distinctive notes of being under the dominion of the nervous system.

(b) It may receive an initial impulse from rheumatism or gout, and possibly from other diathetic conditions. All causes of nerve depression and blood deterioration favour the rheumatoid state.

(c) When fully developed it is itself the cause of an "arthritic cachexia,"—to borrow an expressive phrase from Sir Dyce Duckworth.

(d) This cachexia may be associated with profound lesions of nutrition, with pain, with atrophy, with errors of inhibitive control, and with even visceral disease.

(e) Amelioration, and perhaps even cure, are possible in the earliest stages; but beyond a certain point, rheumatoid arthritis is as unmanageable as if it belonged to a malignant nosology.

RECURRING DISLOCATION OF THE LOWER JAW: A METHOD OF TREATMENT BY OPERATION.¹

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SIMPLE dislocation of the lower jaw can only take place in one direction—forwards—and may be either unilateral or bilateral. The latter variety is the most common, and is generally caused by muscular action, whereas the former is perhaps more often the result of applied force.

The mechanism of dislocation is essentially the same in either variety. When the mouth is opened the condyle with the interarticular cartilage moves forwards out of the glenoid cavity, and rests against the convex root of the zygoma; if downward force is now applied to the jaw, or if the external pterygoid suddenly contracts, the condyle is carried over the convex root into the zygomatic fossa, and the jaw is drawn forwards and upwards by the masseter, internal pterygoid, and temporal muscles. The capsular and other ligaments are stretched, but are seldom ruptured.

It would seem from the anatomical arrangement of the joint that normally the forward movement of the interarticular fibrocartilage is limited by its attachment to the capsule, and that the condyle is prevented from passing on to the summit of the convex root, chiefly by the external lateral ligament. In some cases the force producing the dislocation is undoubtedly sufficient to overcome both these restraining influences, but in others it is probable that the ligaments have been previously weakened by some general debilitating cause—illness, childbirth, etc.—and that both the cartilage and condyle move more forward than usual, and hence become displaced by comparatively slight muscular or other force. It is noteworthy that most of the cases referred to by various writers have occurred in women.

Dislocation having once occurred, there is a decided tendency to recurrence, owing both to the stretching of the ligaments at the time of the accident and to the want of precaution to keep the joint at rest for a sufficiently long period after reduction. The time for limiting movements advised in most of the current textbooks varies from a few days to a week or two, and is manifestly insufficient for the full repair of the damaged tissues and the contraction of the ligaments.

With each recurrence the liability to dislocation becomes more marked, and the joint may become so insecure as to be a constant source of trouble and annoyance. As a rule, but little pain is caused after the first few displacements, and the amount of inconvenience will depend upon the facility with which reduction can be effected: easy reduction by the patient representing the minimum, difficult reduction by a surgeon the maximum.

Hitherto the treatment of recurring dislocation has been palliative only. An elastic bandage or some similar support for the chin is recommended, and the patient is cautioned against opening the mouth too widely. Even if this advice is followed—which it seldom is for any length of time—it is

almost certain that in some moment of forgetfulness an incautious movement will reproduce the displacement and discourage the patient from wearing a restraining apparatus, which is always irksome, and certainly not becoming to either sex. In these cases, therefore, palliative treatment is inefficient and unsatisfactory.

The history of the following case will best explain a method of operation the aim of which is to check the forward movement of the interarticular cartilage, to prevent the condyle from reaching the summit of the convex root of the zygoma, and at the same time to interfere as little as possible with the normal range of movement of the jaw.

Mrs. A. O., aged 23, a stout, healthy-looking woman, was admitted into Queen's Hospital under my care on May 13th, 1890. Five months previously, and a fortnight after confinement, she bilaterally dislocated her lower jaw when gaping. It was reduced, but in a fortnight's time was again dislocated by gaping. Since then recurrence has been frequent, some days happening many times—in fact, almost always if the mouth is incautiously opened. The dislocation is always easily reduced by her usual medical attendant, but if she is away from home difficulty is sometimes experienced, and the manipulation causes her considerable suffering. Restraining bandages had been worn, but the patient objected to them as a permanence, and was extremely anxious to have something done, and was willing to submit to any operation offering even a chance of relief.

On May 15th, under anaesthesia, the left temporo-maxillary articulation was exposed by an incision about an inch long, extending downwards from the zygoma, half an inch in front of the auricle. The capsule was opened and the interarticular fibrocartilage was found to be exceedingly loosely attached. The external lateral ligament could be clearly defined. Following Professor Annandale's method of fixing the cartilage in cases of subluxation, a catgut suture was passed through the periosteal attachment of the capsule to the zygoma and through the margin of the cartilage; but in tying it in the deep and narrow wound it cut through the cartilage; fine silver wire was substituted, twisted and cut off short. A second suture was now passed through the external lateral ligament and through the periosteal attachment of the capsule as far posteriorly as possible, so as to make a fold or tuck in the ligament and bind it down to the adjoining structures. The wound was then closed. It was anticipated that these sutures, assisted by the adhesions which would form during the healing process between the exposed part of the capsule and the surrounding tissues, would fulfil the first two aims of the method, and that careful asepsis would ensure the third.

Primary union took place, and in twelve days the patient returned home, wearing an elastic bandage to restrain movement, and for a time being limited to slop diet. She wore the bandage continuously for two months, and during this time there was no recurrence on either side. When she ceased to wear it dislocation of the right condyle soon took place, and became of frequent occurrence; the left remained in place in spite of the extra strain thrown upon it during the manipulation for reducing the opposite side. The right articulation was therefore operated upon in a somewhat similar manner on September 25th, 1890, but only one silk suture was used; this was passed through the external lateral ligament, the periosteal attachment of the capsule on the outer side of the glenoid margin, the interarticular fibrocartilage, back through the external lateral ligament, and then tied. Primary union again took place, except along a small drainage tube track, and the patient went home on October 8th, observing the same precautions as on the previous occasion.

Since the second operation there has been no recurrence of dislocation, and no trouble whatever has been experienced from the buried sutures. The cicatrices are hardly visible even on close inspection; there is a distance of $1\frac{1}{2}$ in. between the front incisor teeth when the mouth is open, and when the jaws are closed the teeth meet accurately. She can open her mouth widely or gape without fear, and can eat anything; she is, in fact, *re the dislocation*, perfectly well.

The operation, though apparently simple, is not a very easy one to perform. The wound must be limited in length because of the anatomical surroundings; the tissues cut through are very vascular, and it is difficult both to pass the suture, and to tie it sufficiently tight without cutting through the fibrocartilage. On this latter account aseptic silk or tendon will probably be found the most suitable material for the suture. In view of the possibility of suppurative arthritis and subsequent ankylosis, it is advisable to operate on one side at a time. The second operation should preferably take place soon after the healing of the first wound, and before the elastic bandage is discarded.

A sufficient length of time has now elapsed—over eighteen months since the second operation—to establish beyond doubt the permanent character of the result obtained by this method of treatment, the success of which has in this instance been so complete as to justify its employment in other similar cases.

THE South-West German Society of Neurologists and Alienists will hold its seventeenth annual meeting at Baden-Baden on May 28th and 29th.

PRINCE JOHANN LIECHTENSTEIN has given 2,000 florins towards the building of a house for the Imperial Royal Society of Physicians of Vienna.

¹ Read at a meeting of the Birmingham and Midland Counties Branch.