ON
DISLOCATIONS,
ESPECIALLY OF THE HIP-JOINT,
ACCOMPANIED BY ELONGATION OF THE CAPSULE AND
LIGAMENTS.

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It may be presumed that observations similar to those which I am about to submit to the Society, have occurred to other pathologists and surgeons; yet as the subject of dislocations of the larger joints, and especially of the hip, occurring under other circumstances than as the direct consequence of external violence, or of the destructive processes of inflammation, has not, as it has appeared to me, received the attention which its importance demands, I have thought that the following cases, with the reflections they suggest, might not be unacceptable.

Case I. Dislocation of both hip-joints, consequent on disease of the spinal cord, and probably of the brain.—A gentleman, aged thirty-nine, in the year 1824, was attacked with spasms in the pec-

toral and intercostal muscles, and numbness in the whole of the left side of the body, with the exception of the arm. In the left thigh and leg, sensation was wholly lost, the power of motion remaining. He had no sensation of passing his urine after it had quitted the bladder, and was but just aware of the evacuation of the fæces. Vision in the left eye was impaired to the extent that he could but distinguish daylight. Disease of the brain was supposed to be the cause of these symptoms, and a seton in the neck was persisted in for six months without benefit. Subsequently, the spinal cord was supposed to be the seat of disease, and for several months the back was stimulated with tartar emetic ointment. The symptoms continued, with increasing weakness in the thighs and legs, to the complete loss of the power of support, and of sensation in them. Unless he saw his legs, he could not tell in what direction they were; but on looking at them so as to know their position, he could readily move them. At the same time, with a sense of tightness in the lower part of the back, he felt as if a complete separation had taken place of his body from his thighs. With the impairment of the natural sensibility of the limbs, he occasionally suffered in them the most severe pains, sometimes attended with a smarting sensation, at others, with the sensation of a blow frequently repeated. Red-hot irons were now held close to the spine daily, but with no marked benefit. Such is the outline of the case from its commencement in 1824 to the end of the

year 1827, when there was a diminution in the severity of the pains, with recovery to a limited extent of the power of moving the limbs. In March 1828 he was again attacked with violent spasms in his body and limbs, which compelled him to remain in bed several days. On rising from his bed when the spasms had subsided, he found, to his great surprise, his right lower limb so much shortened, that when erect he was but just able to touch the ground with his great toe, and at the same time he remarked a protuberance at the upper and back part of the thigh. In the following December there was a repetition of these occurrences, but in the other limb, an attack of spasms being followed by shortening of it, with a protuberance at the back of the thigh, as on the opposite side. He could still bear the weight of his body upon his limbs, but was almost wholly unable to move them. At no period had there been tenderness, or other sign of inflammation in the soft parts around the hip-joints. Through the next two years he very gradually improved in respect to the diminution of the spasms, and the recovery of the power of moving the limbs, which brings the narrative to June 1831, when, for the first time, the case falling under my observation, I noted, in conjunction with other surgeons, the following particulars respecting it.

The spasms and the attacks of pain are chiefly confined to the chest and to the lower limbs; he suffers a distressing sensation of tightness with acute pain on both sides of the chest, in the direc-

tion of the ribs from their angles to the sternum. Movements of the arms excite this pain. Firm pressure by the hands against the walls of the chest greatly relieves it. There is paralysis of the rectus superior muscle of the left eye, and its sensibility to the impression of light is much weakened. In the erect posture there is a remarkable projection at the back of the pelvis, which, upon examination, is ascertained to be caused by the extremities of the thigh-bones occupying this situation. In rotating each thigh, the head of the femur can be felt moving freely beneath the glutæi muscles. The trochanter major of each femur is thrown directly backwards. The distance between each trochanter and the head of the bone is natural. The head of each femur thus situated upon the posterior part of the pelvis is two inches and a half below the highest part of the crista of the ilium, and four inches distant from the anterior superior spine of the same bone. In the erect posture, there is a diminution in the stature to the extent of between five and six inches, and evidently from the pelvis sinking between the thighs. In the horizontal posture, the thighs can be readily pulled downward so nearly to their natural situation, that the shortening of the stature is then only to the extent of between one and two inches. As a consequence of the ascent of the thigh-bones to the back of the pelvis, the whole form and outline of the thighs are altered, and at the upper and front part of each thigh is a protuberance, apparently formed by the rectus muscle,

not yet adapted to the altered position of the femur. On a re-examination of the case in 1833, I found that a moveable plate of bone, semicircular, thick, and about three inches in extent, had formed immediately above the head of each femur, which, in the erect posture, pressed closely against it; these osseous plates might be regarded as the commencement of the formation of new acetabula.

From the year 1833 to the present time, there has been no material change in the symptoms. He still suffers attacks of severe pain and spasm in the pectoral and other muscles upon the sides of the chest, and in the muscles of the lower limbs, and after the trial of every variety of treatment, it is doubtful whether even a mitigation of suffering has been obtained from any other remedy than opium in some of its forms, to which he resorted at an early stage of his affliction, and has continued taking it in large daily doses. The extremities of the thigh-bones still project upon the back part of the pelvis as they did at the period of their displacement in the year 1828, but they are not so freely moveable as they then were, apparently from the thickening and consolidation of the surrounding cellular tissue. There has been a gradual recovery of the power of directing the movements of the limbs, which is now sufficient to enable him to walk at a slow pace, with the aid of a stick. It might of course be expected that under the most favourable circumstances, a long time would be required for the adjustment of

the muscles of the pelvis and thighs to the altered situation of the thigh bones.

Case II. Dislocation of the hip-joint consequent on an attack of hemiplegia.—I did not witness the following case, but the history of it is drawn out by the gentleman who had the charge of it, and upon whose accuracy I can rely.

A gentleman aged 48 had been for above eight years affected with hemiplegia, chiefly perceptible in the left lower limb. He had been a courier, and he attributed his complaint to the severity and vicissitudes of weather to which he had been constantly exposed. Two years before his death, it became evident, as he moved about on crutches, that the affected limb had become considerably lengthened; this was accompanied by wasting of the limb, with a remarkable flaccidity of the muscles; and on rotating the thigh, the head of the femur could be so plainly felt, that it was concluded it must be out of its socket. This circumstance gave an interest to the case, which led to a careful examination of the hip-joint after death, when the following peculiarities were noticed: The capsule and the ligamentum teres were entire, but elongated to the extent of allowing the head of the femur to pass beyond the limits of the acetabulum. The brain presented no other morbid appearance than a preternatural quantity of fluid in the ventricles. The spinal cord was found healthy in its cervical and dorsal portions, but in its lumbar portion it was so pulpy as to be almost of a mucilaginous consistence. The roots of

the lumbar nerves were in the same softened condition as the corresponding portion of the cord. The thoracic and abdominal viscera were healthy.

Case III. Dislocation of the hip-joint consequent on rheumatism.—Mary Elsely, aged 32, was admitted into St. Bartholomew's Hospital in December 1837, on account of general febrile disorder, combined with pain in the left shoulder-joint, in the right hip-joint and down the front of the thigh. She was in the fifth month of pregnancy ; her occupation was that of a hawker of brushes, which exposed her to the vicissitudes of the weather. She stated that she had been in good health until within a fortnight of her admission, when she was attacked first with pain in the right elbow and left shoulder-joints, and afterwards in the back of the right thigh. The pain varying in severity, was occasionally acute ; on some days it was confined to the thigh, and on others was excruciating through the whole limb from the hip to the toes. Throughout, there had not been more constitutional disturbance than might be referred to the amount of pain she endured. Her disorder was considered to be rheumatism, and the treatment of it was conducted accordingly, with the occasional applications of leeches, belladonna and opium plasters to the shoulder, hip, and thigh, while the internal remedies had been calomel and opium, to the extent of producing salivation, Dover's powder, hemlock, iodide of potassium, &c., each of these remedies in its turn procuring alleviation of the pain, but it again and again recurred in the same part.

It was, therefore, but slowly that the complaints subsided, and it was not until she had been in the hospital above ten weeks that she had sufficiently recovered to be able to move from her bed, to which she had been hitherto strictly confined. On the first occasion of doing so, the woman discovered, as she said, to her horror, a shortening and distortion of the right lower limb, of the mode or time of occurrence of which she could not give the least account, not having the slightest suspicion of it, nor had any one else, until, on getting out of bed, the hip was discovered to be dislocated. I examined the limb, and found it much inverted, and shortened to the extent of a little more than an inch and a half, and the displaced head of the femur could be plainly felt through the glutæi muscles upon the dorsum of the ilium. On rotating the limb, the head of the bone moved freely and without pain. There was no thickening, or in any other respect an unnatural condition of the soft parts, either contiguous to the acetabulum, or in the tract through which the head of the bone must have passed to the situation it now occupied. The woman being in the eighth month of pregnancy, it was not deemed prudent to make any attempt to replace the head of the bone in its socket ; she accordingly left the hospital.

Case IV. Dislocation of the hip-joint consequent on pain in the thigh, treated as sciatica.—A woman aged 30 was admitted into St. Bartholomew's Hospital in March 1838. She had been servant in a gentleman's family at Hampstead, where her illness had commenced with a painful swelling of one of the

joints of the right thumb, which, after a day or two, subsided, and was immediately succeeded by pain and stiffness in the right hip-joint, so far impeding its motions, that she was occasionally confined to her bed. She was seen at this period by several medical men, who considered the case to be sciatica, and treated it as such for between two and three months before her admission into the hospital. She now complained of pain in the right hip, but extending upwards to the loins, and down the thigh, with stiffness of the whole limb. The skin was tender on pressure through the course of the ischiatic nerve. Succussion of the whole limb by the application of force to the sole of the foot, and with the knee-joint extended, produced no pain in the hip-joint; and although the movements of the hip were impeded by the pain in the thigh, and the general stiffness of the limb, yet she could bear the weight of her body upon it without much inconvenience. In the view still taken of the disease, as being sciatica, no other treatment was adopted than the administration of opium, with the application of mustard poultices to the limb. This treatment having been continued for some time without benefit, she was removed to a surgical ward, when there was discovered to be a complete dislocation of the affected hip, of the occurrence of which the woman had not the slightest idea, and was not able, therefore, to give any information respecting the exact time of its taking place; the only point that could be clearly ascertained was, that the dislocation must have oc-

curred within the period of her stay in the hospital, through the whole of which she had been confined to her bed. The head of the femur could be plainly felt upon the dorsum of the ilium, and was freely moveable without pain. The limb was decidedly inverted, and shortened to the extent of nearly an inch and a half. There was no other swelling of the hip than that resulting from the displaced head of the femur, and there had been no evidence of inflammation in the soft parts around the hip-joint. The whole system was in a state of nervous excitement, which very gradually subsided, and in the same degree the uneasiness in the limb diminished. In about six weeks after her admission, she had become free from complaint, except the lameness consequent on the dislocation.

An attempt was, in this case, made to bring the head of the femur downwards to the level of the acetabulum, with an apparatus which, by the operation of a pulley and weight, maintained a gradual but continued extension of the limb. This was persevered in for many weeks, whether or not with benefit was doubtful. When the woman left the hospital there was still a decided inversion and shortening of the limb.

Case V. Dislocation of the hip-joint consequent on rheumatism.—I was consulted in June 1836, respecting the propriety of attempting to reduce a dislocation of the hip-joint which had occurred under the following circumstances. A youth aged fourteen suffered, at Gibraltar, an attack of inflammation in both hip-joints, with severe constitutional derange-

ment, which was reported to be of the nature of rheumatic fever. He was confined to his bed above twelve months. Then, on beginning to move about, it was discovered that the right hip-joint had become dislocated, but he was wholly unaware when the dislocation had occurred. At the time of my seeing this patient, four years had elapsed since the commencement of his illness. His general health is now perfectly good. There is not the slightest pain in the hip or elsewhere, but the limb is everted and shortened, as ascertained by exact measurement, to the extent of three inches and a half. The trochanter major is greatly more prominent than in the opposite limb, and the head of the femur is readily distinguished through the glutæi muscles, having its proper relation to the trochanter consistent with the integrity of the neck of the bone, and with the everted position of the limb. Flexion and extension of the thigh are perfectly free. Rotation of the thigh inwards can be executed, but not outwards. The soft parts of the hip, and in its neighbourhood, are sound.

It was from the characters of this dislocation differing so materially from the ordinary dislocation of the hip-joint consequent on disease, that the question arose whether an attempt should be made to replace the head of the femur in its socket. I had no hesitation in deciding against such a measure, from the consideration of the free action and usefulness of the limb, notwithstanding its shortened and everted position, bearing in mind also the little

probability of the head of the bone remaining in its socket, should we be able to place it there, of which there could not but be considerable doubt. Why the limb had assumed, in this instance, an everted rather than the inverted position which it might be expected to have with integrity of the neck of the femur, cannot, I presume, be satisfactorily explained.

Case VI. Dislocation of the hip-joint, which occurred in the sixth week from a fall.—A female, aged 14, in passing through a passage, the stones of which were slippery, fell upon the outer side of the right thigh. There immediately ensued a powerless condition of the limb, which was soon followed by severe pain and swelling in the front and outer part of the thigh, with spasms of the muscles. The surgeons summoned to the case could detect no deviation from the proper length and position of the limb, and accordingly expressed their opinion that the injury was confined to the muscles. At the expiration of a month there was no recovery of the power of using the limb, and the patient was in consequence removed to the sea side. Gentle efforts to walk were here made with the help of a stick, and at the same time the limb was every day placed in a vapour bath. At this period the patient occasionally remarked that she thought her hip was growing out; on one occasion, whilst using the vapour bath, she observed to her attendants that the projection of the hip had suddenly increased, and on examining the limb immediately afterwards, there was found to be a well-marked dislocation of the head

of the femur. How this dislocation had occurred no opinion could be given ; but the surgeon who had been in daily attendance was certain no dislocation had existed before the present time, which was in the sixth week from the occurrence of the fall. At this period I first saw the case in conjunction with other surgeons, when the following suggestions were offered respecting the probable nature of the injury—that in the fall, the ligamentum teres had been ruptured, effusion of fluid then taking place into the capsule ; this had gradually yielded, and by its elongation had allowed the head of the bone to pass out of the acetabulum to the dorsum of the ilium, upon which it was now situated. We found the space between the anterior superior spine of the ilium and the top of the patella to be an inch and a half less than on the opposite side. There was no tendency to inversion or eversion of the limb, and it could be moved freely in any direction, when the head of the bone might be felt rolling beneath the fingers placed upon the hip. The neck of the femur could be distinguished, and of its integrity there could be no doubt, from the movement of the head of the bone simultaneously with the trochanter, and from the preservation of the natural distance between the two prominences. It was judged improper to make forcible extension of the limb, as there might be some mechanical obstacle, such as the effusion of serum or lymph, to the return of the head of the bone into its socket. Accordingly no other treatment was recommended than quietude of the limb,

with the application of a bandage which might check the further ascent of the head of the femur upon the ilium. When about six months had elapsed from the occurrence of the accident, the patient, on rising from her bed, exclaimed that the projection of the hip had disappeared, and that her limbs were of the same length. A careful examination of the injured limb confirmed the statement of the return of the head of the bone to its socket, but it subsequently became again displaced ; for at a later period, the head of the femur could be plainly felt on the dorsum of the ilium, and the limb was now shortened to the extent of three inches, but still neither inverted nor everted. The power of using the limb was however progressively increasing, and evidently by the active advance of the natural processes combining to restore the usefulness of the limb in any case of unreduced dislocation, especially when occurring in a young and healthy person.

Case VII. Injury to the hip-joint, attended with shortening of the limb, from a fall upon the knee.— A youth aged 18, in walking, was thrown down by his foot striking against a pole which lay unperceived in his way. His face and left knee were the only parts bruised. But on being raised from the ground, he was unable to bear weight upon the left leg, and felt pain in the upper part of the thigh. He remained in bed until the pain in the thigh ceased, and then, on moving about, the limb was, as he stated, very feeble. Three months having elapsed from the accident without the recovery of

much power of using the limb, he was brought from the country to St. Bartholomew's Hospital. Upon a careful examination of the injured limb, the following particulars were ascertained respecting it. By comparison with the sound limb, there was found to be a diminution of the space between the anterior superior spine of the ilium and the top of the patella to the extent of two inches. There was no inversion or eversion of the foot. The head of the femur could not be anywhere distinctly recognized. The trochanter major was considerably more prominent than on the opposite side. All the movements of the thigh could be freely executed, and without pain. By moderate extension with the hands, the limb could be brought down to its natural position, when the unnatural prominence of the trochanter disappeared ; but on remitting the extension, this prominence reappeared, and the limb became again shortened. No thickening or other morbid change could be discovered in the soft parts around the hip-joint.

The first remark suggested by the perusal of the foregoing histories, may be one of surprise, that cases differing in so many particulars should be combined in one series, apparently without regard to the scientific precision demanded by the present state of pathological knowledge ; yet it will be observed, that they are all striking illustrations of the important practical fact to which it is my object to direct the attention of the Society, namely, the occurrence, and by no means rare, of dislocations of

the hip-joint, not as the direct consequence of external violence, nor preceded or accompanied by such changes in the soft parts around the articulation as are attendant on dislocations resulting from the destructive processes of inflammation.

In the first and second cases which have been related, the displacement of the head of the femur from the acetabulum occurred as a consequence of impaired nervous power, combined with spasms in the muscles of the limbs, in one case ascertained to be from disease of the spinal cord ; and in the other, presumed, from the collateral symptoms, to be from the same cause. It may be affirmed that in the first, and very remarkable case, where both hip-joints were dislocated, there had been, at no period, inflammation in the joints or contiguous parts ; and under such circumstances we must, I think, conclude that the pathological changes in these joints had been the elongation of their capsules and ligaments. In the second case, dissection showed such to be the condition of the joint, the capsule and ligamentum teres being lengthened to the extent of allowing the head of the femur to pass considerably beyond the acetabulum. We know that lengthening of the arm may be the consequence of paralysis of the deltoid and other muscles combining in their natural actions, to maintain the articular surfaces in contact. It may be said that the looseness and thinness of the capsule of the shoulder-joint permit no comparison of it with the dense, thick, and closely-embracing capsule of the hip-joint. How-

ever this may be, we have before us the fact of the lengthening of this capsule, and with it of the ligamentum teres, of which no other account can be rendered than that it was a consequence of impaired nervous power in the muscles surrounding the articulation.

In the third, and in the fifth case, the dislocation of the hip must be viewed as the consequence of rheumatic inflammation in the fibrous and synovial tissues of the joint ; and in the fourth case, the dislocation may be ascribed to the same cause, although the disease had been treated under the name of sciatica. It can scarcely be a question, that in each of these three cases, the pathological changes were elongation of the capsule, with either the elongation or actual destruction of the ligamentum teres. The sixth and seventh cases are examples of injuries to the hip-joint from external violence in young persons, followed by a gradual shortening of the limb, which, from the attendant circumstances, can be explained only by the yielding and consequent lengthening of the ligamentous tissues of the joint. In the sixth case, the head of the femur was gradually, and at a distant period from the injury, displaced from the acetabulum. In the seventh case, a similar change in the relations of the articular surfaces was indicated by the shortening of the limb, although the head of the femur could nowhere be distinctly recognized. Other cases have been reported to me of dislocations of the hip-joint, occurring gradually, and without inflammation, after

injuries from external violence. Whatever difficulty there may be in explaining such a form of dislocation, the knowledge of the simple fact of the possibility of its occurrence is of much importance to the establishment of a correct diagnosis of the various injuries occurring to the hip-joint.

It is well ascertained that inflammation of a mild character, whether rheumatic or otherwise, may, without evident change in the organization of ligamentous tissue, so far affect its property of resistance, that it will yield considerably to an extending force ; thus, in the knee-joint, the crucial and lateral ligaments may become lengthened to the extent of permitting such a displacement of the articular surfaces, that, from the view of the outside of the joint, it might be inferred actual destruction of the ligaments had taken place ; and it is to be observed, that these changes in the ligaments of a joint, very slow in progress, may be unaccompanied by pain, or other symptoms of inflammation. My colleague Mr. Wormald lately directed my attention to the following case of yielding of the ligaments of the knee-joint in one of the out-patients at St. Bartholomew's Hospital. A man, about 40 years of age, states, that about three years ago he caught a severe cold, immediately after which his knee became weak and swollen, and that there succeeded a very gradual alteration in the form of the joint, but unaccompanied by pain or other sign of inflammation. The articular surfaces are now displaced to the extent that the head of the tibia projects a full inch

on the inner side of, and a little behind the inner condyle of the femur, with a corresponding hollow on the outer side of the joint, and some fluid within the joint can be felt on each side of the patella. In the hip-joint, from inflammation of a mild character, and probably commencing in its fibrous tissues, there may be effusion of fluid into the capsule with the yielding of it, and of the ligamentum teres producing, first, an increased length of the limb, and an increase of its circumference in the district of the joint ; and subsequently, on the head of the bone reaching the brim of the acetabulum, a shortening of the limb, as the capsule gradually yields to the action of the powerful muscles constantly tending to draw the limb upwards and backwards. There was a case in St. Bartholomew's Hospital, which I refrained from adding to the series described in this paper, because I did not at the time of its occurrence record more than its prominent features, which were as follow :—In a female, an injury to the hip from external violence was followed, first, by a lengthening of the limb to the extent of an inch, with an increase of its circumference, and subsequently by a considerable shortening, with inversion of the limb, but unaccompanied by inflammatory changes in the surrounding soft parts. In a memoir published by M. Vrolik of Amsterdam * there is an account of the examina-

* Essai sur les effets produits dans le corps humain par la luxation congenitale et accidentelle non reduite du femur.

tion of the hip-joint of a young female, in which dislocation of the head of the femur upwards and backwards had occurred, with elongation of the capsule and destruction of the ligamentum teres. The acetabulum was found contracted, of a triangular form, and filled with a yellow, soft, and lobulated substance, which was apparently the adipose and cellular tissue existing naturally at the bottom of the acetabulum in a state of hypertrophy.

In addition to the variety of circumstances under which, in the cases herein related, elongation of the ligaments of the hip-joint has taken place, we may note the occurrence of such a change in early life as a consequence of efforts repeatedly made to place the thighs in positions not permitted by the hip-joints in their natural and healthy condition. A boy aged 18 was sent to St. Bartholomew's Hospital, in whom the following particulars were observed. His muscular system was remarkably well developed. When standing erect, he could, by the action of the muscles, throw the head of either femur out of its socket to the back of the pelvis, where it was felt projecting as in the ordinary dislocation from external violence, and as readily, still standing erect, he could, by renewed muscular effort, throw the head of each bone back again into its socket. It was remarkable that with such a degree of motion in the hip-joints, neither the firmness of his erect position, nor his power of progression, was in any degree impaired. We learned that he had been exhibiting feats at a country fair.

It might be suggested that in a proportion of such cases as have been related, the primary injury was a rupture of the ligamentum teres, the yielding of the capsule, with its attendant deformity and lameness, then in consequence taking place. But there are several facts opposed to such a conclusion. First, we may allude to the natural varieties in the condition of the ligamentum teres. Often, in the adult, it consists merely of a fold of synovial membrane enclosing no fibrous tissue, when, therefore, it can contribute very little to the security of the joint, and on which account the office of this interarticular ligament was thus described by Palletta in his *Exercitationes Pathologicæ*: “*Munus ligamenti aliud non esse quam illud, vasa nempe sanguinea intra funiculi caveam dirigere eaque protegere.*” Secondly, we may observe that in the instances of congenital deficiency of the ligamentum teres recorded by Palletta, Bonn, Sandifort, and Caldani, it is stated there was no lameness. Thirdly, we know that in dislocations of the hip from external violence, the ligamentum teres is in general torn completely across near its attachment to the head of the femur, and yet in a few weeks afterwards, with the closure of the laceration in the capsule, the functions of the joint are perfect; it may, I think, be safely affirmed, without a re-union of the torn interarticular ligament.

With a lengthening of the capsule of the hip-joint, it is unlikely that the head of the femur would be displaced in any other direction than upwards

and backwards, with a corresponding shortening of the limb, the action of the more numerous and powerful muscles tending to this result ; and it may be presumed, that the precise situation of the head of the bone will then be between the glutæus minimus muscle and the dorsum of the ilium. An exception to this would occur in the yielding of the capsule consequent on a paralytic condition of the muscles, when an increased length of the limb may be its permanent character, as in the second case which has been related. With the lengthening of the capsule and the passage of the head of the femur upwards and backwards to the dorsum of the ilium, there may be inversion or eversion of the limb, or no inclination of it to one or other position. Whether these differences depend on the condition of the ligamentum teres, as this may be elongated or removed, future observation must determine. It will be remarked, that in the majority of the cases which have been related, the displacement of the head of the femur occurred so gradually, and with such a freedom from uneasiness in the part, that the patient was wholly unaware that changes so important were in progress ; in fact, there was no suspicion of them before the discovery that the dislocation had actually taken place. The remarkable mobility of the limb in most of these cases is also to be noticed, as another distinctive character of these displacements when contrasted with the ordinary dislocations of the hip-joint consequent on external violence, or on disease.

In illustration of the foregoing statements, I refer to two preparations contained in the Museum of St. Bartholomew's Hospital; one of these exhibits an elongation of the capsule of the hip-joint with destruction of the ligamentum teres; the other exhibits elongation of the capsule and of the ligamentum teres, with the growth of fringe-like membranous processes from the internal surface of the elongated capsule. These preparations are represented in Plate IV. of the present volume.

Fig. 1.

Lithog. from Nature by G. Scharf.

Fig. 2.