attack; in one, at the first remission. While the temperatures were 100° and above the pulse and respiration rates were recorded, and these (averaged) stand in the ratio of 85.5 to 25 to an average temperature of 101°, the average ages of the subjects being somewhat over middle age. As regards quality, the pulse was often full and strong at the beginning but soon degenerated, and dicrotism was of frequent occurrence. In cardiac patients intermittency and irregularity were either induced or markedly aggravated. There were no examples of rash.

Fatal Cases.—Four cases ended fatally, the chief points of which are tabulated below:—

Sex.	Age.	Mental Disease.	Bodily Condition.	Duration of Illness.	Maximum Temperature.	Average Temperature.	Average Pulse.	Average Respiration.
F.	33	Melancholia with commencing dementia.	Amenorrhœa; low vitality	4 days	103.5°	102.44°	107.5	46
F.	68	Dementia with delusions	Heart disease; obese; low vitality	4 "	103.6°	101.89°	115.5	29
F.	67	Senile dementia	Heart disease; extremely feeble	9 "	103.0°	101.44°	106	57
M.	30	Imbecility	Low vitality	4 "	103.4°	103.79°	130	47
Complications developed during illness.				Necropsy.				
Intra-abdominal pain; slight bronchitis; fearful and apprehensive of death				None.				
Slight bronchitis; extremelividity; very poor pulse; presentiment of death				None.				
Slight bronchitis; early failure to expectorate; talked more than usual; slight wandering				None.				
Talked a little more than usual; slight bronchitis; harsh breathing, followed by pneumonia; at the end pleurisy				Rigor mortis and <i>post-mortem</i> lividity fairly marked; pia congested; muscles dark; blood dark and liquid; both lungs congested; commencing red hepatisation of half of left base; fibrinous deposit between pleura on right side anteriorly.				

Complications.—In 36 of our cases there was the complication of insanity. Of the insane, 14 were senile, 6 had heart disease, and in 1, in whom there was a suspicion of phthisis, hæmoptysis occurred during the attack. Among the sane there were 2 cardiac cases, and a woman and child in indifferent health. Of complications developed during the fever there were 13 cases in which the mind was influenced; an imbecile and a quiet dement talked more than their wont; some refused food or medicine; one became more highly delusional; some were excited, some depressed; and in one of these latter depression was followed by sexual excitement contemporaneous with profuse menstruation. In a few instances rough breathing was heard over limited areas without dulness; in 1 of these a circumscribed patch of pneumonia developed in the left base, and was peculiar in having no antecedent crepitation. There were 2 cases of dry pleurisy. Earache was present in a few cases, but was not severe.

Sequela.—Tedious convalescence was almost general. The continuance of dry hard cough for a week or thereabouts was common. Severe bronchitis followed in 1 case, and in 1 dry pleurisy. There were 3 cases of diarrhœa, 1 with tenesmus. Mental deterioration was marked in 1 case. In 2 sleep was more profound. Many suffered from neuralgia. In 1 case there was successively severe neuralgia, suppuration in the middle ear, œdema of the ankles, and tonsillitis, ending in abscess. In 1 patient a mitral systolic *bruit* developed, and soon after there was dropsy of the ankles and legs. A case of acute mania in a young woman, with no predisposing heredity,

was admitted during the epidemic in which insanity was a sequela of influenza.

Protection.—Of the 191 persons above instanced, 10 had already had influenza, and 2 of these were again attacked in the present epidemic—one passing through the symptoms twice at the interval of a month.

Treatment.—The infirmaries blocks were reserved for influenza cases, which at the first declaration were removed there, and did not return to their respective galleries till from a week to a fortnight after the attack. Disinfection with Sanitas and eucalyptus was carried out. There was perfect ventilation, and a uniform temperature of 60° was maintained. Dietetic: This consisted of milk and potash water, home-made beef-tea, calves-foot jelly, gruel, and arrowroot, often supplemented with Valentin's Meat Juice and Brand's Essence of Beef. Medicinal: Salol, bicarbonate of potash (with marked but not miraculous effect), sulphate of quinine, and eucalyptus were tried, and acetate of ammonia, etc., as indicated, for cough. Stimulants were employed when their use became necessary, or when such was anticipated by a knowledge of the previous health of the patient. Our observation with regard to treatment was that, while relieving the symptoms, it seemed not to influence the course of the malady, as we had many parallel cases treated alike but varying widely as to duration. The usual tonics were employed during convalescence.

NOTE BY DR. URQUHART.—In the former epidemic of 1890 the patients were attacked less generally and less severely than the staff. There were 42 female patients, of whom 3 had influenza; and 50 male patients, not one of whom was seized. There were 28 male officials, of whom 9 had influenza; and 27 female officials, of whom 3 had influenza. One death occurred in the case of an elderly female patient, who had previously and repeatedly suffered from pneumonia. The form of mental disease was chronic melancholia, and pneumonia soon ensued with fatal result. Gastro-intestinal complications were common in that epidemic, with severe backache and headache.

A CASE OF LOOSE BODY IN THE KNEE-JOINT DUE TO DETACHMENT OF ARTICULAR CARTILAGE,

WITH REMARKS ON THE FREQUENCY OF SUCH AN OCCURRENCE.

By FRÉDÉRIC F. BURGHARD, M.S. LOND., F.R.C.S. ENG.,
Assistant-Surgeon to King's College Hospital.

IF we exclude such rare causes as synovial apoplexy, masses of effused fibrin, tuberculous disease, and the like, there are three large divisions into which we may group loose bodies in the knee-joint, according to the pathological conditions that give rise to them.

GROUP 1. Osteo-arthritis.—In sixty-nine cases of which I have detailed notes, symptoms of this disease were present at the time of operation or developed later in fifteen, and I have little doubt that if the history of the cases were followed up far enough, the figures would be larger.

GROUP 2. Direct Detachment of Articular Cartilage by Violence.—That cases of this kind do occur is beyond a doubt. The case narrated below is an instance in point.

In August, 1890, a young man, aged 24, came under my care, and gave the following history. Three days previously, he attempted to vault over a gate, and in doing so his left knee came into violent contact with the top rail, and he fell to the ground. The knee was semiflexed at the moment it was struck, and the force of the blow was so great as to make him feel quite sick from the pain. He asserted quite definitely that the knee was struck on a level with, and to the inner side of, the patella. On attempting to rise from the ground, a sharp pain, "like pins and needles running into the knee," was experienced, and this recurred whenever he attempted to move the joint. During the next three days, the limb became swollen and discoloured, and he was confined to bed. At the end of this period I saw him. The knee was bruised, especially over the inner side, and there was much synovial effusion. On palpation, an acutely tender spot was found over the inner condyle. The pain thus produced was likened by the patient to something sharp being driven into the bone, and the reason that he sought advice was that he thought that a splinter of wood from the gate had been driven into the joint. After a few days' rest, the swelling had sufficiently subsided to allow a more thorough examination of the joint to be made. The pain on pressure over the inner condyle was as marked as before, but on this occasion deep palpation detected slight crepitus immediately beneath it. Three

days later, this was ascertained to be due to a movable body at the inner edge of the articular cartilage of the femur, about opposite the middle of the patella. It could be moved laterally for a little distance, but not at all upwards or downwards. Movement was accompanied by distinct crepitus. The conclusion arrived at was that a piece of the articular cartilage had become detached by the injury, but that it still retained some attachment to the bone, by a pedicle of inconsiderable length. An arthrotomy was advised for its removal, and, after a lapse of ten days, during which time the effusion had entirely subsided, this was done.

A vertical incision, $\frac{1}{2}$ inch in length, was made $\frac{1}{2}$ inch internal to the inner border of the patella. After all bleeding points had been secured, the capsule was opened by another vertical incision of the same length, and the loose body which presented at once in the wound was seized with forceps and removed. It proved to be a piece of the articular cartilage chipped off, together with a portion of the adjacent non-articular bone from the extreme inner edge of the articular end of the femur. It was free everywhere, except at the upper border, where it was attached by a small band of fibrous tissue to the periosteum of the condyle. The surface of the bone immediately beneath the loose body was very distinctly depressed—more so than the thickness of the detached portion seemed to warrant—over an area exactly corresponding to it in size, and the depression was rough with many spicules of bone, which came away as the finger was passed over them. The synovial membrane was injected, but otherwise normal.

The interior of the joint was then syringed out with a 1 in 6,000 solution of corrosive sublimate, and the edges of the incision in the capsule carefully approximated by means of fine gut sutures. The skin wound was then sutured separately, and a back splint and cyanide dressings applied. No drainage tube was used. The progress of the case was in all respects satisfactory. The wound united by first intention, and the dressings were changed for the first time and the stitches removed on the fourteenth day. In three weeks from the time of operation the limb was perfectly sound and useful in all respects.

The fragment removed measured $\frac{3}{4}$ by $\frac{1}{2}$ inch, and was ovoid in outline. The edges were cleanly cut, except along the inner border, where it was rough, and had been torn away from the non-articular surface of the condyle. The anterior surface was smooth and convex, and had all the characters of articular cartilage, while its deep surface was rough, with spicules of bone, and presented a layer of bone nearly $\frac{1}{2}$ -inch thick.

This is clearly a case of direct detachment of a piece of articular cartilage by violence. It is put on record, not so much because of the indubitable nature of the case—although such an occurrence is sufficiently rare—as because a consideration of the conditions met with here seem to throw some light upon the exact part which injury plays in the production of these highly interesting bodies.

It is admitted that such cases are of great rarity. In a search through the literature of the subject for the last twenty-five years the following cases appear to be the only indisputable examples of this class of injury on record:—

The first case was reported by Tarnier.¹ A patient committed suicide by leaping from a window. At the *post-mortem* examination there was found within the joint a portion of the articular cartilage of the femur, which had been stripped quite cleanly off from the bone beneath, the latter being quite sound.

There is a specimen in the St. Thomas's Hospital museum taken from a case, under the care of Mr. Simon,² of a young man who fell and wrenched his knee. As a result "some inconsiderable synovitis" supervened, and a loose body was detected within the joint. This was extracted within three weeks from the receipt of injury, and proved to be a portion of the articular cartilage detached from the patella. This interpretation has recently been confirmed by Mr. Shattock.³

M. Claudot⁴ reports the case of a boy who fell upon his knee and sustained a severe injury to it a few days before operation. Here the loose body was pronounced by the author to have been "clearly a piece detached from the femur."

A very striking case has been reported by Mr. Jacobson,⁵ where two loose bodies were extracted from a knee-joint a few weeks after the receipt of a severe injury to the condyle. In this case the roughened surface from which the body had been detached was plainly felt by the finger at the time of operation.

Poulet and Vaillard⁶ record a case of a young lad who fell heavily and struck his knee on a heap of sharp stones. A portion of the inner condyle and its cartilage was detached.

In a case where my friend and colleague, Mr. Watson Cheyne, lately wired together the fragments of a fractured patella a piece of cartilage was found chipped off from one of the fragments and lying loose in the joint embedded in the blood clot between the ends of the recently-fractured bone.

GROUP 3. *Changes in the Synovial Membrane not due to Osteo-arthritis.*—With the exception of the cases already alluded to,

nearly all the cases that arise either spontaneously or some considerable time after an injury are said to be due to changes in the synovial membrane unassociated with osteo-arthritis.

No one at all acquainted with the subject under discussion will deny that many loose bodies may and do arise quite independently of severe injury or of osteo-arthritis, but I would urge that there is some proof and much probability that many of the cases that have hitherto been ascribed to idiopathic synovial change are in reality due to injury, which may be more or less remote possibly, but which nevertheless acts in a definite manner in causing the loose body.

In October, 1890, I made a number of experiments in order to determine the facility with which violence could bring about the detachment of portions of bone or cartilage in the cadaver. As might be expected from a consideration of the work of others in the same direction, it was found extremely difficult to deliver a blow that would detach a portion of the articular cartilage without at the same time doing serious damage to the joint itself, and indeed it seemed that only by striking the articular edges obliquely could a loose body be produced. These experiments bore out completely Sir George Humphry's⁷ view that such a lesion could only with difficulty be produced, even by a violent blow with a hammer. It seems quite clear that, for a direct and complete detachment of the cartilage to take place, the blow must be either very sharp and localised (as in the case recorded by Poulet and Vaillard, where the knee was struck against a heap of sharp flints), or that the articular surface must be struck obliquely and a portion chipped off. This is the probable explanation of the cases of Simon, Jacobson, and myself.

But, at the same time, it was found extremely easy to deliver blows upon the condyle in such a manner as to partially separate portions of its cartilage both from the surrounding tissue and the bone beneath. And, moreover, as the bone beneath was much contused, a condition of things was produced closely resembling that found in my case, and showing pretty clearly that the piece thus partially detached had little or no chance of becoming united again to the femur. And in this connection I would call attention to the fact that in a case recorded by Claudot⁸ the loose body was "still attached to the condyle by a few slender periosteal filaments." This was also the case with the second loose body in Jacobson's case.

This particular condition of partial detachment is the one I wish to draw special attention to, for I believe it to be one that is comparatively easily produced, and one that will explain the very frequent association of injury with the production of these bodies. In 69 cases of which I have notes there is a history of definite injury, often severe, in no fewer than 36.

The experiments of Poulet and Vaillard¹⁰ have shown that even when loose bodies are entirely free in the joint they may undergo important structural modifications. These observers opened the knee-joints of dogs, and, by means of a chisel, detached portions of bone and cartilage, and then closed the joint by suture, leaving the fragments free in the articular cavity. After several weeks the animals were killed, and it was then found that the detached portions had developed for themselves fresh attachments to the synovial membrane, and had become partially vascularised. As a result of this, the interstices of the cancellous bone had become partially filled with newly-formed fibrous and cartilaginous tissue. Poncet,¹¹ writing upon the same subject, goes so far as to say that these bodies may actually increase by a process of imbibition from the synovial fluid without possessing any attachment to the structures of the joint at all. He does not, however, support this statement with any convincing proof. The part played by injury in the majority of the cases of loose body following after a blow would, according to this view, be that the cartilage is only partially detached from the bone, that it is nourished by means of the pedicle that still connects it to the joint structures, and that it thus undergoes considerable modifications not only in size but in structure, so that, should it not give rise to acute symptoms demanding

¹ *Bulletin de la Soc. Anat.*, 1855, p. 193.

² *Path. Soc. Trans.*, vol. xv, p. 206.

³ *BRITISH MEDICAL JOURNAL*, 1884, vol. i, p. 787.

⁴ *Arch. de Méd. Mil.*, 1889.

⁵ *Lancet*, 1889, vol. ii, p. 363.

⁶ *Arch. de Physiol.*, vol. i, 1885.

⁷ *BRITISH MEDICAL JOURNAL*, 1883, vol. i, p. 613.

⁸ *Arch. de Physiol.*, vol. i, 1885.

⁹ Fano (*Bull. de la Soc. Anat.*, 1885) states that he has often produced similar lesions when manipulating luxations in the cadaver.

¹⁰ *Arch. de Physiol.*, vol. i, 1885.

¹¹ *Lyon Méd.*, 1887.

its removal for a considerable time, the actually traumatic origin of the body may be difficult to trace. Of course, when it has reached a sufficient size, or it is exposed to some violent movement, the pedicle may become twisted, and the body be set quite free in the joint.

This is, to my mind at least, a far more satisfactory explanation of those cases occurring some time after the receipt of an injury in young athletic lads, than the invocation of the agency of those normally existing cartilage cells in the synovial membrane described by Kölliker and Rainey, which I have looked for so often and under so many different conditions during the past few years, and which I have so constantly failed to find.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PURPURA FEBRILIS CAUSED BY COPAIBA.

I LATELY had an opportunity of watching a case in which a man suffered from a febrile condition and a skin eruption, which I think must have been due to the effects of copaiba. The case is as follows: J. S., aged 26, had gonorrhœa, and was given copaiba by a chemist, in capsules, six a day. These he took for a week. Then he had rigors and headache, chiefly occipital, and when seen next day he had a furred tongue and temperature 101° F. The following day a rash appeared on the backs of both hands and wrists as rose-coloured slightly raised papules, some larger than others; these increased in number and size, and coalesced into blotches of a deep pink colour, some with a tinge of blue. Then the rash came out abundantly on the face and neck down to the clavicles on both sides, in blotches very like measles in appearance. Numerous less thickly scattered blotches and papules were on the chest, back, and abdomen, and the rash was again more marked on the legs, especially below the knees. Although the eruption was so universal, there was a marked symmetry in the distribution. The redness did not fade on pressure, and the larger blotches were distinctly raised. Tongue was furred, pulse normal, and temperature on different days 101°, 102°, and 103°, being the following day 99° F. There were heavy perspirations on some nights. No subjective symptoms save headache for first two or three days, and a slight itching. After five days the rash subsided, leaving dark stains like those of purpura.

Enfield, N.

FRED. TRESILIAN, M.D.

CASE OF HAIRPIN IN THE FEMALE BLADDER.

ON January 24th I was summoned to a young lady, whom I found to be suffering great pain over the region of the bladder. She told me she had been troubled for a long time with irritation about the orifice of the urethra, which she relieved by rubbing the part with the rounded end of a hairpin; and that while in bed that morning the pin had slipped from her fingers. She did not mention the circumstance to anyone, but got up and went about her duties as usual, though suffering intensely; till, being unable to bear the pain any longer, I was sent for about 4 P.M.

Upon examination I felt the pin in the bladder distinctly, but after trying for an hour I was unable to seize the ends with forceps. I then introduced a large-sized sea tangle tent into the urethra, which well dilated it, and attempted to get hold of the pin with a larger pair of forceps, failing in which I tried also with a hook unsuccessfully. Chloroform was administered, and I was able to introduce my finger into the bladder without doing much damage to the urethra, when I felt the pin lying obliquely in the bladder, the points sticking into the mucous membrane. Upon freeing these it was possible, by pressing them together, to remove the source of the trouble without the aid of a contracting bladder. She had a very acute attack of cystitis, with purulent discharge, which, however, got well quickly under ordinary treatment. There was some incontinence of urine for a period, but she soon recovered perfect control, and made a good recovery.

Such an accident, I am well aware, is not of rare occurrence;

but it is one which, when it does take place, not unusually gives the surgeon a great deal of trouble. Some authorities recommend sudden rupture rather than gradual dilatation of the urethra; but in this case the results of the latter were most satisfactory, and should I have another case of the kind to deal with, I would certainly resort to gradual dilatation and manipulation with the finger, without the use of any instruments.

WM. STAMFORD, M.R.C.S.Eng., L.R.C.P.Lond.

Tunbridge Wells.

PROLONGED CONSTIPATION: PASSAGE OF GAN- GRENOUS GUT: RECOVERY.

Mrs. W., aged 24, who gave me a history of previous constipation, called me in on December 7th, 1891. She had then been seven days without having had any movement of the bowels. An enemata of soap and water was ordered, but this had no effect; the usual purgative treatment had the same negative result.

The obstruction continued for five weeks; and, as an operation was not allowed, Dr. Samuel Fenwick was called in. Nothing of importance could be made out, with the exception of large masses of scybala, but no tumour could be discovered. At Dr. Fenwick's suggestion, I inserted a piece of rubber tubing, 2½ feet in length, into the rectum, and passed an enema up by this means, and continued the same treatment for a week. Symptoms of peritonitis supervened; after keeping the patient under the influence of morphine by the hypodermic method they subsided. The constipation still remained, however, and on February 29th, 1892 (eighty-four days after coming under treatment), when the patient appeared to be getting stronger, I administered an enema of five pints of warm water and soap. This she retained for half an hour, when she passed a piece of intestine 3½ inches in length, evidently from the ileum. This was followed by a very copious motion, consisting of scybala and mucus. The enema treatment was continued on March 1st, 2nd, 3rd, and 6th.

On March 7th, after similar relief, I put her on cascara sagrada, with liquid food, and she is now convalescent.

During the whole time the patient was under my care I kept her upon whisky and beef tea, with plenty of ice, and on rare occasions a little milk.

The following points are worthy of notice in this case: 1. No tumour could be discovered. 2. Very slight discoloration by jaundice took place. 3. There was no stercoraceous vomiting. 4. Very little blood or mucus was passed by the rectum. 5. The exceedingly small amount of wasting. One would have expected to find a great deal more, considering the diet was so limited. I attribute this to the free use of opium, thereby preventing any great amount of metabolism in the tissues. I believe this to be the longest case on record, with complete obstruction, where recovery took place.

W. A. DUNCAN COOPER, M.B., C.M.Aberd.

Finsbury Park, N.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

THE GENERAL HOSPITAL, BIRMINGHAM.

A LARGE GALL STONE PASSED BY THE RECTUM NOT PRECEDED BY ANY ORDINARY SYMPTOMS OF HEPATIC COLIC.

(Under the care of Dr. T. SYDNEY SHORT.)

[From notes by Mr. DRYDEN STEAD, Resident Medical Assistant.]

G. B., aged 62, a burnisher by trade, came as an out-patient on October 9th, 1891, complaining of constipation and an aching stitch in the right side. He was pale and anæmic, with a worn-out appearance, and seemed weak and ill. He said that during the previous winter he had suffered from bad bronchitis, followed by an aching pain in the right side, always present, but worse on breathing deeply; and that, as spring came on, his breathing got better, but the pain continued; he