

THE  
**Jacksonian Prize Essay**

FOR 1865.

ON DISEASED CONDITIONS OF THE  
 KNEE-JOINT.

BY

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APPENDIX OF CASES. (*Concluded.*)

CASE XXIII. Notes of W. F. Clarke, and Martin Oxley, dressers. James Haggarty, aged 11, admitted into King's College, under Mr. Bowman's care, on February 6th, 1861.

He had previously been in the hospital from February to August 1859, with his knee in much the same condition apparently as now. It was then put upon a splint, and extended till it was nearly straight. When he left King's College Hospital, he was able to walk pretty well by the help of crutches.

Eleven months before admission he discarded the crutches, and ever since then the knee had been becoming more and more bent. On the 31st of last January he fell downstairs and struck it against a sharp corner; this gave him great pain at the time. A swelling began to form, and he was unable to use the limb as before; after being laid up at home a few days he was brought to the hospital on February 6th. He was a pale, delicate, strumous-looking boy, but his general health seemed to be pretty good. The following was the condition of the left knee. The tibia was dislocated backwards; the femur projecting in front of it to the extent of about an inch. This made the condyles appear prominent; immediately below them, and a little to the outer side of the leg, the patella was firmly fixed; below this again, and also on the outer side of the joint, there was a soft elastic swelling, very tender and sensitive on pressure; below the joint, on the inner side of the leg, there was a hollow caused by the displacement of the tibia. The limb was bent at an angle of about 130 degrees, and was almost perfectly ankylosed; on the skin covering the joints were the scars of one or two old cicatrices; on the tendons of the outer hamstring was a small discharging sore. [Fig. 12, page 492, gives an idea of the appearance and position of the leg.] The patient suffered no pain, except in the swelling mentioned above; and he was able to walk, or rather to limp about, with the help of a stick, though he could only touch the ground with the toes of his left foot.

March 2nd. Since his admission he had had a liberal diet, and had rested his leg by lying in bed. By these means his general health had improved considerably, and the knee was no longer painful or tender. To day he was taken down to the theatre, and placed under chloroform; Mr. Bowman then proceeded to resect the knee; a lunated incision, with long sides, was made, crossing the joint immediately below the patella. The skin was then dissected upwards, close to the bone, until about an inch and a half of the lower extremity of the femur could be removed with the saw; the tissues were next cleared away from the upper part of the

tibia, and a thin slice—averaging less than half an inch in thickness—was sawn off; it was then found that the surfaces of bone could be brought into perfect apposition; one artery was tied; the flaps of skin were brought together, and united by three sutures; the leg was then laid on a McIntyre's splint, and a bandage applied above and below the knee; the seat of the operation being covered only by a little simple dressing. The patella was firmly united to the femur, and came away with that portion which was removed; the ankylosis appeared to be partly fibrous, partly bony. On a vertical section of the end of the femur being made, it was seen that the whole of the epiphysis had been taken away, as well as a portion of the shaft of the bone.

March 3rd. Pulse 104; tongue clean and moist; he slept well after taking a draught, and was tolerably easy, and free from pain.

March 4th. Pulse 120. To day, as the femur seemed to project over the tibia, bandages were applied over the femur to keep it down; the straight splint was then attached to the McIntyre, and the limb extended; the wound was dressed with cold water.

March 5th. Pulse 128; tongue slightly furred; bowels rather confined; he complained of cough. He was sick yesterday afternoon. The knee was tolerably easy; he did not sleep well last night owing to the discomfort of the long splint.

March 7th. Pulse 120; the bowels had been slightly moved by a pill, and his tongue was cleaner. The knee was tolerably free from pain, except when it was being dressed.

March 10th. Pulse 140; tongue clean; bowels confined; the knee jumped a great deal, and gave him much pain; at other times it was tolerably easy.

March 12th. Pulse 130. Slept well last night, and felt better this morning. The knee was tolerably easy; bowels open.

March 16th. Pulse 130. He had a draught every night, and slept well. The knee was discharging freely, and gave little pain. Appetite good; bowels open; urine of specific gravity 1,015, no albumen.

March 19th. Pulse 120; tongue clean; bowels open. Yesterday the splint was removed, and reapplied, care being taken to raise the tibia, and depress the femur. To day he was easier, and his spirits seemed better.

March 24th. Pulse 104. He was going on favourably; bowels open; the knee was easy, and the front part had nearly healed. At both ends there was an opening, which discharged freely.

March 30th. Pulse 130. Tongue clean; bowels open; the knee was progressing favourably; it gave him less pain; indeed it was quite easy, except just when it was being dressed; the incision was healing; there was sufficient discharge from the ends of the wound. To day the splint was removed and reapplied, care being taken to depress the femur and raise the tibia, so as to keep the bones in a right line.

April 2nd. There was no pain in the knee; the discharge was less; he ate well, and slept well, and his spirits were excellent.

April 6th. His appearance improved daily; there was little or no pain in the knee, except just when it was dressed. He slept and ate well. The incision was almost healed along the front, but at the ends there were openings, from which a free discharge took place.

April 13th. He was going on favourably. His general health was excellent, and his appearance had greatly improved; the leg was in good position, and the bones were becoming firm; there was but little

discharge; the wound was dressed with water-dressing.

April 22nd. To day the limb was taken off the splint, and a plaster of Paris bandage applied.

May 20th. He could now walk slowly with a crutch, and could even bear the whole weight of his body on the left leg; the length of which, from the anterior superior spine of the ilium to the outer malleolus, was twenty-three inches and a quarter; the right measured twenty-five inches and a quarter. There was a small sore on both the inner and outer side of the knee, which discharged a little. His health had improved very much; he expected to go to Margate every day.

May 22nd. He went out to day.

October 7th. The leg that was operated upon measured twenty-four inches from the anterior superior spine of the ilium to the external malleolus, being two inches and a half shorter than the other. The boy's health was excellent. He walked a mile to the hospital this morning; he was on his legs all day; the limb had regained much of its plumpness, but remained thinner than the other; no movement could be perceived at the knee, but attempts at flexion gave a little pain, so that probably cartilaginous, and not osseous, union had taken place. The outer side of the incision still presented a small unhealed portion.

Cast No. 4 was taken from the knee in November 1865, when the limbs were carefully measured as given in the essay, and at the same time a photograph was taken (Fig. 13, p. 493).

*Cases in South Devon Hospital.* Emily Pemberthy, aged 25, married, was admitted May 4th, 1858, with scrofulous disease of the right knee-joint. The disease was of seventeen years' standing; it commenced with pain, followed in two years with swelling. She was attended by different medical men, and underwent a variety of treatment till July 17th, 1855, when she became an in-patient of the Truro Infirmary, and stayed there some time; no improvement taking place, in September 1857, she went into King's College Hospital, under Mr. Bowman, who twice applied the actual cautery, without relief. Mr. Bowman refused to resect, as there was not sufficient evidence of disease.

Excision was performed by Mr. Whipple, on June 2nd, 1858, by the H-incision, the McIntyre splint was used. The patient was discharged, having made a good recovery, September 10th, 1858.

Samuel Sargent, aged 28, sailor, admitted July 27th, 1859, under Mr. Fox, with rheumatic disease of the knee-joint. Excision was performed on September 23rd, 1859, and he was discharged December 23th, 1859, with good recovery. No notes were taken.

Richard Palmer, aged 25, waiter, was admitted January 13th, 1864, under Mr. Whipple. Excision was performed, (date not stated), death occurred on February 15th, 1864. No notes.

Eliza Brooks, aged 25, dressmaker, was admitted January 25th, 1864, under Mr. Whipple. Excision was performed February 17th, 1865. She was discharged, having made a good recovery, August 23rd, 1865.

Harriett Hillier, aged 32, servant, was admitted on August 2nd, 1865, under Mr. Whipple. Excision was performed on December 1st, 1865. She remained under treatment at the time of the report.

Martha Attrill, aged 15, was admitted September 5th, 1860, under Mr. Square. Excision was performed on March 13th, 1861. No notes. She died of phthisis, three to six months after her discharge.

Ann Batten, aged 29, tailoress, was admitted October 5th, 1859, under Mr. Square. Excision was

performed January 13th, 1860. She was discharged cured.

#### LIST OF CASTS.

1. Cast of the knee of a child showing chronic disease, with enlargement of the end of the femur and partial dislocation of the tibia backwards.
2. Cast showing the characteristic appearance produced by effusion into the knee-joint.
3. Cast of the limb of a child, amputated by the author (Case xviii), for strumous disease of the knee with great distortion.
4. Cast taken recently of the knee of Mr. Bowman's case of excision, showing the growth of the limb, and the increase of bowing since the last photograph was taken.
- 5 and 6. Casts taken at five years' interval, from a boy from whom Mr. Heath excised the joint, for disease and ankylosis, in 1858. (See *Lancet*, July 7th, 1860, and drawing in body of essay.) The casts are intended to illustrate the material improvement in the nutrition and development of the limb in five years, and the slightly increased bowing at the joint.
7. Cast recently made from the limb of a girl from whom the author excised the knee in May, 1864, and who subsequently sustained a fracture of the thigh. (See Case xiii, and two photographs in body of essay.)
8. Cast of the knee-joint amputated by the author, for long standing disease in a phthisical patient. (See Case xix.)

#### PREPARATIONS.

1. A knee-joint amputated by Mr. Holt. (Case xvi.) The joint is opened and a bougie is introduced to show how the pus had passed along the tendon of the popliteus, and formed an abscess at the back of the joint, and in the calf. The joint was full of pus. The synovial membrane is much thickened, and is thickly coated with lymph; the crucial ligaments are nearly destroyed; there is caries of the articular surface of the tibia, but a portion of the articular cartilage is still left, though softened and ulcerating the articular surfaces of the femur and patella are thickly coated with lymph, and the cartilage of the patella is slightly ulcerated.
2. A knee-joint amputated for destruction of the joint, with ulceration of the articular surfaces; the crucial ligaments are softened, and nearly destroyed the interior of the joint is thickly coated with lymph inflammatory deposit is present in the head of the tibia, and is shown by a horizontal section of the bone.
3. A knee-joint amputated for destructive disease (Case xix) in a phthisical man, by the author. The structures of the joint are all more or less involved the synovial membrane being much thickened and the ligaments softened. The articular cartilages are much thinned, and in parts ulcerated.
4. A knee-joint amputated for old standing disease. The synovial membrane has been in great part destroyed, as also the ligaments. The cartilages are most extensively ulcerated, so that the articular surfaces of the bones are exposed, and are carious. A vertical section, made when the preparation was fresh, showed, extremely well, inflammatory injection and thickening of the cancelli of the ends of the bones.
5. A dry preparation of the bones forming the knee-joint, amputated by the author (Case xx), for long standing scrofulous disease. The remains of the articular cartilages have been removed by maceration; but the articular extremities of the bones will be seen to be abnormally irregular and rough.

A vertical section has been carried through the bones, and shows them to be unusually thin.

6. A dry preparation of the bones forming the knee-joint, amputated by Mr. Liddon. (Case XXI.) The bones have been macerated, but when fresh, showed denudation of articular cartilage. The articular surfaces are rough, and the end of the condyles flattened; the bones are much thickened. The surface of the tibia is rough and carious; the spine of the tibia is gone, and there is a cavity on the inner articular surface. A small exostosis or osteophytic growth projects posteriorly.

7. Portions of bone and ossifying cartilage, removed by excision of the knee-joint of a child, by Mr. J. Wood. (Case XVII.) The slice of femur is very thin and nearly healthy on the surface, and the patella is healthy. The principal disease was in the tibia, two slices of which have been removed. An abscess may be seen on the lower surface of the head of the tibia (which includes the whole epiphysis); this has encroached upon the joint, and the articular cartilage is thinned, and the synovial membrane much thickened.

8. A wedge constituting an ankylosed knee, removed by Mr. H. Smith from a child. (Case XVI.) The wedge includes the articular ends of the femur and tibia, and half the patella, all bound together by strong fibrous tissue.

9. The portions of bone removed by excision, by Mr. H. Smith. (Case XV.) The synovial membrane is in great part destroyed, and what remains is much thickened. The articular cartilages are destroyed in great part. The patella is adherent to the external condyle, in which there is a carious cavity, and a corresponding one in the opposite surface of the tibia, the bones having mutually worn each other away apparently, in a remarkable manner.

10. Portions removed by excision, by Mr. Whipple. There is thickening of the synovial membrane, with thinning and communicating ulceration of the articular cartilages. The spine of the tibia was broken off during the operation, and is attached to the femur by strong fibres.

11 and 12. Two femurs are sent in to illustrate the correct and the incorrect modes of removing the articular surface, as described in the essay.

**HORSEFLESH AS FOOD.** According to the *Moniteur de la Meurthe*, hippophagy is making progress at Nancy. M. Pineau has already a dozen fattening in his stables. At present the consumption is two animals per week.

**BURLINGTON HOUSE.** The Pathological Society, like the Medico-Chirurgical Society, has applied to Government for apartments in Burlington House, and has received the same answer, that more applications had been received than could be met according to the existing accommodation. The circumstances, however, are somewhat different. The Pathological Society has not a library, and does not require apartments devoted to its sole use. It is at present paying a heavy rent for the use of an apartment on fifteen nights in the year. This, it is thought, might be granted without much inconvenience in some of the rooms now used by other learned societies in Burlington House, and a renewed effort will, we believe, be made by the Honorary Secretaries, Dr. Murchison and Mr. Holmes, to ascertain whether some arrangement cannot be made for this purpose. The Society devotes its limited funds in such large proportion to scientific purposes, as to leave a very narrow margin for other expenses; and the claim which they have to such public accommodation as can be reasonably afforded is very strong.

## Original Communications.

### REMARKS ON SYPHILISATION.

By GEORGE GASKOIN, Esq., Surgeon, Chevalier of the Order of Christ, Portugal; Surgeon to the Artists' Benevolent Fund; formerly House-Surgeon and House-Pupil, St. George's Hospital.

[Continued from p. 258.]

BOTH Vidal and Hebra support the opinion, that the influence and operation of soft or simple changes on the frame is something more than local—something more than limited to the neighbourhood of their site. In default of direct proof, they adduce the protective power of vaccinia in illustration of a constitutional change established in the system, which, during the cycle of its occurrence, is betrayed by no other sign than such as may be read off from the vesicle as on a dial. That such a change does take place *pari passu* with the evolution of the vesicle and its decline, is a fact that will hardly be disputed. Syphilographers who entertain different views from the above insist that, beyond having afforded passage to the contagion, the manifestation at the spot of lesion in vaccinia has no kind of connexion with the concomitant interior change. They affirm that the elaborative process is distinct in each, and that each pursues an independent course. Hence, whatever may take place in the constitution, the appearance of the vesicle is neither to be regarded as a measure of its completeness, nor to be accepted as a token of its existence. Moreover, the failure, it is said, of definite incubation in vaccinia, destroys the force of the analogy; for a certain stage of incubation, subsequent to the implantation of the virus, is proper to syphilis. A better subject of comparison, they suggest, is to be found in variola, where a volatile animal poison received into the body is subject to an incubation of fourteen days' term. But here again analogy is at fault, in so far that variola, casually taken, exhibits no appreciable lesion at the point where it enters the system.

Such is this course of argument; no reference being made to the method of inoculation for small-pox, in the practice of which the matter of variola is dealt with as a fixed contagious principle. When varioliferous matter is inoculated, the stage of incubation is practically annulled, or reduced to an equality with that in vaccinia; meanwhile, as is well known, the communicable disease is neither altered in character nor destroyed. In this instance at least, it seems difficult to believe that the local and constitutional symptoms proceed independently side by side; for if, in three or four days' time, the wound of inoculation be seen to close, the inoculation is declared to have failed. If it should inflame rapidly, a bad eruption of variola may be expected; and a quantity of pus deposited, as the disease advances, in the inoculated part, is often found to diminish towards the end, and it has commonly been supposed to be assimilated or absorbed.

There is some difficulty, it may be remarked, in regarding disease (under a fair interpretation of the word) as exclusively local, or exclusively general. The existence or prolongation of a local affection presupposes a consent, or at least a tolerance, on the part of the economy. A constitutional malady seems to imply the idea of some local expression, sooner or