CLINICAL LECTURE

ON

BONE AND JOINT CHANGES IN CONNECTION
WITH THORACIC DISEASE.*Delivered at the Hospital for Consumption and Diseases of the
Chest, Brompton.*

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(Concluded from page 58.)

CASES OF PULMONARY OSTEOARTHROPATHY.

I WILL now give very brief notes of cases that have come under my own notice. Some of them appear to me as genuine as many of the recorded cases; others I merely put in for comparison and in order to illustrate what seems to me to be the confusion that surrounds the subject.

CASE I (referred to above).—A youth, aged about 19, had had for years a long piece of drainage tube in his pleura. I think it was 11 inches for 9 years. It had slipped in soon after the opening of an empyema. He had marked clubbing of the fingers and toes and nose, and very obvious swelling of the wrists and ankles, and, I think, knees; but I did not take careful notes of them. The tube was removed by Sir Joseph Lister. The empyema closed, and the clubbing and the swelling of the joints quite disappeared. I have no doubt that this would have been considered a typical case. Some years later he died of pneumonia, so I cannot now obtain any details or dates.

CASE II.—In 1888 a patient came under my care for chronic empyema associated with tubercle. He was then 31 years of age.

His troubles began in 1880, eight years before I saw him, with pleurisy, followed by empyema, which had been opened in the posterior axillary line. He had a small cavity as large as the palm of the hand in the posterior and lower part of the right axilla, which I opened up by resecting 3 inches of three ribs, and removed a large quantity of calcareous material (which I may state in passing is to my mind always suggestive of tubercle). The empyema has never closed, but the patient continues to lead an active life, attending to his business, and spending his holidays fishing in Norway. He has been married since I operated on him, and is now in better health than he was then.

His knees began to creak in the year 1887, that is, seven years after the onset of his chest troubles, and there has been at times effusion into them. They give him little or no trouble as a rule, and he does not pay any attention to the creaking, which still continues. There is no limitation of movement. About two years ago he had a similar affection of one elbow, which passed off after a few weeks. No other joints have been affected.

I have not seen him for some years, but Dr. Norris, of Newcastle, has kindly supplied me with the following data:

"Lower ends of both femora enlarged, right more than left. Measurements (leg extended and tape carried round condyles and over patella), right, circumference 13 ins.; left, circumference 13½ ins. Upper ends of tibiae and fibulae, both enlarged. Measurements round head of tibia, below patella, equal on both sides, 1½ ins. No enlargement nor thickening of soft parts in either knee, no fluid, no heat, movements perfect. Fluid was present in both knee-joints in 1888, right more affected than left, and for a longer period. Both joints almost normal to look at, right apparently slightly larger than left, skin normal, no scars. Lower ends of femora and upper ends of tibiae widened; upper ends of fibulae enlarged and prominent. No deformity of patellae, which are freely movable. Soft parts above and below joints thin and firm; no marked emaciation on either side. In both joints are flexion and extension abundant, fine crackle heard and felt. There is no history of rheumatism in the family."

He has very marked clubbing of the fingers, which began between September, 1884, and May, 1885, whereas his joints first swelled about 1887, that is, about two years later. The accompanying Roentgen skiagram of the right hand (Fig. 5) shows that there is not the slightest appearance of enlargement of any of the bones of the hand.

This is a doubtful case, and very likely would not be owned by Marie, but it is a very interesting one to compare with the others.

CASE III. A patient under the care of Dr. C. T. Williams, aged 21, was under my care at the Brompton Hospital in September, 1887. She had left pleurisy followed by empyema, which had been incised in February, 1887. I enlarged the opening; the empyema did not close. In July, 1891, I noted that she had occasional swelling of the hands and feet. There was much clubbing. In November, 1891, there had been no more swelling of the hands and feet. The empyema closed in November, 1893, and she reports that between 1891 and 1893 she had pains in her fingers, and a sensation as if the nails were coming off; the wrists and ankles, and especially the latter, swelled considerably, and she had pains in the shoulders and knees. The attacks of pain recurred frequently. Since the cessation of the discharge the clubbing has much diminished, being now most marked in the thumbs. The pain in the joints has not entirely ceased, the feet especially frequently aching. She complains that her hands are now very clumsy, which is more obvious to her than to others, as before she was rather vain of their elegant shape.

The next case may seem inappropriate but I wish to mention it briefly.

CASE IV.—A lady, aged about 40, was attacked with an acute tuberculous affection of something inside the chest, but probably not the lung. Most likely it was suppurative of some bronchial glands which burst into a bronchus. She had expectoration of pus containing tubercle bacilli, and

became very ill. She, however, gradually improved, but came under my care for tuberculous glands at the root of the neck and caries of a rib cartilage. After prolonged suppuration, these troubles appeared to be almost well, when she was seized with what may be called polyarticular rheumatoid arthritis. It was very painful, and affected many joints—fingers, wrists, elbows, shoulders, temporo-maxillary articulations, etc. There is no marked clubbing of the fingers. This condition of things is on the mend, and the patient is becoming stouter; but the joints still cause her a great deal of pain. She has for years been the subject of leucorrhœa, which does not trouble her, and which she does not treat, at all events efficiently.

CASE V.—This, I think, is undoubtedly a genuine case. A man, aged 29, single, was admitted into Brompton Hospital, under Dr. Biss, on January 1st, 1896.

History.—Father alive, aged 56, and well. Mother died twenty-seven years ago from epilepsy. Two sisters alive and well; no brothers. He never remembers being without a cough, and was told by his stepmother that he had it since he was a baby. He does not know how it began. His fingers have been clubbed ever since he can remember. He has never had rheumatic fever, and does not know of any rheumatism or consumption in the family. The cough has been gradually getting worse, and the expectoration increasing; the latter has been offensive, certainly for three years. He has never had any pain in his joints until the summer of 1895, when first the ankles and then the knees began to be affected. First, they pained him when he was walking, and afterwards began to swell at night; no other joints had become affected up to the time of admission to the hospital. He says he had swelling of one testicle five years ago, and that at the time there was a little scalding on micturition, but assures us he has never run the chance of catching gonorrhœa in his life; he does not remember which testicle was affected, but thinks it was the left; there is a little doubtful thickening at the top of the left epididymis. There is not now, and he says there never has been, any discharge from the urethra.

State on Admission.—The patient was admitted with the diagnosis of chronic pulmonary tuberculosis of a fibroid type, but repeated examinations have failed to detect the presence of tubercle bacilli. The physical signs are most marked at the left apex, where there is deficiency of resonance, approaching to dullness, which extends down to the level of the sixth rib, and reaches round into the axilla. Over this area there is very loud amphoric breathing, with moist rales and well-marked whispering pectoriloquy. In the back the resonance is not so good as on the right side throughout, and there are moist rales on this side. On the right side there is some compensatory emphysema in front, and there are a few rales, similar to those heard on the left side, at the extreme base behind. In default of proof of the presence of tubercle bacilli the diagnosis at the present time is, therefore, bronchiectasis. The heart's apex beat is in the fifth space, half an inch outside the nipple; it is very forcible, the impulse is slapping, and there is some prolongation of, if not an actual murmur with, the first sound at the apex. The patient is thin and sallow but not particularly anæmic. The urine has a specific gravity of 1024, and there is no albumen. The tongue is furred. The bowels are regular. Since his admission pains and swellings have occurred in the wrists, elbows, and fingers, and the affection still is most obvious in the knees, ankles, wrists, and fingers. It is doubtful whether the hips or shoulders were affected.

Upper Extremities.—(Fig. 1.) There is no tenderness in any part of the upper extremities. The hands are moist, the fingers are all clubbed, the nails being blue at the periphery; they are not, however, cracked, but are

Fig. 1.—Showing arms and forearms of Case v.

marked by longitudinal furrows. There is no tendency to hyper-extension of the terminal phalanges. The terminal inter-phalangeal joints appear to be normal. The proximal inter-phalangeal joints are all swollen and stiff. There is little, if any, affection of the metacarpophalangeal joints, except in the case of the thumbs. The interossei seem to be wasted. There is no appearance of fluid in the affected joints of the hands. The soft parts appear to be infiltrated, and there is swelling over both wrists, which is obviously partly in the subcutaneous tissues, for it quite masks the outline of the tendons when the fingers are extended. The outlines of the radius and ulna cannot be seen, but are easily felt. There is no perceptible fluctuation in the joints. The outlines of the parts on the anterior aspects are somewhat obscured. The skin is rather hot. The movements of the wrists in all directions appear to be somewhat impaired. He is unable to flex his fingers completely into the palm of his hand, without great difficulty and straining, and even then the fist is not a firm one. The measurement round the lower ends of the radius and ulna on each

wrist is 7 inches. I should be sorry either to assert or deny that there is thickening of the lower ends of the bones. The bones feel large, but my impression is that they are not pathologically increased in size.

Elbows and Shoulders.—Nothing abnormal is to be made out in the elbows or shoulders, but the patient says he feels sometimes a little stiffening in both elbows. There is no creaking in any of the joints.

Face and Spine.—The jaws are not affected; there is no pain in the spine, and no lateral curvature. The spine in the lumbar region is convex backwards, the convexity being most marked at the second lumbar vertebra. This convexity does not disappear when he lies on his face, although it is then much diminished. It is impossible to say anything about the clubbing on the nose, because he has a diverted septum, the result of an injury some years ago. The palate and jaws are perfectly normal. The cartilages of the neck and ears are normal. The sight is good, and the voice is clear. The thyroid is not enlarged, and it is quite certain that there is no retrosternal dullness.

Lower Extremities.—(Fig. 2.) There is marked perspiration of the feet; the bed is quite wet beneath them when he has been lying still for some time; the toes show marked clubbing, and appear to be swollen and ache a little,

Fig. 2.—Showing the legs in Case v.

especially the metatarso-phalangeal joints of the big toes; the swelling appears to affect the proximal inter-phalangeal joints of the other toes. There is some swelling of the whole dorsum of the foot, extending up to about 2 inches above the ankle, obscuring the outlines of the tendons and other deeper structures. The front of the ankle is slightly convex, the malleoli are not distinctly seen, the superficial veins are not enlarged, the skin over the ankles is slightly hot, and there is no fluctuation in the ankle-joints. Movement is somewhat impaired, there is tenderness over the malleoli. The ankles are equal in size. With regard to the enlargement of the tibia and fibula, the same remark applies as was made with regard to the radius and ulna. The shins are not thickened. The knee-joints are both swollen, and both contain a little fluid, the left more than the right, but not nearly so much as they did when he was first admitted. I cannot make out any enlargement of the bones. There is slight heat of skin, but no obvious thickening of synovial membrane, and no tenderness. The knees bend to about a right angle, but not more. The muscles of the thighs are wasted. There is nothing apparently wrong with the hips. There is no tenderness about the great trochanters.

Pyræxia.—The temperature is often up to 100° at night, and is about normal in the morning; but he has passed through periods while in the hospital of normal temperature.

Sputum.—The average amount was 18 ounces when he came in, and now the average is about 20 ounces in the course of the day. It has the factor which we are in the habit of considering characteristic of bronchiectasis; there is as well a tendency for it to separate into three layers, which is described as usual in the same condition.

CASE VI.—Another genuine case. L. F., a man aged 25, a labourer.

History.—His aunt and one brother are said to have died of consumption, but there is no other history of tubercle in the family, nor is there any of rheumatism or gout. The patient had a swelling in his groin when 15, which did not suppurate; but except for this he had good health until the commencement of the present illness. He never had gonorrhœa or

syphilis, or dysentery. He joined the army in 1892, and in 1893 (two years and four months ago) he had an acute illness on his way to Bermuda, which appears to have been pleurisy on the left side. He was in bed for three months, and was then, and has on subsequent occasions, been tapped with a needle, but no fluid has ever been found. Ever since the onset he says that he has had a cough, and has expectorated, as he does now, greenish pellets of muco-pus. This has been subjected to microscopic examination, but no tubercle bacilli have been seen. He first noticed the joint affection after leaving his bed at Bermuda—that is, three or four months after the onset of the chest trouble. It began with a pricking pain in the ankles, and they gave way under him. They swelled after exertion. A fortnight later the knees swelled. Then followed the pain in the arms. The fingers have been clubbed for two years at least, so the clubbing must have commenced about the same time as the joint trouble.

State on Admission.—The left side of the chest is retracted and presents physical signs which may be interpreted as meaning either fibroid phthisis and bronchiectasis, or a localised empyema with bronchiectasis. The expectoration amounts to a pint or more in twenty-four hours. The urine is high coloured, specific gravity 1032, no albumen, no sugar. There is a deposit of phosphates. The temperature varies from normal to 100°. The bowels act three or four times a day. There is a slight systolic apex murmur.

Upper Extremities.—There is marked clubbing of the fingers. The nails are reeded but not cracked, and the fingers are not particularly blue. There is no affection of the interphalangeal or metacarpo-phalangeal joints. There is no wasting of the muscles of the hand. There is often a good deal of sweating of the palms. There is obvious swelling over the dorsal aspects of both wrists, which appears to be chiefly if not entirely in the soft parts. It masks the outlines of the tendons. The bones do not feel to me to be enlarged, but they have been considered to be so by others. There is no tenderness of the wrists and no heat. The movements are slightly limited. There is apparently no fluid in the joints. The elbows are not affected, nor are the shoulders, but he sometimes has a little pain in the left shoulder. The muscles of the forearm are small and possibly wasted.

Lower Extremities.—(Fig. 3.) There is marked clubbing of the toes. No joints are affected below the ankles, and to these the description given to the wrists exactly applies. There is often a good deal of sweating of the feet.

Fig. 3.—Showing the legs in Case VI.

Both the knees are swollen and contain a small amount of fluid, much less than when he first came under observation. The synovial membranes are not obviously thickened, but there is on both sides a small round nodule (as large as a cherry) near the anterior border of the lower end of the tendon of the vastus externus, manipulation of which causes the patient slight discomfort. There is slight impairment of movement in the joints, but no creaking, and I should say there is no enlargement of the ends of the bones. The thigh muscles are small, probably wasted. The hips are apparently unaffected.

Face, Neck, and Chest.—The temporo-maxillary articulations are unaffected. The conformation of the upper and lower jaws is perfect. There is no deformity of the back except a slight lateral curve with the convexity towards the affected (left) side. The nose is slightly bulbous at the tip. Its cartilages, like those of the larynx and ears, are soft and natural. There is not any obvious retrosternal dullness.

TERMINAL PHALANGES CLUBBED.

With regard to the enlargement of the ends of the fingers, I cannot myself observe any difference between it and the ordinary clubbed fingers met with in chronic suppuration, heart troubles, and other wasting diseases. And you will

Fig. 4.—From a skiagram of the fingers of Case vi.

see from the skiagram of the fingers of Case vi (Fig. 4), that the terminal phalanges are quite normal in outline, as those of Case ii (Fig. 5).

Fig. 5.—From a skiagram of the fingers of Case ii.

It is also to be observed that the clubbing of the fingers in Case i disappeared on the closure of the empyema or the swelling of the joints.

I have examined several other patients with marked clubbing very carefully, to see whether there is any slight affection of the joints, and have failed to find any.

It is also to be observed that in at least two of the cases recorded the clubbing was antecedent to the swelling of the joints, in one case by the space of many years. So I think it

is fairly arguable that the two phenomena may be, and probably are, quite independent of one another.

CONCLUSION.

The conclusion that I have come to is that at least two conditions are included under the name of "ostéarthropathie hypertrophiante pneumique," and that those which I have met with are examples of that form of osteo-arthritis which is associated with chronic septic suppurations such as gonorrhoea and leucorrhoea, complicated with clubbing of the fingers, which I believe has nothing whatever to do with the disease.

As to what osteo-arthritis is I have very confused ideas. It was one of the puzzles of my student days that rheumatoid arthritis should be made to include such apparently widely different conditions as that we have been discussing and *malum coxae senile*, and I wish to enter a loud protest against the continuance of this definition, and to express the hope that physicians and pathologists will endeavour to throw some light upon the confusion which still exists. I cannot believe that these probably septic conditions have anything in common with the rheumatic gout we inherit from our mothers and our grandmothers, and I think that the sooner we recognise that they are totally different conditions the better.

The other class of cases is that figured by Bamberger, and recently most admirably described by Thorburn in a communication to the Pathological Society, in which there is a more or less extensive chronic periostitis starting in the neighbourhood of the joints, but ultimately involving the whole of the shafts of the bones. It is also accompanied by erosion of the cartilages in parts apparently not subjected to undue pressure. What is the true pathology of these cases, and how far they or, indeed, any of the whole series are essentially connected with thoracic disease it would, I think, be premature to say. Thorburn

is still inclined to favour the view that it may be a mild tuberculous affection. I cannot help being reminded of the close resemblance the bones, and especially the joints, bear to that interesting series of syphilitic cases described by Bowlby, and to observe again upon the regrettable absence of reference to the possible complication with syphilis in the cases recorded. Of course it may turn out that if the cases I am describing are traced to the bitter end, they may develop into those described by Bamberger and Thorburn. But I very much doubt it, and, at all events, I trust that the distinction I have endeavoured to draw may serve to clear the ground in the study of this very interesting subject. I do not like Marie's name at all, but if it must be retained, let it be confined to those which show marked periosteal as well as joint affection.

PRESIDENTIAL ADDRESSES

DELIVERED AT THE

ANNUAL MEETINGS OF THE BRANCHES

OF THE

BRITISH MEDICAL ASSOCIATION.

ON SOME CURRENT TOPICS IN THE BRITISH MEDICAL ASSOCIATION.

Delivered at the Annual Meeting of the Bath and Bristol Branch at Bristol, June 24th, 1896.

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President of the Branch; Professor of Medicine in University College, Bristol; Senior Physician to the Bristol General Hospital; Fellow of University College, London.

My first duty on taking this chair is to express my sincere thanks for the honour which you have conferred upon me in placing me in a position of such responsibility and distinction. It shall be my endeavour to prove myself worthy of your confidence, and as far as lies in my power to promote the welfare of the Branch and the interests of the profession in this neighbourhood.

On the very threshold the incoming President has to encounter a difficulty often more formidable than any by which he is afterwards met. To select a subject of some interest and to prepare an address which may be in some measure worthy of your attention is no light task. Little of novelty is to be looked for in these days of many similar occasions. If I were to revert to the past and chronicle the progress of medicine during my personal experience of active work, the period that would be covered has recently been most ably dealt with by one of my predecessors in this office. Were I to indulge in prophetic forecast, I might but find myself in the excellent company of the learned Ambroise Paré, who in the year of grace 1579 thus delivered himself of his convictions: "For God is my witness, and all good men know, that I have now laboured fifty years with all care and pains in the illustration and amplification of chirurgery; and that I have so certainly touched the mark whereat I aimed, that antiquity may seeme to have nothing wherein it may exceed us, beside the glory of invention, nor posterity anything left but a certaine small hope to adde some things, as it is easie to adde to former inventions."

Perilous though the practice of prophecy may prove concerning the ultimate limitations of our art, in one direction it may be indulged in with safety. One future alone can be in store for the British Medical Association. Year by year our great Association becomes greater, its boundaries wider spread, its influence more powerful. With its 66 Branches extending throughout the British Empire and its more than 16,000 members, it is the only organisation which can claim to represent our profession. Other bodies may here and there exercise a more powerful local or specific influence, but it alone can set in motion a whole profession acting with one aim, speaking with one voice. And as, with the advance of science and the growth of knowledge in the world, the profession of medicine is more and more looked to by the community at large for guidance in the laws

of health, without doubt there will be a progressive increase in the influence and importance of our Association, which will stand forth as the organised profession, its acts the expression of our will, its opinions the matured product of our thought. It should ever be the aim of the Association to maintain the high tone consistent with the responsibility of its position. The representative of a profession which not only is learned and gentle in the good old sense, but also has the proud reputation of being a calling with which personal interest ever gives place to public weal, it should sedulously shun any approach to the attitude of a mere trades-union. All matters affecting our interests should be viewed not from a narrow or selfish class standpoint, but in the light of their bearing upon the common good, that it may be patent that the Association in all its motives and actions is mindful of the traditions of a noble calling.

It cannot, I think, be controverted that the strength and vitality of the Association lie in the Branches. Did these not exist there would be but little cohesion between some 16,000 members kept together by a central authority which could not be in touch with a large proportion of the component atoms.

The relation of the Branches to the Association is not altogether that commonly assumed in the metaphor of the human body and its members. For the Branch is not merely a portion of the whole, deriving its vitality and power of action from the central controlling mechanism. It is itself a separate centre of vitality, capable of independent initiative, and expressing the energy and best thought of the section of the profession which it comprises. The leg does not direct the body (except in ataxic conditions); but recent events have shown how an important Branch may influence the policy of the Association. And in my opinion it cannot be too clearly recognised that it is advantageous for the Branches to discuss on their own initiative questions that may arise, and to confer with each other upon them. Only—to follow out the metaphor—we must be quite sure that the apparent increase of activity is not the expression of some hysterical tendency or abnormal irritability or ataxic condition.

The Bath and Bristol Branch holds a prominent position in the Association. In point of numbers it stands sixth in sixty-six; and the experience of sixteen years, during which it has been my honour to represent you upon the Council of the Association, has shown that the weight of your influence in no way falls short of that of your numbers.

It is fitting that I should take this opportunity to express my lively sense of the confidence which I have enjoyed during so long a period of time. It has always been my aim to support to the full extent of my ability your wishes and your opinions in the Council, and it is a source of much satisfaction to me that there has never been any jarring note or discord between myself and the important section of the profession whom it has been my privilege to represent for so long.

This is the age of agitation and of change, and the British Medical Association has not remained untouched by the prevailing spirit. Amongst other subjects of discussion, the reform of the present mode of government has been advocated, chiefly on the ground that the Council is not a truly representative body. And here I would remind you of the root meaning of the word "reform"—"a change which reconstructs the present order in a new form," without necessarily improving it. And in this narrower sense it is often more correctly applied to advocated change. There is no need to insist upon the fact that the width and depth and reality of a movement cannot be measured by the energy of its supporters, or to remind you that a single positive (who is apt to be very positive) will make more stir than many negatives; and that change should not be made simply because a restless spirit is abroad, or solely on account of the importunity of its advocates. With this preface I pass on to say a word on the present form of government of the Association.

The management of the Association is in the hands of the Council, which is directly elected by the Branches in the following way. Each Branch elects one representative, and each Branch consisting of more than 200 members elects an additional representative for every complete 200 members. The Council is appointed for one year only.

The objection is urged by some that the Council thus constituted is not truly representative. It appears to me to be