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CLINICAL LECTURE

DELIVERED TO THE
STUDENTS OF SURGERY IN THE ROYAL INFIRMARY OF EDINBURGH,

AT THE
CONCLUSION OF THE SUMMER COURSE FOR 1827.

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REVIEW of some of the Surgical Cases which have lately occurred in the ROYAL INFIRMARY of EDINBURGH—A Clinical Lecture delivered to the Students of Surgery in that Institution, on Thursday, 26th July 1827, by GEORGE BALLINGALL, M. D., F. R. S. E. Fellow of the Royal College of Surgeons, Surgeon Extraordinary to the King, Regius Professor of Military Surgery in the University of Edinburgh, and one of the Surgeons to the Royal Infirmary.

GENTLEMEN,

THE summary which I gave of our proceedings at the conclusion of the last course of Clinical Lectures was so favourably received by our pupils, that I feel encouraged to undertake a similar review of some of the cases which have fallen under your observation during the course which I am now about to close.

In commencing this retrospect, it was my wish to have submitted to you a general return, embracing a view of the whole of the surgical cases which you have had an opportunity of witnessing in the Hospital during the last three months; but circumstances have prevented me from completing this view with sufficient accuracy to be laid before you. I wish, however, to impress you with the great importance of such comprehensive views of Hospital practice, convinced that it is by these that the practice of such establishments must be regulated and improved, rather than by the occasional publication of isolated cases, whether successful or otherwise. Much has recently been done, in this country, in the way of publishing Hospital Reports; but to give them all the utility of which they are susceptible, such publications should be undertaken on a more systematic, extended, and unreserved plan, so that the results of different Hospitals may become fair objects of comparison, and that, where differ-

ent results are exhibited, the profession may be enabled to judge whether this is attributable to a difference in the size, situation, construction, and interior economy of the Hospitals, to a difference in the class of patients admitted, or to any peculiarities of medical or surgical treatment which may be adopted in them.

In proceeding to the more immediate business of this Lecture, I would observe, that instead of arranging my cases, as I did upon the last occasion, nearly in the chronological order of their occurrence, I shall endeavour to bring together such as naturally fall under the same head, such as bear any natural relation, or are mutually calculated to illustrate each other.

Of the class of injuries of the head, we have, I think, had fewer cases during the present quarter than upon some former occasions. The same remark may be extended to wounds and injuries of the trunk; and of these none have possessed that peculiar or impressive character which would render them proper subjects of observation in this brief retrospect of the course. Of fractures, wounds, and injuries of the extremities, some of a very interesting nature have presented themselves, and to a few of these I would now solicit your attention.

In the case of *Elizabeth Matthews*, recently dismissed, you had an instance of the successful treatment of a fracture of the humerus close to the round globular head of the bone, or in what has been termed the anatomical neck of the humerus. In remarking upon that case, I took occasion to point out to you, that when the bone is broken, as in this instance, above the insertion of the pectoralis major and latissimus dorsi, these powerful muscles tend to draw the lower fragment of the bone towards the trunk, away from the head of the humerus which remains attached to the glenoid cavity of the scapula; when the fracture, again, passes through that part of the bone into which the two last mentioned muscles are inserted, both fragments are naturally drawn towards the trunk; and when the fracture is below the insertion of these muscles, it is the superior fragment of the bone, which is drawn by them towards the trunk of the body, while the lower fragment is drawn outwards and upwards by the deltoid. These, I remarked, were not to be considered as the only muscles tending to displace the broken fragments of the bone, but they are by far the most powerful; and by leaving the others out of view for a moment, you will, I think, be better enabled to understand the true position which the broken ends of the bone generally assume in fractures of the upper part of the humerus; and you will readily perceive in treating them, the propriety of placing, along with the splints on the outside

of the arm, a pad or cushion in the axilla, so as to operate on one, or other, or both fragments of the bone, as the case may require.

On the 9th of May *Charles Knowles* was admitted with a severe injury of the wrist—the radius fractured near to its articulation—the ulna protruding through a lacerated wound—the flexor carpi ulnaris torn across, and the ulnar artery laid bare. This wound was for several days attended with a very moderate degree of inflammation, and the symptomatic fever extremely mild; but at the end of a week from his admission, the hand and lower part of the forearm became much inflamed and swollen, with great constitutional disturbance; these were relieved by several incisions into the swelled and tense integuments, and for some days matters wore a more promising aspect; but he then became affected with profuse sweatings; on the morning of the 25th, he had a severe and long-continued rigor, and on that day I amputated the arm below the elbow. The stump at the first dressing had a most favourable appearance, and promised to unite by the first intention; at the second dressing, some swelling and tension were observed in the upper arm in the region of the biceps muscle; and at the third dressing, this part of the arm had become discoloured and afforded an obscure sense of fluctuation, the stump all along doing well, and the constitutional symptoms in some respects improved since the operation. I now made an incision near the insertion of the deltoid, and discharged several ounces of dark grumous fluid, the cellular substance and muscles presenting at the wound a black gangrenous appearance. After this the patient sunk rapidly, and died in less than 24 hours. On dissection, the biceps and brachialis internus were found completely gangrenous, while the remaining portions of the muscles below the elbow had a tolerably florid and not unhealthy appearance; the stump had partly reunited, but the adhesions were torn open almost without an effort, and the cut surface had a sloughy appearance.

One is almost tempted to believe, from the rapidity with which the disorganization of the parts above the elbow took place, that mischief must have existed in this region even before the operation, although no indication of it was perceived either by myself or colleagues, not even by the Gentleman who applied the tourniquet.

In the case of *William Grant*, who was admitted on the 4th of May with a gunshot wound of the hand, injuring the ball of the thumb, and the parts on the posterior surface of the metacarpus, a profuse hæmorrhage occurred on the 15th from the radial artery, at the point where it passes between the metacarpal bones of the thumb and forefinger; this hæmorrhage recurred in spite of every effort to restrain it; and Dr.

Campbell, who had taken charge of the patient in Dr. Hunter's absence, was eventually obliged to secure the brachial artery above the elbow. On the seventh day after it was tied, a profuse hæmorrhage occurred in consequence, as was supposed, of the premature disturbance of the ligature, by a sudden start of the patient during sleep. Dr. Campbell passed another ligature upon the artery about two inches above the former, and from this time the cure was progressive, although slow, from the patient's scrofulous diathesis.

This case was in almost every respect analogous to that of Thomas Sutherland, detailed in the Lecture which I printed at the conclusion of last winter course; and as that case has been thought worthy of a place in the Medical and Physical Journal, and is thus fully before the profession, I refer you to that work for my views of the nature of this accident, and of the difficulties sometimes experienced in its treatment.

In the case of *Andrew Wilson*, you had an instance of a wound of the radial artery at a different point, immediately above the wrist, and in that case no secondary hæmorrhage occurred, although of this I was apprehensive, from the inferior portion of the divided artery not having been seen and secured after the injury; a step which it is always desirable to take whenever it is practicable.

During the present course you have seen several instances of dislocation of the shoulder joint, all of which have been treated successfully, and none of them offer any subject for remark, if I except the case of a patient, I think, of the name of *Smeaton*, whose arm was reduced in the beginning of May, and which afforded an instance of what is not an every-day occurrence,—an old man coming from a distance to seek relief from the regular practitioners of surgery, after he had failed in obtaining it from a celebrated country bone-setter.

In the person of *Margaret Murray*, a patient of Dr. Hunter's, you had a recent opportunity of seeing an irreducible luxation of the first phalanx of the thumb. This is a case, I remarked to you, of which no one will readily estimate the difficulty who has not experienced it: but the numerous cases which I mentioned, where all attempts at reduction had failed in the hands of the most eminent surgeons both in this country and in France, will, I am sure, incline you to look with an indulgent eye on every unsuccessful attempt which you may hereafter have occasion to witness, and will stimulate you to avail yourselves of any opportunity which may present itself of dissecting the joint in its dislocated state, and explaining the real cause of the difficulty in reducing this luxation.

I pointed your attention particularly to the remarks on this dislocation

in the excellent practical work of the late Mr. Hey of Leeds. I noticed also the successful cases recorded by Mr. Shaw and by Mr. Charles Bell, and explained to you by a sketch from Mr. Bell's *Operative Surgery* what he conceives to be the true position of the parts in this luxation, and what he considers to be the obstacles to its reduction. Of this troublesome accident I met with two instances about thirteen years ago, in the persons of two young soldiers, which you will find recorded in the 11th vol. of the *Edinburgh Medical and Surgical Journal*. In one of these cases I failed, and in the other my efforts were successful. My failure occasioned me more annoyance at the time than it will ever do again, now that I know how very far it is from being singular; and, as to my success, Gentlemen, I wish I could persuade myself that it was any thing more than accidental: it is right, however, to observe, that in most, if not all of the cases where the reduction has been accomplished, it has been undertaken at an earlier period than in Murray's case; and that this reduction has been effected rather by pushing than by pulling the bones into their natural situation.

Of the accidents affecting the inferior extremity, I would first advert to the cases of *Jane Sedler* and *William Stevenson*, both of whom have been under treatment during the present course for fractures of the neck of the thigh bone. In my observations on these cases, I formerly entered at considerable length into the merits of the controversy which has lately agitated the profession as to the nature and treatment of this accident.

I took occasion to notice a little essay lately published by Mr. Benjamin Bell on interstitial absorption of the neck of the femur, which in some instances has produced appearances liable to be confounded with fracture; and as I have not yet seen any unequivocal instance of a bony re-union where the fracture was wholly within the capsule, and the head of the bone fairly detached, I am necessarily led to agree with Sir Astley Cooper in questioning the probability of a bony re-union under such circumstances. On the other hand, I am induced, from my own experience, to admit the difficulty of ascertaining precisely whether a fracture of the neck of the femur is wholly or only in part within the capsule; and I concur with Mr. Earle in believing that painful and protracted efforts to ascertain this point may prove not only futile, but ultimately injurious, by lacerating the investing membrane of the neck of the bone, and impeding its re-union; "thus contributing" (as Mr. John Bell has observed on another occasion) "to make good our opinions by our practice."

In the treatment of this accident, I presume that every surgeon is desirous of taking steps to procure the most perfect re-union of which the

case admits, and I believe that the perfection of this re-union often depends upon circumstances which it is nearly or altogether impossible to ascertain with precision, nay, upon circumstances which may be altered for the worse by the very attempt at such precision. I would therefore recommend to you in every case to take the chance of obtaining a bony re-union by adopting that mode of treatment most likely to procure it; for, however imperfect this union may ultimately prove, it will always be a pleasant reflection to think that nothing has been omitted which was calculated to promote it, and that nothing has been done which could possibly impede it.

It would ill become me, Gentlemen, to underrate the importance of the discussion about fractures of the neck of the thigh bone, considering the distinguished surgeons who have taken part in it; but while several points connected with this controversy are still undecided, I must, *pendente lite*, be permitted to solicit your attention to a division of fractures of the upper part of the thigh bone capable of immediate practical application. I would divide these fractures into such as occur in that part of the bone above the muscular insertions, and such as occur at or below the point at which these muscular insertions commence; that is, into fractures above the trochanters; fractures passing through these processes; and fractures immediately below them; of each of which there are numerous varieties.

In the first case, it is obvious that we have no command over the head and neck of the bone, except through the medium of its ligamentous connexions with the pelvis, and every contrivance calculated to insure the successful treatment of this accident, must have in view the fixture of the pelvis, as well as of the thigh bone. The limb may be placed either in the bent or extended posture; but the former I consider the best wherever we have an apparatus sufficiently perfect for keeping the parts in apposition.

In the second case, that of fracture through the trochanters, we have both portions of the bone acted upon, and sometimes rotated in opposite directions by the muscles implanted into them; and hence we are enabled to explain the fracture of this part of the bone with inversion of the toes; an occurrence which was long ago noticed by Paré and Petit, but of which the true explanation has only recently been given by Mr. Guthrie of London, and Mr. Syme of this city, each of whom has met with an instance of this variety. Of its treatment I speak with great diffidence, because I speak without any personal experience; but I am disposed to think that in most cases the tendency of the limb to deviate from the natural position, will be best counteracted by keeping it in the extended posture by means

of Boyer's, Desault's, or Hagedorn's apparatus ; the merits and defects of each of which I endeavoured to explain to you.

In the third case, that of fracture immediately below the trochanters, the limb ought, I think, uniformly to be placed in the bent position. It has been well observed, that in this instance no modification of the extended posture will answer, for, supposing the patient placed on his back, the powerful action of the psoas magnus and iliacus internus muscles, inserted into the trochanter minor, will raise, or bend the upper fragment of the bone upon the pelvis, while it is obvious that all attempts to extend, to level, or to depress the inferior fragment of the bone will tend to separate the broken ends from each other.

I would therefore press upon your attention these three varieties of this accident, as more capable of being recognised in practice, and better calculated to lead to a determinate and successful mode of treatment. In the first case the position of the limb may be optional, in the second I am inclined to consider the extended posture the best, and in the third the bent position should invariably be adopted.

In each of the cases which have led to these observations, we had all the usual diagnostics of fracture above the trochanters,—fracture within the capsular ligaments ; we had the limbs shortened in Sedler's case to the extent of an inch, and in Stevenson's case to the extent of an inch and a half—the space between the trochanters and crests of the ilia in both cases diminished—the trochanters rotating along with the shafts of the bones—the eversion of the toes—and the sense of crepitus on extending and rotating the limbs. They have both apparently obtained a pretty firm reunion, but whether of a bony nature or not it is impossible to say ; these cases, you will observe, were both treated in the extended posture, as practised by the French surgeons, but this, more from a sense of the imperfection of the apparatus which we possess for retaining them in the bent position, than from my own conviction of the advantages of the extended one. An early bias, derived perhaps from the study of Mr. Potts's writings on this subject, and the observation that the limbs naturally fall into the bent position during sleep, have made me long incline to the general adoption of the bent posture in the treatment of fractures of the lower extremities ; and for maintaining this posture the best contrivances with which I am acquainted are the beds of Mr. Henry Earle, and of Mr. Amesbury, the construction of which I endeavoured to explain to you by means of the plates attached to their respective works. For fractures in the lower part of the thigh or leg, I would recommend to your notice the splint contrived by Mr. Macintyre of Newcastle, which you have frequently seen me

use in this house, and which I consider one of the best modifications of the double inclined plane.

At the beginning of the present course you had an opportunity of seeing a remarkable fracture of the femur in the case of *David Hamilton*, a patient of Dr. Hunter's who was reported to have been thrown from a window three stories high, and who was brought into the hospital with a lacerated wound between the eyebrows—the frontal sinus laid open—the bones of the nose fractured—the left elbow dislocated, and the radius broken; in addition to all this he had sustained an oblique fracture of the left thigh immediately above the knee joint, the superior portion of the fractured bone had penetrated the cruraeus and rectus muscles, and threatened to protrude through the skin. The luxation of the elbow joint was early reduced, and of the injury of his forehead and the fracture of his arm he speedily recovered, but the fracture of the thigh remained long disunited although the limb was kept extended to its due length by means of Boyer's splint. It was obvious that the fractured surfaces could not be placed in perfect apposition in consequence of the portion of the tendon of the rectus interposed between them. Several expedients, some of them remarkably ingenious, were suggested to Dr. Hunter for the removal of this portion of interposed tendon, but these he considered it unnecessary to resort to, from an opinion that the fracture having taken place in the broad expanded extremity of the femur, where it enlarges for the formation of the condyles, there was still (notwithstanding the interposed substance) a sufficient extent of the fractured surfaces in contact to admit of a firm reunion; and this union at the end of thirteen weeks was found to be completed, when the patient left the hospital with the limb very little shortened, and walking with the assistance of a stick, without any considerable halt. In this case I always considered any operation for the removal of the end of the bone forbidden by its contiguity to the joint, and was always encouraged to expect a favourable termination by the result of some similar cases which I have witnessed, particularly by the case of a patient of mine of the name of *Cooper*, who had, like *Hamilton*, sustained some severe injuries on the head, and a fracture of the thigh bone; and who remained about the same length of time in hospital; in that case there was I think much less of the fractured surfaces in contact, a small portion of the muscular substance of the limb was thought to be interposed between them, and the fracture being towards the middle of the bone, the injured part of it was less vascular, and the circulation in it of course less vigorous.

In the case of *Isaac Webber*, æt. 68, the tendons of both recti muscles were ruptured or torn from their insertions into the patellæ, and this pro-

duced entirely by the forcible action of those muscles in endeavouring to save himself from falling backwards, his feet having slipped out below him in coming down a few steps of a stair; the accident was marked by the great mobility of the patellæ—an evident hollow or depression above these bones,—and complete inability to extend the limbs, every attempt of this kind increasing the hollow above the knees. The patient was laid upon his back, with his shoulders and the trunk of his body raised by pillows, and at the same time his heels elevated; splints were placed along the back part of his limbs with compresses and bandages over the patellæ; in this position the old man lay with great patience and composure, from the 7th of May to the 24th of June, when the union was found to be more perfect than I had anticipated, considering his advanced period of life, and he left the Hospital walking with the assistance of crutches.

In the “Elements of Anatomy” lately published by my colleague, Dr. Monro, you will find several cases akin to the above, but neither in these nor in any other which has come to my knowledge, was the rupture so complete on both sides as in the case of Webber; and here it was fortunate that the treatment was as obvious as the accident was rare.

In the case of *John Carlan* you had an instance of a severe injury of the ankle joint, rendering the amputation of the limb necessary. This little boy, three years of age, was brought into the hospital on the 3d of July, with an extensive ulceration over each of the malleoli of the right leg—the extremities of both the tibia and fibula bare—the lateral ligaments entirely destroyed, and the cavity of the ankle joint fully laid open. The history of this case, as given by his parents, was very unsatisfactory; but he was reported to have sustained an injury on the joint about a month previous to his admission, and the ulceration was stated to have taken place about three weeks subsequent to the receipt of that injury. For a day or two after he was brought into the hospital, the constitutional symptoms were so mild, and the discharge from the wounds so moderate, as to render me unwilling to urge the removal of his limb; but an unfavourable change in his general health soon took place; he became affected with diarrhœa, and the discharge from the ulcerated ankle increased to profusion. I then pressed upon his parents the necessity of removing the joint; but this was, for two days, obstinately resisted, during which the boy’s health suffered severely. On the 9th instant, the limb was amputated below the knee: his health improved a little for two days after the operation; but, on the third his pulse got up, his appetite failed, his bowels again became irritable; the stump did not adhere, and he died in less than a week after the limb was removed. On dissecting the joint,

which was exhibited to you immediately after the operation, the extremity of the tibia was found deprived of nearly the whole of its cartilaginous covering; the end of the fibula covered with pale spongy granulations; and the astragalus lying dead in the bottom of the ulcer, imbedded in pus, nearly detached from its connections, and divested of its cartilaginous surfaces.

In commenting upon this case, I observed to you that the extreme youth of this subject was in some respects an advantage to him, and in others the reverse. You must all have seen very extraordinary instances of the system accommodating itself to privations and injuries sustained in early life, and, on the other hand, surgeons have learned by experience that the extreme irritability of childhood is upon the whole rather unfavourable to capital operations. I pointed out to you, in reference to this case, several instances in the writings of Dupuytren, of Cooper, of Gooch, of Hey, and of Trye, where the astragalus had been either removed by excision, or separated by the powers of nature, and a useful limb preserved; and had this boy's health been more prosperous, I should have been encouraged to hope for a similar termination here, although, in this case, the ulceration on each side of the joint was a most unfavourable circumstance, by preventing the application of a splint, or the adoption of any sufficient means to preserve the limb at rest; upon which you know that the successful treatment of wounds and inflammations of the joints so essentially depends.

I would here notice, more with a view of soliciting information for myself than of offering it to you, the case of *James Dall*, a robust hale-looking man fifty-six years of age, who was admitted on the 4th of June, with two chronic abscesses—one in the left forearm, and another a little below the right knee. This man was induced, in consequence of some family circumstances, to leave the house a few days after his admission; the abscess near his knee having been previously opened by a puncture with a lancet, and about two ounces of matter discharged from it. This is one of four cases which I have now treated in this house, where abscesses have formed in different parts of the limbs, of the face, and of the trunk of the body, without any apparent cause, without any discoloration of the skin, or any considerable pain; without any evident marks of preceding inflammation, and almost without the patient's knowledge. These abscesses are seated in the cellular membrane, are altogether unconnected with any affection of the bones, or of the glandular parts, and often, as in this man's forearm, at a distance from any of the usual seats of scrofulous disease. In *Dall's* case, these abscesses were considered as a sequela of rheumatism, but in other instances no such origin has been assigned to them.

My views in their treatment have been confined to the evacuation of the matter, and to the regulation or improvement of the general health when that has been impaired. I have, however, but a very indifferent account to give of my success. One woman who had an abscess of this kind, seated deep under the great pectoral muscle, fell a victim to a violent attack of erysipelas, which was then prevalent in the house; and in that case nothing appeared upon dissection which was calculated to elucidate the nature of the disease. The other patients, to the best of my recollection, have all left the house without benefit, and one of them, a young lad about eighteen or twenty years of age, apparently dying. In that case, an abscess on the outer part of the leg, containing a few ounces of pus, was first punctured, and afterwards freely laid open by incision; it threw out dark fungoid granulations, and afforded a grumous unhealthy discharge, hectic fever supervened, and the young man would willingly have consented to the amputation of his limb; but this I declined, as it would only have been applying a partial remedy to a very general disease; for, in that case, an abscess existed in the opposite thigh, one in the cheek, and one near the shoulder.

Dall was, I think, a native of Fife, the other cases noticed above were from the Shetland Islands, whence patients occasionally come to us with very anomalous forms of disease; and this one, as I have already hinted, is, with the exception of the foregoing cases, altogether new to me.

I will next, Gentlemen, direct your attention to the case of *Robert Auld*, in which you have all taken so much interest, and which presents many anomalies. This poor lad (an idiot) was admitted on the 6th of June, with an oblong elastic tumour under the integuments of the left groin, following apparently the course of the spermatic cord, and bearing somewhat the resemblance of an inguinal hernia. This tumour was slightly discoloured on the surface, and was stated to have originated suddenly in consequence of a kick from a jack-ass. I had little doubt that the great bulk of the swelling was formed by the effusion of blood; it was treated in the first instance by leeching and cold lotions, under which the inflammatory appearance on its surface diminished, and for some time I had hopes that it would be removed by absorption. But the tumour having become stationary, I opened it on the 23d of June, and turned out a large quantity of coagulated blood from the upper part of the swelling; in the lower part of it the effused blood had become to all appearance partially organized; it presented somewhat the appearance of the fibrinous deposit found in aneurismal sacs, and on attempting to remove it, fresh bleeding

was excited ; the wound for some time promised to suppurate kindly, and the remains of the coagulum were likely to be thrown out in the form of a slough ; the lad's health, however, became impaired, frequent oozings of blood occurred, and the matter in the bottom of the wound assumed rather the appearance of a soft fungus than of a slough. On the 3d of this month, the wound was enlarged downwards to the bottom of the scrotum, the whole of the fungoid mass which could be readily detached was removed, and the oozing of blood which followed was restrained by the application of hot turpentine, which was continued for several days, with the double purpose of suppressing the bleeding and hastening the detachment of any remaining portions of slough. But the patient's health continued to fail; the fungus again sprung up, and was not now confined to the bottom of the ulcer from which it originally seemed to arise, but a fresh growth of the same description took place from the upper point of the ulceration, which had extended towards the anterior and superior spinous process of the ilium, and here the excrescence obviously originated from the integuments or cellular membrane, and not from any deeper-seated part. Various escharotics were applied without effect, and on the 16th an attempt, which was of necessity a forcible one, was made to destroy the fungi with the scalpel and actual cautery, but this was counteracted by the patient's violent struggles, and little or no ground was gained. On the 20th he submitted patiently to the application of ligatures round the roots of the fungi, and on the following morning the lower one appeared somewhat shrunk, and less vascular ; but he has since obstinately resisted any attempt to tighten the ligatures. He has now become exceedingly irritable, timid, and suspicious. Within these few days we are threatened with a fresh protrusion of fungus from the upper part of the ulcer, while the former ones continue to increase. His pulse is now 120 ; his body much emaciated ; and his appetite greatly impaired ; so that there is little or no room to hope for amendment.

From the view which I first took of this case, I represented it to you as a variety of hæmatocele, as a bloody tumour lying over the course of the spermatic cord, but not contained within its sheath. You will recollect that before it was opened the great bulk of the tumour lay high up in the groin, above the ring of the external oblique, and that while this part of it was discoloured and livid, the scrotum on that side presented its usual appearance, slightly corrugated on its surface, free from tenderness or discoloration, with a firm globular body to be felt at its lower and back part, which was conceived to be the testicle. It was obvious that the testicle

had not descended into the scrotum on the right side ; and it is now positively asserted by a person who has been in the habit of visiting this patient, and who formerly slept with him, that he never had any testicle on either side of the scrotum.

From the subsequent progress and present state of this case, it is impossible to speak with precision as to the anatomical structure of the parts ; the lower part of the fungus had at one time very much the appearance of those fungi which are not unfrequently found to spring from the testicle, but in this instance the upper part of the excrescence, at least, had certainly no such origin. In speaking of the vessels from which the blood was in the first instance effused, and by which the fungus was subsequently nourished, I mentioned the epigastric, the circumflex iliac, and the spermatic, as those most probably engaged ; and I noticed several anomalies in the distribution of these vessels, observed by different anatomists, some of which may possibly exist here.

In the treatment of this case, the state of the poor creature's mind has been all along a most formidable obstacle, by throwing additional obscurity on the nature of the disease, and by rendering him incapable of mustering sufficient resolution to submit to the most probable means of relief. You have all seen how inefficacious the employment of escharotics has proved ; and the attempt which you saw me make on the 16th to reduce the excrescence, by shaving off a portion of its surface, and afterwards cauterizing it, was, I think, rather prejudicial than otherwise. It was evident that the patient's violent struggles produced a determination to the seat of the disease ; every successive writhe of his body propelled an additional quantity of blood into the tumour, part of which escaped, and part lodged in its texture, and led to its increase.

An attempt to remove the whole excrescence with the knife, and to cauterize its base, would, I think, be exceedingly hazardous : in the first place, it is not to be expected that this could be done without the loss of a large quantity of blood, which the patient is now very ill able to spare ; in the second place, the cautery cannot here be applied with freedom, for, were the eschar to extend a little too deep, it might lay open the cavity of the abdomen, or excite inflammation within it ; and, in the third place, I should hesitate to carry a scalpel near the base of this excrescence, for, were the patient to make one of those sudden and irresistible contortions which you have formerly seen, it is not impossible that the knife might be plunged into his belly, or into the iliac artery.

Allied to the last case, at least as far as regards the seat of the disease, is that of *Peter Macintyre*, who was operated on for strangulated inguinal

hernia on the evening of the 10th of June, after the failure of the usual preliminary attempts to reduce the tumour; the hernia consisted partly of omentum, which was found adherent to the bottom of the sac, and partly of intestine, which was found strictured in the upper orifice of the inguinal canal. The only peculiarities in this case were the unusual flaccidity of that part of the tumour projecting beyond the ring of the external oblique, and the great space between the external and internal apertures of the canal. I mentioned to you that where herniae are of any considerable standing, (as the omental part of this tumour most probably was,) the two apertures of the inguinal canal are brought nearer each other, and the extent and obliquity of that canal generally diminished by the continued impulse of the parts from above.

In M'Intyre's case, however, those Gentlemen who were present at the operation must have seen that the stricture was barely accessible with the tip of my fore finger; and it was only by slitting open the external ring, while my assistant drew the hernial sac downwards, that the stricture was brought fairly within reach, and divided. The protruded parts were then easily reduced, and the functions of the patient's bowels were speedily restored. The wound healed rapidly, but when almost completely cicatrized, an abscess formed in the upper part of the scrotum, which retarded his final recovery.

My observations on this case were chiefly intended to apprise you of what I have found to be the most common difficulties in the treatment of this disease. First, the diagnosis between hernia and those tumors with which it is liable to be confounded; and, secondly, the diagnosis between the hernial sac and its contents.

In illustration of the former point, I noticed several mistakes which had fallen under my own observation, and instanced two cases in which every thing was prepared, and the Surgeon about to operate, when I had the good fortune to suspend his proceedings, and both cases turned out to be glandular swellings of the groin, accompanied with an accidental obstruction of the bowels, and some febrile excitement in the system.

In illustration of the second point, the difficulty of distinguishing between the hernial sac, and the bowel which it contains, I mentioned to you that in one of my earlier operations for a strangulated femoral hernia, where the tumour was very small, and the fascia propria thick, I mistook the latter for the hernial sac, dilated the stricture in the crural arch, and pushed up what I conceived to be the intestine into the cavity of the abdomen; but the symptoms of strangulation continuing, my patient died, and on dissection I had the mortification to find a small portion of the ilium still strangulated in the neck of the sac.

When the sac has been successfully opened, and its contents fairly displayed, the difficulty of the operation is in a great measure at an end; but you are all aware that the fear of wounding the epigastric artery, in relieving the stricture, has been the great bugbear in this operation, and this fear has, I believe, had a most injurious effect in the treatment of strangulated inguinal hernia. I illustrated by a diagram the true position of this artery, and showed you that when the hernia, as in M'Intyre's case, enters the superior aperture of the inguinal canal, and descends along its course, constituting the oblique, or what Hesselbach terms the external inguinal hernia, the artery lies on the pubic or mesial side of the neck of the sac. When the hernia again protrudes directly through the lower aperture of the inguinal canal, forming the direct, the ventro-inguinal, or what Hesselbach terms the internal hernia, the artery lies on the iliac or lateral side of the neck of the sac; in one or other of these situations this vessel is always to be found, and, of course, by avoiding them both, by cutting neither outwards nor inwards, but directly upwards, parallel to the linea alba, you will in all cases avoid this artery; and for this practical rule in operating, you are indebted to Sir Astley Cooper, to whom his profession is under so many important obligations. In support of the opinion which I gave, that the risk of wounding the epigastric artery had been very much over-rated, I mentioned the fact that even among the older writers who were in the habit of making more extensive incisions than are now thought necessary, we find few or no instances of hæmorrhage from wounds of the epigastric; and I stated that in conversing with the most experienced of my brethren here, I could not find that any one of them had met with a serious or fatal hæmorrhage from wounding the epigastric in this operation. With the view of encouraging you to have speedy recourse to an operation in strangulated hernia, I took the liberty of pressing upon your attention the result of the cases which I have had occasion to treat in this house; of seven patients upon whom I have now operated here, six have been saved, and this I attribute entirely to the early period at which the operation has been undertaken; but, while a promptitude in operating proves most beneficial to the patients, I regret to think that it is often detrimental to the pupils, by depriving them of opportunities of becoming familiar with an operation from which they are too liable to be deterred by an exaggerated conception of its difficulties.

In concluding my remarks upon M'Intyre's case, I adverted to two varieties of the inguinal hernia, with which it is necessary you should be acquainted—the hernia congenita; and what has been termed the hernia infantilis, or what Sir A. Cooper has spoken of as the encysted hernia of

the tunica vaginalis. In the latter form the disease presented itself to me in the case of a fine little boy upon whom I operated somewhat more than twelve months ago, and of which you will find a brief account in the *Edinburgh Medical and Surgical Journal*. It is the only case upon record, so far as I know, in which this form of the disease has become the subject of operation; and when such cases occur unexpectedly, you must not be taken by surprise. I would have you to bear in mind the very just observation of Janson, that "we can never foretell with certainty what we are to find in a hernial tumor."—I would have you to believe that this is a disease in which many patients are lost from procrastination, but comparatively few from any untoward occurrence in operating;—and I would have you to look upon these as a class of cases in which error is at least as excusable as delay.

In the class of urinary complaints, or what the French surgeons term "*Maladies des voies urinaires*," you have seen two remarkable cases of strictures with fistulæ. The first of these is that of *Robert Miller*, a patient of mine, who was admitted several months ago with a stricture near the root of the penis, and numerous sinuses and fistulous openings in the perinæum, through which the whole of the urine was discharged. In this case the stricture was speedily overcome, and a full-sized catheter lodged in the bladder, several of the sinuses were then laid open and healed; but one of these, which took a direction upward, in the angle between the scrotum and top of the thigh, and opened above the pubis, could not be treated by incision, without dividing the spermatic cord; and an attempt has therefore been made to heal it, by passing a seton along its course. Those gentlemen who recollect the miserable situation of this old man at the time of his admission, will allow that a good deal has been done for his comfort; but of any thing like a permanent or satisfactory cure I entertain no hopes, from his advanced period of life and broken constitution.

In the case of *James Murray*, a patient of Dr. Hunter's, there was a complete obstruction in the membranous part of the urethra, with a fistula opening into the rectum, within the sphincter ani, and through this opening the whole of his urine had been discharged for several weeks previous to his admission. The manner in which this fistula originated is not very easily comprehended. The patient states that about two months ago he was severely bruised between the arm or lever of a thrashing-mill, and a beam of wood which projected over it, and that on the following day his urine came all away by the opening into the rectum. By an examination with the speculum ani, the orifice of the fistula was distinctly perceived,

and the first indication obviously was to restore the natural canal of the urethra. With this view bougies of various descriptions were tried without success, and Dr. Hunter then placed the patient in the posture for lithotomy, introduced a staff into the urethra as far as the obstruction admitted, cut down from the perinæum upon its point, and prolonged the incision backwards in a direct line with its extremity; the staff was then pushed onwards, and made to enter the bladder; this instrument was now withdrawn, and a small-sized elastic catheter substituted in its stead, through which you had the satisfaction of seeing the patient's urine discharged before he was removed from the table. Catheters of increased diameter have since been successively introduced, and there is every reason to expect that this young man will ultimately obtain a perfect cure.

In the case of *Thomas Banks*, also a patient of Dr. Hunter's, you saw a very extraordinary occurrence—the lodgement of a large-sized stone in the perinæum, communicating with a small fistulous opening externally, but having no communication with the canal of the urethra. This patient was admitted on the 5th of April, and stated that about eight years ago, a tumour formed in the seat of the opening in the perinæum, that this tumour burst spontaneously, and that the orifice had never since closed. He had never experienced any difficulty in voiding his water; none of it had ever escaped by the sinus, nor had his complaints ever debarred him from his usual avocations. In this case, the first impression was, that the hard body felt in the perinæum was an exfoliation from the ischium; but Dr. Hunter, on introducing the probe, conceived it to be a calculus, immediately cut down upon it, and removed it by means of a pair of dressing forceps: the wound granulated kindly, and the patient was dismissed cured on the 30th of April.

This concretion, which weighed 89 grains, was sent to Dr. Turner for analysis; and in a note from him, which I had the pleasure of reading to you, it is stated to consist of “the carbonate and phosphate of lime, together with a little animal matter,” thus differing, I believe, essentially in its composition from any of the numerous calculi from the human bladder which have been analyzed by Marcet or others. Some concretions akin to this have, I think, been found in the bladders of the inferior animals; but supposing the nucleus of this formation to have come from the patient's bladder, how and when did it escape from the urethra? how did it increase to its present size? how did the aperture in the urethra close over it? and how did all this take place without any impediment to the excretion of the patient's urine? From the difficulty in solving some of these questions, and from the constituent parts of this concretion, it can

scarcely, perhaps, be thought to have originated in the bladder ; but as all this is matter of speculation unconnected with any surgical proceeding, I must hold myself excused from entering farther into this extraordinary case.

In the class of tumours which have been extirpated during the present course, are to be ranked the cases of *Elizabeth Sandys* and of *Janet Taylor*. The former, a patient of sixty-five years of age, had a schirrous tumour removed from her left breast, and an enlarged gland from the axilla, on the 7th of June. In removing the gland in this case I deviated from the general practice, by making a separate incision over it, instead of extending the incision for the removal of the mamma, and removing, as is often directed, the intervening cellular substance, under the expectation that we shall thus get rid of the diseased absorbents lying between the breast and axilla. You would observe, that in this patient, who was of a tall figure, the tumour limited in extent, and the breast pendulous from old age, the space between the mamma and armpit was unusually great ; there was no swelling, tenderness, nor discoloration of the intermediate space ; and hence I was tempted to operate as I did, thinking that where no vestige of disease existed, there was nothing to guide me in its removal. Knowing how slowly schirrous affections often advance in old age, even when well marked, I have little fear of the disease recurring from the particular mode of operating adopted in this case ; and you must all, I think, have remarked the superior facility with which I was enabled to remove the diseased gland by making my incision directly over it, instead of pushing or dragging it downwards from its position, as you often see done, to bring it within the range of an incision, which the surgeon is reluctant to prolong.

The case of Janet Taylor, aged 23, whose breast was removed by Dr. Hunter on the 5th July, was chiefly remarkable for the very early period at which the disease in this instance made its appearance. You will find it stated in Sir A. Cooper's printed lectures, that in all his unlimited experience he has only known two instances of a true schirrus of the mamma occurring in women under thirty years of age ; and had the disease been less marked in this case, I should have been led to question its nature ; but, as I observed to you, when we had the tumour before us, it possessed every characteristic symptom of the disease previous to its removal, and possessed all its usual appearances when dissected. We had here the discoloration of the skin, the retraction of the nipple, the firm adhesion of the integuments to the surface of the tumour, its stony hardness, and knotty unequal feel, with lancinating pains darting through it. On

dissection, we had the firm cartilaginous feel under the scalpel, and the white ligamentous bands passing through it, with discoloration of the intermediate substance, although these last mentioned appearances were less strongly marked than what you may have observed in other instances.

The only other case, Gentlemen, which I think it necessary to bring to your notice at present, is that of *Hugh Morison*, aged fifty-one, who was admitted on the 7th of July, and who had come from Perthshire to seek relief for a large tumour distending the right cheek and disfiguring the countenance; of which the following is the description as taken by Dr. Lubboch, the house surgeon.

"There is an extensive tumor in the region of the superior right maxillary and malar bones, bounded above, by the tarsal edge of the lower eyelid, by the extremity of the nasal process of the superior maxillary bone, and by the external angle of the frontal bone. Inferiorly, it extends to below the level of the teeth of the upper jaw: posteriorly, it is bounded by the zygomatic process, and by the anterior edge of the ramus of the lower jaw: internally, it has driven the inner wall of the antrum into the nostril, so that a probe is not easily passed through the inferior meatus; the palatine process of the superior maxilla is softened, and also very much inclined inwards. Two of the bicuspid teeth are quite loose; the remainder of the teeth placed behind the above have been removed. Two or three glands upon the parotid are enlarged. The surface of the swelling is irregular; in some places soft, in others hard and cartilaginous. Vision, hearing, and smell, on the affected side, are all impaired; the eye, however, is not protruded from the socket: deglutition is attended with some difficulty."

"Four months ago, after exposure to cold, he was affected with pain in the molares. One of them was extracted with a little relief, the alveolus was punctured, and about a gill of clotted blood evacuated. Complaint is attended with gnawing lancinating pain, which becomes worse in the night, and he is much subject to headache. General health good."

This tumour you saw me remove on the 10th instant, a few days after the patient's admission. An incision four inches in length, beginning near the commissure of the lips, was carried over the most prominent part of the swelling, and terminated near the external canthus of the eye. The integuments were then dissected backwards and forwards until the greater part of the surface of the tumour was laid bare; it was then raised from below upwards, and as the patient was losing much blood, it was hastily

and forcibly wrenched from its attachments. A gush of arterial blood now took place from the bottom of the cavity in great profusion, so that the patient lost, I suppose, nearly two pounds in less than a minute. This hæmorrhage was however very readily commanded by the actual cautery, which was freely applied; both extremities of the coronary artery of the lip, which had necessarily been divided in the first incision, were then secured by ligature, and the cavity whence the tumour had been removed was filled with dry lint, when the patient rose from the operation-table, and walked to his bed. Some small portions of the tumour were left attached to the soft parts on the inside of the cheek, from a reluctance to prolong the operation, and from an opinion that the patient had lost as much blood as it was proper or safe for him to lose. These remaining portions of the excrescence, one of which was found adherent to, or at least in close contact with the coronoid process of the lower jaw, have since been removed, partly by the scalpel and partly by the actual cautery, the repeated application of which the patient has stood with the same admirable fortitude which was so remarkable during the operation.

The tumour, which was exhibited to you at a former lecture, was found to be entirely of a hard sarcomatous character, without any covering or intermixture of bony substance; the impressions of the fangs of two of the molares, which were extracted on the evening before the operation, may be seen on the lower surface of the tumour, to which they had only been attached by membranous adhesion, there being no remains of the alveolar processes.

On examining accurately the cavity from which the tumour was removed, the whole of the superior maxillary, the inferior spongy, and malar bones are found to be wanting; the cavity of the nose is laid open, and the septum to be seen; a great part of the bony floor of the orbit has been absorbed, and there is nothing interposed between the globe of the eye and the site of the tumour, except the tunica conjunctiva. By the cast which was shown to you at a former meeting, and by the hasty sketch which, through the kindness of Mr. Benjamin Bell, I am enabled to give you along with this lecture, you will, I think, have an accurate conception of the situation and extent of this tumour. The patient, I am happy to add, is doing extremely well; the whole surface of the wound, with the exception of the part last cauterized, from which the eschar is not yet detached, looks clean and florid, and I expect soon to be able to bring the edges of the incision together by an operation similar to that for the hare lip.

In the observations which I formerly offered to you upon this case, I

took occasion to draw your attention to several others of a similar kind, and particularly to one, of which you will find the particulars detailed in Mr. White's Surgery.

While such a case as that remains upon record, attended with perfect success, I think a surgeon would not be justified in withholding his assistance from any patient who should desire it. But from the manner in which I addressed myself to Morison, you must have observed that I had no very ardent ambition to remove this tumour from his jaw. I did not consider it a case in which it was sufficient to wring from the patient a reluctant consent to an operation. I thought it necessary that he should express a distinct wish for its performance; and having once expressed that wish I did not hesitate to undertake it; although, Gentlemen, it was, I own, but a heartless task,—not from the difficulty of its accomplishment, for that was less than I had anticipated,—not from the extent of the hæmorrhage; that I expected, and for that I was prepared: but from the discouraging event of several similar cases in which I have been concerned, and from a conviction that while we can remove the obvious and tangible part of the disease, we cannot so readily remove the latent disposition to its return.

In conclusion, Gentlemen, I have only to observe, that in committing these occasional Lectures to the press, I have no expectation of conveying to the public any thing which can be novel or interesting to the experienced Members of my profession. This retrospect can only be useful to those who have witnessed the different cases, and who have heard my observations on them in detail; to you it may serve as a memorandum of cases to which you have given a most laudable attention, and from which, it is to be hoped, that you may have derived some practical instruction. I have endeavoured to give to you my sentiments on these cases, with that candour becoming the School in which I have passed the best part of my professional life. I have given to you my opinions, on all occasions, without reserve;—would that they were more worthy of your acceptance!



H. Morison 22nd July 1827.

