

ORDER OF ST. JOHN OF JERUSALEM

The *London Gazette* has announced the following promotions in, and appointments to, the Venerable Order of the Hospital of St. John of Jerusalem:

As Knights: Major-General Sir Robert Hay, K.C.I.E., K.H.P., I.M.S., Brigadier W. S. Johnston, C.B.E., D.S.O., M.C., Colonel H. H. E. Russell, O.B.E., V.D., Colonel E. Cotter, C.I.E., V.H.S., I.M.S., and Dr. H. F. J. Norrie. *As a Dame*: Dr. Frances C. B. McKay. *As Commanders (Brothers)*: Major-General F. A. Maguire, C.M.G., D.S.O., V.D., Colonels N. Briggs, C.I.E., V.H.S., I.M.S., and L. H. A. R. Huggard, Lieutenant-Colonel E. A. H. Russell, V.D., Messrs. R. D. A. Douglas, M.B.E., H. R. Rishworth, C.B.E., J. J. Abraham, C.B.E., D.S.O., and Drs. W. Benton, C. D. Newman, S. F. Chellappah, O.B.E., and E. S. Bowes. *As Officers (Brothers)*: Air Marshal T. E. V. Hurley, C.M.G., C.B.E., Colonels T. E. Holland and A. M. McIntosh, Major A. Ehrmann, O.B.E., T.D., Captain C. J. Evers, Mr. F. H. Edwards, Drs. T. P. Lalonde, F. W. Hebblethwaite, E. P. Scott, D. M. MacManus, W. Megaw, J. C. D. Carothers, R. V. S. Cooper, C. R. de C. Sadler, E. H. Lodge, F. C. Middleton, M.B.E., J. Mackenzie, and R. C. Inglott, M.B.E. *As Associate Officers (Brothers)*: Major D. P. Mitra and Dr. R. S. B. Gopal. *As Officer (Sister)*: Lady Margaret Ramsden, M.D. *As Serving Brothers*: Surgeon Captain C. T. Baxter, R.N.(ret.), Brigadier W. Leslie, M.C., T.D., Major G. K. Wood, R.A.M.C., Drs. E. J. A. Dougan, T. H. McOwat, M. A. Oulton, L. D. Densmore, J. F. Eustace, W. D. Dyson, E. W. C. Thomas, F. W. Moffitt, W. L. Jack, R. N. Gibson, H. D. Wallace, E. J. G. Wallace, W. G. Denholm, L. C. J. Edwards, J. G. Bremner, H. C. Geldard, J. W. Flynn, W. E. George, H. H. Hurst, and D. J. Taitt. *As Associate Serving Brothers*: Captain M. Solomon, R.A.M.C., and K. B. M. S. Mahmood. *As Serving Sisters*: Drs. Eda S. Curtis, Helen M. McNeill, Olive S. May, Marguerite A. C. Douglas-Drummond, and Laura K. M. Horne.

Reports of Societies

ORTHOPAEDIC SURGERY IN RHEUMATOID ARTHRITIS

At a meeting of the Section of Physical Medicine of the Royal Society of Medicine on Jan. 14, Mr. W. A. LAW, who has recently spent some months at the Massachusetts General Hospital studying the orthopaedic services of Bauer and Smith Petersen, discussed the part played by orthopaedic surgery in rheumatoid arthritis and ankylosing spondylitis.

Mr. Law said that the orthopaedic surgeon had lately been taking a greater share in overcoming the deformities of these common diseases. For this purpose a high standard of team work was essential, the team including a physician, an expert on physical medicine, an orthopaedic surgeon, and in certain cases deep x-ray therapy might also be needed. The principle of rest was still the basis of the so-called conservative treatment of rheumatoid arthritis. The aim of all treatment must be to relieve pain, arrest the disease process, and restore function; but rest might be harmful from the point of view of restoration of function, particularly if by putting one joint at rest there was interference with the function of other joints of that limb. While a case was undergoing surgical treatment a careful balance must be preserved between rest and active exercise, pain being controlled if necessary by drugs. In many rheumatoid cases there were multiple deformities necessitating a long programme of reconstructive or functional treatment. The patient might also have to undergo one or more revision operations to secure a satisfactory end-result.

Upper Limb

He proceeded to discuss, with illustrative cases, the orthopaedic procedure for various joints affected by rheumatoid arthritis. A painful shoulder joint with adduction and internal rotation deformity was frequent; excision of the acromion process, together with removal of sub-acromial bursae, eliminated the source of pain and allowed free movement. Relief of pain also helped to remove muscle spasm. In rheumatoid arthritis of the elbow joint, spasm of the biceps muscle was a pronounced feature. Smith Petersen had drawn attention to the fact that the radial head might be drawn upwards so as to impinge upon the capitellum. Excision of the head of the

radius overcame such faulty joint mechanics, pain was relieved, and a considerable improvement in range obtained. Arthroplasty of the elbow joint with excision of the lower end of the humerus and upper ends of the radius and ulna was indicated where there was gross joint destruction or complete ankylosis.

Lower Limb

The hip joint and the knee joint frequently demanded surgical treatment on account of pain and deformity associated with a variable degree of ankylosis. Where the patient's morale was low and the muscles wasted and fibrotic a stabilizing procedure such as arthrodesis might be useful. In too many cases the problem of bilateral painful stiff hips and/or knees had to be faced. A strong plea was made for a reconstructive operation before fibrosis of muscles and ligaments and atrophy of the bones and joints had progressed too far. More than one operation might be necessary.

In 1939 Smith Petersen announced his technique for the performance of arthroplasty of the hip, his aim being to create all the elements which made up the joint. This technique had been greatly improved by the introduction of the vitallium mould. Originally a two-stage procedure was intended, but the inertness of vitallium had now made the second stage (for mould removal) unnecessary. The mould became a permanent insurmountable barrier to recurring ankylosis. Any reconstruction of the hip joint must aim at producing a joint which was painless, stable, and capable of bearing weight. The response to the procedure was conditioned by the degree of muscle wasting and involvement of other joints, but even in bed-ridden cases there was marked improvement. In a few patients increased use of the hip joint resulted in pain and effusion in the knee joint, but this was temporary.

Mr. Law reviewed four types of reconstruction: (1) routine arthroplasty in which the femoral head and enlarged and deepened acetabulum were reshaped and made smooth and congruous; (2) the modified Whitman procedure, which was indicated if the femoral head had undergone atrophy or the bone was so soft that after reshaping by gouging the femoral neck became too short; (3) the modified Colonna operation, which was carried out if there had been a more severe degree of absorption or loss of the femoral head and neck; (4) arthroplasty at the level of the lesser trochanter, should the greater trochanter be unsuitable for reshaping. This last operation resulted in loss of leg length, but this was of little significance in bilateral cases.

Painful and swollen knee joints could always be rendered painless and stable by arthrodesis. In cases where the joint was grossly distended by synovial effusion or the synovial membrane was thickened, much might be achieved by excising the synovial membrane so far as possible, together with the semilunar cartilages. Internal derangement of the knee joint owing to a meniscus lesion in a joint with rheumatoid arthritis should be treated by excision of the meniscus. In performing posterior capsulotomy difficulty might be found owing to dense adhesions. Subperiosteal stripping of the capsule might prove a safer method. As a less radical alternative to the complete excision of the patella, plastic operations on the bone were of value, and it was possible that the retention of a portion of the patella aided in repair and improved the quadriceps mechanism.

After touching on the spinal osteotomy operation devised by Smith Petersen, Mr. Law concluded by saying that these joint reconstructions were formidable operations, requiring patience and vision on the part both of surgeon and patient, but the benefit was seen not only in the restoration of function but in the marked improvement in the patient's outlook, always an important factor in the treatment of rheumatoid diseases.

Discussion

Dr. W. S. TEGNER, President of the Section, referred to a case which Mr. Law had mentioned of a man who after arthroplasty of the elbow sustained an elbow injury on being lifted from the ambulance, whereupon the rheumatoid condition flared up again. It was interesting to learn that joints which had been treated surgically were still subject to this possibility. At what stage should operation be attempted? Those who saw a good deal of rheumatoid arthritis mostly

believed that movement should be undertaken early. Was it possible that in a joint which had been treated by arthroplasty a recurrence of rheumatoid arthritis might occur as bad as, or even worse than, that in a joint on which no operation had been done? Mr. Law appeared to think that rheumatoid arthritis and ankylosing spondylitis were very much the same condition. On this side of the Atlantic most people thought they were not the same.

Mr. LAW said that there was no doubt that a joint which had undergone arthroplasty was still subject to any disease process to which the unoperated joint was subject. Rheumatoid arthritis might recur in a joint on which an arthroplasty had been done. The main value of arthroplasty at such a stage in the disease was in the maintenance of muscle power. If the old idea of waiting until the disease had "burnt itself out" still obtained, the muscles and fascia by that time would be just ribbons of fibrous tissue. There were no soft structures with which to work. Hence the value of the teaching of Smith Petersen on the necessity of considering revisions of these operations. An arthroplasty on the hip joint, done to-day, might result in six months' time in a flexion range of 60 to 80 degrees, but in eighteen months' time the range might have come down to 30 to 40 degrees, and if there had been further flare-ups there would be more pain and more joint swelling, and it would be worth while revising that arthroplasty. In the hands of Smith Petersen that procedure worked extremely well. But it was a colossal programme to put to the patient. With regard to ankylosing spondylitis and rheumatoid arthritis, he felt that there was a difference in the state of the bone as between the two conditions, but it was not a gross difference. In the former condition the bone was much harder, so that one had to use hammer and osteotome to get through the bone, whereas in the ordinary rheumatoid case one could often do the gouging by hand. Rheumatoid bone was more vascular and was associated with the thick overgrown villi, so that there was more bleeding in the operation.

Dr. FRANK COOKSEY said that the practice in this country in the active stage of the disease was to rest the joint as much as possible and maintain prophylactic movement rather than institute active exercises. He found it difficult to believe that the same flare-up after operation might not occur as was sometimes seen in their own unoperated cases which, after conservative treatment, were allowed to get about too soon. Was there any evidence that by operating early the period of activity of the disease was shortened?

Mr. LAW replied that there was no evidence on that last point. The benefit of early operation was the maintenance of muscle power and tone. Joint movements were dependent on these muscles. If they had been reduced to mere ribbons of fibrous tissue no chance was given for joint reconstruction. He would not say that early surgery should replace conservative treatment. He thought that the patients must have their proper medical treatment before any surgery was considered. But he felt that there was a place for surgery before the disease was "burnt out." There was a point where conservative treatment (splintage, traction, and various therapeutic measures) ceased to make for real advance, and this was before the muscles became completely atrophied. That was the ideal time to begin to think of surgery.

Preparations and Appliances

SIMPLIFIED APPARATUS FOR COLLAPSE THERAPY

Dr. FINTAN L. CORRIGAN, Military Unit, Harefield County Hospital, Middlesex, writes: The cylinder shown below was designed to simplify the apparatus at present in use for collapse therapy and to produce, if possible, a fool-proof machine. By the use of automatic valves at the inlet and outlet allowing air in one direction only, the machine is at once independent of taps, and refills can be given by use of the plunger only. However, a tap is desirable between the cylinder and the manometer for the following reasons: (1) To control the rate of flow of air (the tap being set to the desired speed beforehand); (2) to take pressures at more frequent intervals than 200 ml. if required. The capacity of the cylinder shown is 200 ml. (as in the

Maxwell apparatus), this being a convenient figure, and, as the pressure change produced by each discharge of the cylinder can be read on the manometer while the cylinder is being recharged, the operator can carry out a large refill clinic using the plunger only. The aspiration of air from the chest calls for exactly the same procedure—the connexion having first been transferred from the outlet to the inlet after removal of the filter.

By using this cylinder connected to a manometer we have been able to reduce our refill clinic time by one-quarter. This

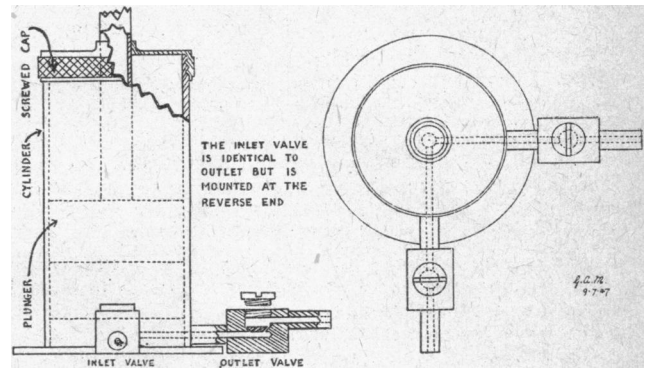
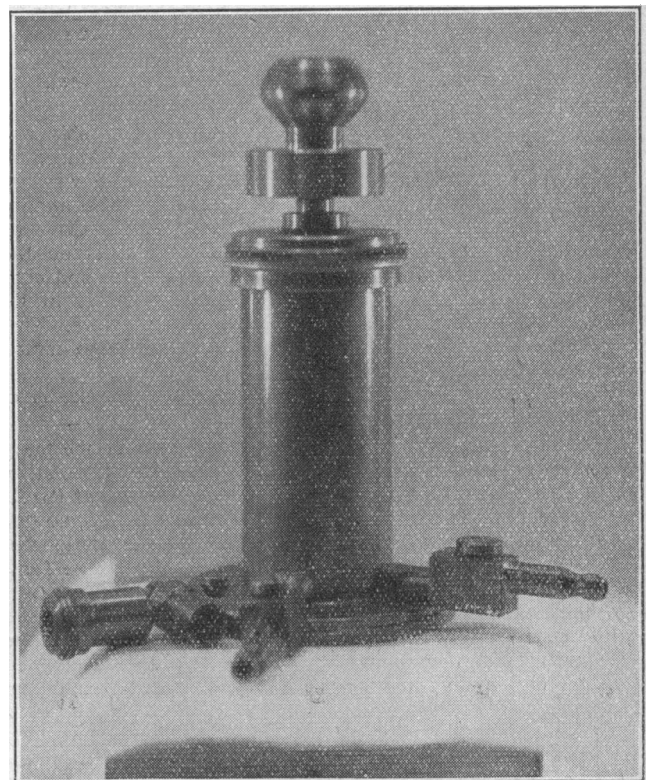


Diagram of cylinder.



Photograph of cylinder. The filter has been removed from the inlet tube and laid beside the cylinder.

speed can be maintained when the operator has to manipulate the apparatus for himself, in contradistinction to the use of an apparatus with taps. The cylinder shown was made to my design at the hospital by a member of the engineering department (Mr. A. Barons) and is at present being used with an aneroid manometer as fitted in the Maxwell box, a tap being incorporated between the cylinder and the manometer. It is, of course, essential that the valves should be accurately machined.

I am indebted to Dr. K. R. Stokes, the Medical Director of Harefield County Hospital, for his help and encouragement in producing this modified apparatus.