twist or movement, they catch between the bones, they cause violent pain, and compel the patient to lie or sit down, until he can carefully dislodge the treacherous

lump from its painful position. Frequent repetition of the accident produces *synovitis*, and may even terminate in suppuration and *caries* of the joint. Hence, in bad cases, operative procedures are necessary to extract the cartilage. On inspection of this patient, you can distinguish a prominence, instead of the usual depression, each side of the *patella*. In case of the removal of a "floating cartilage" according to the old plan, without antiseptics, about one case in seven died. Careful antiseptic precautions must be taken in the operation of extracting a detached piece of cartilage. As this patient will remain in the hospital, we will have him go to bed, and will secure immobility by extension with a weight and pulley. Later in the case, an extension splint will be adapted to his leg, and a cure probably be attained. My practice is to use a straight tin or brass splint, concave, so that it will fit the limb nicely, and provide it with extension bands, as explained to you in a former lecture.

6.—*Fracture of Forearm*.—This boy has a fractured forearm; the injury occurred five weeks ago, but we told him to return occasionally to have the arm dressed. The day I attempted to reduce the fracture, I experienced a considerable difficulty in approximating the ends of the broken *radius*; I was obliged to introduce a *ténotome* to sever the tissues that had become entangled with the ends of the bones, in order to have a better apposition of the fragments, which enables me in a great measure to overcome the difficulty. When the sharp ends of the fractured bone imbed themselves thoroughly in a muscle or other organ so as to have a stratum of firm tissue separating the fragments, no union will take place. I thus succeeded in obtaining a reduction of the fracture. There is some slight irregularity of both bones present in this case; but the occurrence most to be feared is the loss of rotary motion, consequent upon the action of the *pronator quadratus* in drawing the ends of the fragments toward the centre of the forearm, so that they strike, instead of rolling freely past each other in rotation. In the present instance the rotation is good. We will, however, apply the splints for another week, as the parts are weak and need protection in case of accidental falls. Absolute perfection in all respects is rarely obtained after fracture of the forearm; but by diligent attention you will obtain good and useful members in the great majority of cases.

PNEUMONIC ABSCESS.¹

BY EDWARD F. WELLS, M.D.,

OF MINSTER, OHIO.

The daring boldness and, in some instances, the brilliant success, with which destructive processes within the lungs have been recently attacked by the surgeon lend, together with the inherent importance of the subject itself, an absorbing interest to my theme. The advances made by these pioneers upon a hitherto untrodden field justly challenge the ad-

miration of the professional world, and I fear that only adverse criticism awaits any one who attempts to run counter to the now popular current in the management of pulmonary abscesses. Yet the principal object of this communication is to call attention to the well-known, but often illy appreciated fact that, not only a few, but many of these cases recover without an operation, and that, a diagnosis having been made, it does not always follow as a corollary that an external evacuation of the purulent collection is the sole, or, except in rare cases, the most appropriate remedy.

I desire, however, that my position be not misunderstood. That operative measures are necessary and advisable in some infrequent and properly selected cases I am not only free to admit, but also to advocate. Indeed, I have myself assayed the operation in one case, and proposed it in another—both of which recovered by the powers of Nature and are living and well to-day. I have incorporated in this paper the histories of quite a number of cases which have recovered under expectant and medicinal treatment, and I think that the observation of every one present will bear me out in the belief that I do not stand isolated in my experience in this particular. On account of the vastness of the entire subject of pulmonary abscesses I will confine my remarks to those occurring as a consequence of pneumonic fever.

That the issue of pneumonic inflammation in abscess is a rare event is affirmed by the vast majority of writers,¹ although I quite agree with those who consider its rarity as having been generally overrated.² On the contrary it certainly is not so common as the older authors³ believed, for it is clear that they must, in many instances, have mistaken tubercular vomicae and post-mortem breaking down of tissue, for pneumonic abscesses.

Laennec,⁴ with his vast experience, extending over a period of twenty years, and after having made several hundred dissections of pneumonic subjects, met with abscess only five or six times. Andral,⁵ with an equal experience, met with but one case in an adult and two cases in infants. Bronsais,⁶ with extensive facilities for observation, observed but a single case, and that was caused by a foreign body. Chomel,⁷ in seventeen years' pathological work, saw but two cases. Trousseau,⁸ in a quarter of a century's practice, had never encountered a case, although he then met with two within a week. Bouillaud⁹ met with only two or three cases. Swett¹⁰ says that he never encountered an example, although in another place¹¹ he gives the details of a

¹Laennec, *Diseases of the Chest*, trans. by Forbes, N. Y., 1830, p. 205; Andral, *Med. Clin.*, trans. by Spillan, Phila., 1843, Vol. II, p. 180; Chomel, *Vorlesungen über Pneumonie*, Leipzig, 1841, p. 58; Eberle, *Prac. Med.*, Phila., 1831, Vol. I, p. 286; Rokitsky, *Path. Anat.*, Phila., 1855, Vol. IV, p. 70; Watson, *Prac. Physic.*, Phila., 1845, p. 573; Williams, *Cyclop. Prac. Med.*, Vol. III: Gerhard, *Dis. Chest*, Phila., 1860, p. 188; Swett, *Dis. Chest*, N. Y., 1856, p. 62; Spillan, *Op. cit.*, p. 180; Dietl, *Der Aderlass in der Lungeentzündung*, Wien, 1848, p. 69; Ziemssen, *Pleuritis u. Pneumonie in Kindesalter*, Berlin, 1862, S. 163; Sturges, *Nat. Hist. Pneumonia*, London, 1876, p. 117; Jürgensen, *Ziemssen's Handbuch der Spec. Path.*, Bd. V, Leipzig, 1877, S. 146; Green, *Quain's Dic. Med.*, N. Y., 1883, p. 859; et al.

²Cullen, *Prac. Phys.*, Phila., 1792, Vol. I, p. 187; Heimly, quoted by Laennec, *Op. cit.*, p. 207; Crichton, quoted by Laennec, *Op. cit.*, p. 207; Stokes, *Diseases of the Chest*, Dublin: Copland, *Med. Dic.*, N. Y., 1855: Vol. II, p. 382.

³Aretaeus, Galen, Tulpus, Bontius, Morgagni.

⁴*Op. cit.*, p. 205.

⁵*Op. cit.*, p. 180.

⁶*Hist. des Phlegmas. Chron.*, T. II, p. 111.

⁷*Dic. de Méd.*, T. XVIII, p. 239.

⁸*Clin. Med.*, Phila., 1873, Vol. I, p. 650.

⁹*Dic. de Méd.*, T. XIII, p. 364.

¹⁰*Op. cit.*, p. 69.

¹¹*Op. cit.*, p. 93.

¹Read before the Chicago Medical Society, Dec. 7, 1885.