ABSTRACT OF CLINICAL REMARKS

ON

OPPORTUNITY IN THE TREATMENT OF GLAUCOMA,

In Cases under Treatment in the Ophthalmic Department of St. Mary's Hospital.

By ERNEST HART, Esq.,

Ophthalmic Surgeon and Lecturer in the Hospital and School.

WE have at the present moment under treatment, in this department of the hospital, several cases very proper to raise, in reference to glaucoma, the most critical of ophthalmic diseases, that question which is itself the most critical in the practical therapeutics of every disease—the question of opportunity in treatment. By opportunity in treatment I mean, briefly, the moment for action, and the crisis which determines the kind and degree of action.

The cases to which I wish to direct attention are three in number, and are cases of acute glaucoma. The surgeon who says acute glaucoma as the word of diagnosis, must pronounce also iridectomy as the plan of treatment. I shall take that for granted here and now, as we have many opportunities of discussing the ordinary clinical relations and results of the disease and the operation. But now as to the three cases—the scope which they leave to judgment, and the lessons which they teach as to opportunity in treatment.

In the one, the opportunity is superseded; in the other, it is past. It is only in the third that iridectomy is desirable. In the first, it would have been unwise and cruel. The patient was recovering without it, and the operation would have been out of place. In the other, the eye is so far destroyed, that it would be useless and inapplicable. In the third only is it desirable. This will illustrate what I mean when I say that, although iridectomy is the remedy in glaucoma, it is not always the remedy; and that for this, as for every operation in surgery, it is necessary to determine the occasion for its application.

Let me briefly sketch for you the clinical outlines of these cases. No. 1 is a man aged 30, married, of generally good health, he says, but pallid, and of very nervous temperament. His wife is always in charge of him, and generally answers for him. He is decidedly the more nervous of the two, and seems to be perpetually "nursed" by her. He is a footman; and, when he first appeared here, the cornea was dull and rough; the pupil was ovally dilated; the conjunctiva somewhat, but not much, suffused; the eyeball decidedly and markedly harder than its fellow, but not yet in the extreme degree of tension. He was complaining of lancinating pain over the eyebrow, and in the orbit and side of the head, and could barely count fingers. The dulness of the cornea and cloudiness of the humours interfered with ophthalmoscopic examination; but the diagnosis was perfectly clear. Here was a case of acute glaucoma, not fulminating, but still decidedly acute, and which, judged by the actual status of the eye, would not only justify, but seem to demand, iridectomy. There were, however, circumstances which made me hesitate. He had been suffering for a fortnight. He had first noticed that there was something wrong in his eye when serving at a supper. He felt then some pain in the eye, found a cloud before it, and poured the wine by the side of the glass instead of into it, and overfilled the glasses. He had last year the power of measuring distances, for he had then only monocular vision. He finished his work, and went home; and his wife noticed that the eye was red, and the pupil large. The sight was very dim. She poulticed it and bathed it, and purged him, and darkened his room, and acted, indeed, very judiciously on general principles; which might, however, readily have cost him his sight by delaying necessary treatment of a more active character. I can tell you of more than one such result. Under this maternal treatment, he began soon to improve, but slowly; and, as the improvement was not rapid enough to please them, they came to me at the hospital; and now their story was, that the pain was much less, although very like sharp *tic*, and very persistent; that the eyeball was less red; and that sight had markedly improved, inasmuch as he could not at first even see the fire or the candle, but could now see his hand, count fingers, and dimly discern the outline of my face. Under these circumstances, I did not think it desirable to interfere.

I have, in the *Ophthalmic Hospital Reports*, referred to one or two out of a now tolerably numerous class of cases which I have collected, which appear to me to place beyond a doubt the neurotic origin of these attacks of glaucoma. When the intraocular effusion and presence of the neurotic crisis has passed off, or is passing off, if the pressure have not been so great as to damage or destroy the visual sensibility of the re-

tina, the patient may be little or none the worse for it. This is not a result to be anticipated in any number of cases; it is not one on which we count, or which will justify us in neutrality in any ordinary cases of glaucoma; but it is one which occurs, which we must bear in mind in such cases as this, and which (with the confusion of other varieties of disease) may account for published cures of glaucoma by remedies and operations which we know do not cure it. This young man was already on the road to cure; and in his case we were justified, nay, I think we were bound to abstain from interference, and to stand by and watch the natural history of a case of acute glaucoma tending to resolution and recovery. This has occurred. We have simply ordered him nourishing diet, rest, a darkened room, with a mixture containing bromide of potassium and hydrochlorate of ammonia, to relieve his neuralgic symptoms and to give him sleep. Ophthalmoscopic examination showed subsequently distinct cupping of the discs and tortuosity of the vessels. His cornea has cleared; the pupil has recovered its natural motility; the eyes are of undistinguishable similarity of aspect; and he reads No. 2 of Snellen's types at a foot and a half, and up to within four inches, showing that even the impairment of accommodation has passed away.

This case, however, recalls to me one or two others which might usefully be compared with it. I have under my care now, and will take an opportunity of showing to you, a man who has had three attacks of glaucoma, subacute, which have subsided under treatment, but have each left the eye more and more impaired by pressure. A patient of Dr. Fenwick, whom I saw recently, is in the same condition, from the same cause. These patients had systematically refused to submit to operation. On the other hand, I have a very satisfactory impression of various cases in which iridectomy, opportunely performed, has almost completely restored vision which was reduced to nullity or threatened to the last degree; and one of them illustrates very neatly the question of opportunity. In the course of ten days, the sight had twice gone for near twenty-four hours, and twice returned. The third time, the sight had been totally abolished for near three days, and the eyeball as hard as a marble; the pupil rigidly dilated. The patient, who had been counselled against the operation, now consented to it, by the advice of Dr. Bradley and myself, and with the happiest results. I mention these cases to illustrate the circumstances which must determine us when to operate and when to abstain. The next case is one of many which we still see, in which there is every reason to believe that iridectomy might have saved an eye now totally lost for want of it, and beyond the reach of art.

[To be concluded.]

NECROSIS OF A LARGE PORTION OF NEARLY THE WHOLE THICKNESS OF THE SHAFT OF THE FEMUR,

WITH SPONTANEOUS FRACTURE AND VERY GREAT SHORTENING: RECOVERY WITH AN USEFUL LIMB.

By JOSEPH BELL, F.R.C.S.E.,

Lecturer on Surgery, Edinburgh, and Assistant-Surgeon Clinical Wards, Royal Infirmary.

I SAW the patient, James G., aged 10, for the first time on June 8th, 1866. I found him in bed, very feverish, and suffering intense pain in the left knee-joint, which was hot, red, and swollen. The only reason he could give to account for the state of the joint was a severe sprain received when jumping, about a week before I saw him; up to which time he had been perfectly healthy, regular at school, and able to run about as well as others. No positive evidence of fracture was present, though, from the localisation of the pain and the greater degree of swelling in the upper *cul-de-sac* of the synovial membrane, I was led to entertain the possibility that there had been a separation, partial or complete, of the epiphysis of the lower end of the femur. In spite of all the ordinary remedies, his symptoms became more intense, and a very extensive acute abscess formed below the muscles of the thigh, and extended from the knee to the trochanters. This I evacuated by two free incisions, one on each side of the limb, so as to make the opening as thorough as possible; and, for a time, all the symptoms abated, and the patient was much relieved. Suppuration, however, continued very profuse, and soon it was evident that nearly the whole shaft of the femur was dead. His strength was kept up by generous diet, wine, and cod-liver oil, which, fortunately, he was able to take freely. He seemed now to suffer little; but the knee-joint was almost ankylosed in a semiflexed position; the leg and foot were very oedematous, the foot being extended and the toes pointed. Any attempt to bend the knee, or to improve its position by splints or extension, gave so much pain, as to do more harm to the general health than good to the limb. He was patient and un-

complaining, but during the autumn months grew gradually weaker; while still so little attempt at repair by formation of new bone was made, that interference seemed impossible. Late in October, however, a slight movement caused a separation of the upper end of the dead portion, and a spontaneous fracture took place just below the trochanter.

So little effort had Nature made, that there was no strength in the periosteum to resist the muscles, and in a few days the limb was shortened between five and six inches; the knee of the injured side being little below the level of the scrotum of the other. Pain and suppuration increased, several new openings formed, and the patient's case seemed almost hopeless. For his condition now was, an inflamed knee-joint, a thigh-bone fractured close to the trochanter, and known to be dead to the epiphysis, with a leg swollen almost to bursting, in a boy with a pulse invariably above 120, with profuse night-sweats, exhausting diarrhoea, and a capricious appetite. There was no evidence that the lower end of the dead portion was loose, indeed it felt firm, and its proximity to the knee-joint was an added risk.

It was obvious something should be done; so on November 21st he was put under chloroform, and, having made a free incision on the outer side of the thigh, I succeeded tolerably easily in dividing enough of the thickened, but barely ossified, periosteum, to enable me to seize and detach the piece of bone now figured. Profuse hæmorrhage occurred, first from a considerable arterial branch, which was easily secured; and secondly from the whole inner surface of the periosteum, requiring plugging of the wound and hollow of the new bone with lint.

From this time, the case was one of uninterrupted recovery. A full opiate gave him a long and refreshing sleep. The stuffing was removed on the fourth day. Gradual extension was kept up on the shortened and extensible thigh, by properly adjusted pillows, aided by the swollen foot and leg, as the counterextending force. Ossification now went on with great rapidity. The fistulous openings gradually closed, though delayed by very numerous small fragments of bone; the progress of which the little patient used to watch with interest as they worked their way from the upper to the lower end of the bone; and he rapidly regained flesh and strength.

Friction and frequent use of passive movements aided in restoring the movements of the knee and ankle, which are now nearly normal.

Present State of the Limb (January 1868).—The patient walks and runs easily and rapidly, with the aid of a high-heeled shoe. When he is stripped, the left leg looks considerably shortened; but careful measurement from pelvis to patella shews that this shortening is rather apparent than real, depending chiefly on a distortion of the spine, the result of his constrained position in bed, which tilted up the affected side of the pelvis, and which is now gradually diminishing. The real shortening of the femur is rather under an inch and a half. The injured limb is growing rapidly, and is well nourished; its circumference being only three-quarters of an inch less than that of the other.

REMARKS.—This case is worthy of notice, on account of the rarity of such severe and complicated cases, the various risks run by the patient, and the cure without amputation. In proof of its rarity and danger, I may briefly quote the following, a few out of a host of similar authorities.

Weidmann, in his well known monograph, *De Necrosi Ossium*, figures only one case at all similar in severity to this one, that of a girl, aged 21, in whom about two inches only of the shaft of the femur became necrosed.

Benjamin G. Bell, in his classic work on the *Diseases of the Bones*, does not seem ever to have seen any case of necrosis of the femur so extensive or so complicated.

Sédillot, in his monograph *Sur l'Evidement des Os*, records a considerable number of severe cases of necrosis of the long bones; but, so far as I can discover, in none was there separation of even a portion of the whole thickness of the femur.

Ollier, in his most masterly treatise on the same subject, refers in strong terms to the extreme rarity and danger of cases in which the necrosis involves the whole thickness of the shaft of the femur; and states his belief that it is almost impossible that such a case could recover in a large hospital, from the risks of osteo-myelitis, etc.

Gross gives his opinion in the following terms. "Cases occur in which the neighbouring structures are so extensively and seriously involved, as to render it difficult, if not impossible, to save the affected limb. Such an event will be particularly liable to happen when a large joint is implicated, as, for instance, that of the knee in necrosis of the thigh." (3rd ed., vol. i, p. 817.)

Among many cases in the records of surgery, I may just refer to two, each of which resembled my case in almost every particular, and both of which recovered, but only after amputation of the affected limb. One is recorded by Dr. Knox of Edinburgh, in the *Edinburgh Medical and Surgical Journal* for 1822; and the other by Dr. Kerr of Aberdeen, in the same journal for July 1834.

A case somewhat similar to mine, with a like fortunate result, is recorded by Dr. Handyside. (*London and Edinburgh Journal*, December 1844.)

We have not far to seek for an explanation of the danger to life and limb, in cases where the whole thickness of the shaft of the femur is involved; for it occupies a special and peculiar position amid the long bones. The tibia and fibula, radius and ulna, being in pairs, have this great advantage, that separation even of the whole epiphysis of one need not in any great measure interfere with the shape, length, and usefulness of the limb, as the unaffected bone acts as the best possible splint during the process of separation and repair. In the humerus, too, necrosis even of the whole shaft is not so dangerous to life, nor does even very considerable shortening impair to any great degree the usefulness of the limb. In the femur, there is risk of deformity and very great danger to life.

THE GLANDULA COCCYGEA OF MAN.

By PROFESSOR DR. VON LUSCHKA, Tübingen.

IN the year 1859, I (*Der Hirnanhang und die Steissdrüse des Menschen*, Virchow's *Archiv f. Patholog. Anatom. und Phys.*, 1860, v. xviii) discovered a small glandular organ, to which I gave the above name, on account of its local relations. It is generally only of the size of a hempseed, and constitutes either a single compact round body, or consists of several loosely connected portions. The organ is situated on the anterior circumference of the end of the coccygeal bone, connected with filaments from the ganglion impar of the sympathetic nerve, and with small branches of the arteria sacralis media, between the levator ani and the posterior end of the sphincter ani externus. The substance of the gland, when fresh, has a pale red colour, and a considerable degree of elasticity, so that the whole, as well as parts of it, easily slip between the plates of glass, and resist considerably the attempt to tear them asunder by needles.

As to the structure of the gland, there are to be distinguished—1. The *stroma*, consisting of a tough fibrous connective tissue, free of elastic elements, interspersed with numerous oval granules; 2. The glandular cavities or follicles ("Hohlgebilde"), the walls of which are formed by connective tissue containing many oblong granules not affected by acetic acid. These cavities are of different forms, sometimes representing long regular canals, occasionally with branches; sometimes round or oval bodies. Their contents are chiefly cells, round or polygonal, always with a distinct nucleus, which is surrounded by a delicate granular membrane. Along the axis, as Sartoli has proved, usually is found a small almost capillary blood-vessel, imbedded in the cell-tissue, but distinctly separated from it. By careless artificial injection, the interglandular blood-vessels are easily torn; the injected fluid mixes with the cellular tissue, and fills the cavities in such a manner as to mislead to the view that they are conglomerates of blood-vessels.

The gland is rich in nerves derived from the terminal branches of the sympathetic nerve. They form microscopic networks perforating the stroma, and are occasionally seen connected with ganglion-cells; the existence of the latter has been lately confirmed by A. Macalister. (On the Anatomy and Physiology of the Coccygeal Gland, *BRITISH MEDICAL JOURNAL*, 1868, No. 367.)

Although the function of this organ is at present unknown, it is already of great interest to pathology, because it is not only the seat of the so-called "coccygodynia", but also of the hygromata cystica perinealia.