The Story of An Aussie 'Rheuma' Surgeon
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In December 1961, I graduated in medicine from Melbourne University and spent the next few years as a resident and registrar at St. Vincent's Hospital, apart from 1964, which was spent as a demonstrator in Anatomy at Melbourne University and passing the so-called "first part FRACS" exams in that year. In 1967, I passed the final FRACS exams in general surgery. I then decided to train in orthopaedics and with the advice of Mr Peter Williams, I applied to go to Auckland, New Zealand, to work as an orthopaedic registrar at the Middlemore Hospital in Auckland, which was, at that time, the largest orthopaedic hospital in the southern hemisphere with five very active orthopaedic surgical units (consisting of two orthopaedic surgeons and sometimes a junior full-time orthopaedic surgeon, as well as a registrar and resident). All the orthopaedic trauma at that time was transferred to this hospital from the whole Auckland and surrounding areas.

It was a great introduction to orthopaedics for me and I did a large amount of surgery myself, particularly as I already had the FRACS, albeit in general surgery. At Middlemore Hospital I worked for Ross Nicholson (who died in July 2013) and the late John Morris who had trained under John Charnley at Wrightington in England for a couple of years and as a result had the so-called "licence" from Charnley to use his prosthesis and the Thackeray special instruments. As a result, I was exposed to the classical Charnley total hip replacement operation, with trochanteric osteotomy, as well as the metal on metal McKee-Farrar prosthesis, that was also used in a research trial comparing the two types of prostheses. I had seen the McKee-Farrar prosthesis used in Melbourne by John Cloke at the Alfred Hospital. He had commenced doing this operation in the late 1960's. My year in Auckland was a memorable one for many reasons as it was a very busy and fulfilling job and wonderful to work with many impressive orthopaedic surgeons as teachers. It was also a very relaxed lifestyle and my wife Terry and three children at that time were happy living there for the twelve to eighteen months.

I then returned to Melbourne and at that time there was no formal training programme, although Peter Williams was trying to organize a proper programme with the various major public hospitals. I worked for six months at the Royal Childrens' Hospital and the six months at the Royal Melbourne Hospital. At the Royal Melbourne, Kingsley Mills introduced me to the Smith-Peterson cup arthroplasty for hip joint disease and also started my interest in rheumatoid surgery, as he did a lot of this work in association with the Rheumatology Department and University Department of Medicine. At that time we did a number of open synovectomies of the knee and I became further involved with the intricacies of managing the rheumatoid patient as a whole.

During 1969, I was appointed to the post in Edinburgh known as the AOA Commonwealth Registrar and so in late December of that year, we set off for Edinburgh

with four daughters and I started work about twenty-four hours after we arrived on 1 January 1970, remaining there for some eighteen months. Initially I worked at the Royal Infirmary in Edinburgh doing trauma etc. under Professor J. I. P. James and others and then spent the rest of my time at the Princess Margaret Rose Orthopaedic Hospital (PMR) on the outskirts of Edinburgh. Initially I worked for Mr. John Chalmers – he was a great doctor, and excellent surgeon and a great thinker. As a result he had more influence on my subsequent career than any other surgeon that I had worked with. I then worked for Mr. Douglas Savill and Willie Souter and it was here that I learned about the art and craft of rheumatoid surgery. Savill was a very impressive and meticulous surgeon – a delight to watch or assist. He had developed an international reputation as a rheumatoid surgeon, although he published very little in the journals. Despite this, the written records of his patients were full of detail. He was obsessive about his work, his surgery and his care of patients.

Rheumatoid arthritis is a fascinating condition and at that time its medical management was very limited, basically just to Aspirin, some anti-inflammatory agents and occasional oral and injectable steroids, as well as various forms of physical therapies. Of course in the last fifteen years or more the situation has changed significantly. As it is a very chronic disease, it often commences in young adults, but also in children and remains a major issue for the life of the patient, with the slow and progressive destruction in joints and various soft tissues. There is really no such thing as so-called "burnt out" rheumatoid disease, but rather there is inexorable progress, albeit very slowly. As a result, most of these patients need frequent medical review by the rheumatologists. As a result, rheumatology out-patient clinics are an important component of public hospital management and in many ways was preferable to private care.

As the Savill Registrar, I would work beside him in the Orthopaedic Out-patient Clinic, as well as attending the local Rheumatology Medical Out-patient Clinic on a regular basis and we would consider all the problems from the cervical spine to the feet where surgery may have had something to offer the patient. Patients would be put on Savill or Souter's waiting lists and the patients would be admitted on a Sunday afternoon for assessment over the next few days and then any proposed surgery undertaken later in the week. The registrar would formerly admit and document the patient when they arrived on the Sunday afternoon (whether you were on-call or not!). This involved a full assessment of the patient, with detailed charting of all the joints and any neurological examination that was indicated including muscle charting. Using a variety of goniometers, the range of motion of all joints, including the finger joints and foot joints was measured and recorded. It would often take one to two hours to fully chart a patient. Then on the Monday morning the process would be repeated with Savill in attendance. As the registrar, you would present the patient and the clinical findings. Savill would then carefully check your measurements! He would berate you if you got it wrong or failed to do something. What a great learning experience that was and of course in today's world, that never happens. Over that six to nine month period I learned about rheumatoid surgery in all areas, that is the cervical spine, shoulder, elbow, wrist, hand, hip, knee, ankle and foot, as well as many other issues.

This of course was in the days before there was very much joint replacement surgery and no arthroscopic surgery. There was hip replacement surgery and in the main it was the Charnley hip joint replacement. In the knee, we did a lot of open surgical synovectomies, arthrodeses and sometimes partial replacement arthroplasty, using perhaps the McIntosh tibial replacement prosthesis, or similar devices. We also did a lot of wrist surgery, such as extensor tendon synovectomy or compartment decompression and occasional flexor tendon synovectomies in the fingers and the wrist,

with carpal tunnel decompressions. Metacarpo-phalangeal replacement with the Swanson prosthesis was also a relatively common procedure.

Then in early 1971, I returned with the family to Melbourne and was appointed as an Assistant Orthopaedic Surgeon at St. Vincent's, as well as a part-time Senior Lecturer in the University Department of Surgery, under Professor Dick Bennett. Over the next few years I carried on doing some basic research work in osteo-induction mechanisms, and at about the same time as Marshall Urist in the United States was demonstrating the presence of bone morphogenetic protein (BMP). I also went into private practice, but the development of such a practice was very slow, particularly as it was before the time there was a Medicare fee for consultation and surgery. At that time too, appointment as an orthopaedic surgeon at a public hospital was initially honorary until payment started in about 1974. At that time I started what continued to be part of my professional life for the next forty years, namely undergraduate teaching for two hours every Monday morning on the orthopaedic floor, as well as attending the Rheumatological Out-patient Clinic. This was extremely important as I was able to discuss the surgtical options not only with the patient, but also with the attending rheumatologist and then put the patient on my personal waiting list.

At this very early stage of my career, I was introduced to one of the most important principles in rheumatoid surgery and that was patient selection and timing. In most of the patients one appreciated that there was significant involvement of most of the joints in the upper and lower limbs and so it was important to prioritise which procedure should be done first and so on. As Willie Souter championed over many years, one always did "the winners" first, such as hip replacement, forefoot surgery, elbow synovectomy and so on. Also the timing of the surgery was important from the patient's point of view, as there were often long periods of rehabilitation in patients who were often young women with families, jobs etc. - this of course made it very difficult to organise for those patients on the public hospital waiting list. Accordingly, it required on my part a lot of personal attention to the waiting list and frequent communication with the patients.

Initially when I returned to Melbourne I was able to do and in fact did, most of the surgery myself. This included cervical spine surgery, as well as surgery of the shoulder, elbow, wrist and hand and also lower limb surgery. However, as the years progressed and super specialization was developed, I did less and less of the rarer interventions, such as cervical spine surgery and then hand surgery and later shoulder surgery, although I continued doing shoulder rheumatoid surgery until the late 1980's and did continue with elbow surgery as well as foot and ankle surgery. Very slowly, the vast amount of surgery personally undertaken was hip and knee surgery. I seemed to become a "triage doctor" for many of my super-specialist colleagues! In general, these super specialists did the technical task better than I could, but their expertise in looking after the whole rheumatoid patient was often lacking.

I think it is of interest to go through each of the main areas where rheumatoid surgery played a significant part:-

Cervical spine - In the rheumatoid patient with severe disease over a long period of time, involvement of the cervical spine is common, often with some evidence of neurological compromise. It is therefore important to be aware of this involvement when the patient is having surgery in other areas and requires anaesthesia. The disease often involves the posterior facet joints, the joints of Luschka and the joints between the atlas (C1) and the axis (C2), as well as the joints between the atlas and the occiput.

Surgery becomes indicated with uncontrolled, severe pain, significant neurological deficit or gross instability of the spine. If there is significant atlanto-axial subluxaton (greater than 3-4mm), then atlanto-axial fusion is indicated with the use of sublaminal wires and bone graft, sometimes augmented with methyl-methacrylate to hold the vertebrae in the reduced position until the bone graft heals.

If there is atlanto-axial impaction with vertical migration of the adontoid process, then a much more difficult procedure requiring fusion from C2 (axis) to the occiput, using wires, special plates and bone grafting is required.

On occasions, instability can occur with rheumatoid arthritis in the mid cervical region and fusion at the involved levels may be required.

Later in my career I did this surgery often with my neurosurgical colleagues. They were always reluctant to take bone graft from the iliac crest posteriorly and would often do the operation with fixation and local bone, which I always felt was insufficient.

Shoulder joint - On many occasions I performed open surgical synovectomy of the shoulder and this involved synovectomy of the subacromial bursa, as well as the gleno-humeral joint itself. One of the problems of this procedure was the development of a synovial fistula and further surgery may be required.

Total shoulder joint replacement became available in the 1970's and I performed a number of these procedures using the Neer prosthesis, which was an uncontrained joint. It was successful in terms of pain relief, but often joint movement was compromised. In general, rotator cuff surgery in the rheumatoid patient was unsuccessful. Before total shoulder joint replacement, I did do a number of cases using an interpositional arthroplasty, of which there were many varieties. On a number of occasions I used as an interpositional prosthesis, a sheet of silastic which was placed like a curtain between the articular surfaces.

Although I commenced doing shoulder arthroscopy in about 1978, at St. Vincent's, I had no experience of arthroscopic synovectomy of the shoulder.

Only on one or two occasions did I carry out arthrodesis of the shoulder in rheumatoid arthritis and this usually became necessary if the joint had become infected, for example following Cortisone injections by others. It was always a very difficult technical procedure and very difficult to obtain arthrodesis in a functional position, particularly in the rheumatoid patient.

Elbow joint - Historically the results of synovectomy of the elbow were very good and one would never consider joint replacement without advising a synovectomy first, unless the joint was extremely unstable. Again arthroscopic synovectomy of the elbow was never popular in my time as it was difficult to achieve a full clearance of the chronically inflamed tissue. With synovectomy, most of the surgery is achieved through a standard lateral approach to the joint. On occasions, it was necessary to excise the destroyed head of the radius. Sometimes synovial fistulae would occur post operatively.

If synovectomy has been unsuccessful and/or the joint is very unstable, total elbow joint is indicated. In the late 1960's hinged prostheses were used, but the results were disappointing. Then with the introduction of unconstrained prostheses such as the Ewald capitello-condylar surface replacement, the results were much better. In the late 1970's the Souter-Strathclyde elbow prosthesis was used by many rheumatoid surgeons, particularly in the United Kingdom.

Apart from hand surgery, elbow synovectomy was the most common upper limb procedure I performed with rheumatoid patients.

Wrist and hand procedures - With regard to the wrist and hand, the aim of surgery was in the main to control pain and correct deformity whilst improving or maintaining hand function and preventing tendon rupture.

A number of different procedures were performed. Flexor tendon synovectomy of the wrist was carried out when the patient presented with marked swelling, symptoms of median nerve compression and perhaps tendon rupture. Clinically, examination revealed what was essentially a "compound palmar ganglion". This procedure was a basic carpal tunnel release with synovectomy of the bursa and involved tendons and if necessary, tendon repair.

Resection of the lower end of the ulna was undertaken when there was gross involvement of the inferior radio-ulnar joint and dorsal subluxation of the lower end of the ulna. The operation usually involved excision of the lower end of the ulna (the Darroch procedure) or removal of just the intra-articular part of the bone, maintaining the ulnar-styloid process with its attached ulnar collateral ligament.

Stabilization of the wrist with dorsal tenosynovectomy - In these cases, there was marked synovitis on the dorsum of the wrist, involving all the extensor tendon compartments, although usually the tendons of abductor pollicis longus and extensor pollicis brevis were spared. There was also significant destruction of the radio-carpal and mid carpal joints. The operation involved exposure of the extensor retinaculum and a 3cm band of the retinaculum was dissected, maintaining its attachment on the ulnar side to expose the various extensor tendon compartments. Excessive synovitis was excised and any ruptured tendons repaired using adjacent tendons. With involvement of the radio-carpal joint, this was opened and synovectomy performed and the wrist held in the corrected position with two Kirschner wires for some weeks. In about 10% of cases following this procedure, bony ankylosis occurred across the radio-carpal joint. It is interesting to note that only rarely were the de Quervain's tendons (apl and epb) are involved with rheumatoid synovitis.

Dorsal tenosynovectomy with or without resection of the lower end of the ulna, was often carried out without stabilization of the radio-carpal joint.

Arthrodesis of the wrist was often indicated and this could involve arthrodesis of the whole radio-carpal joint, or limited fusion of the lunate to the lower end of the radius, thus allowing some movement to occur at the mid carpal joint. If bilateral arthrodesis was undertaken, it was important to fuse the wrist on one side in neutral position and in the other side in some flexion.

Finally, there was arthroplasty. I had only very limited experience of this procedure using the Swanson silastic flexible hinge joint with intramedullary stems, inserted into the intramedullary canal of the radius and the intramedullary canal of the third metacarpal.

With regard to rheumatoid hand surgery, when I started in orthopaedic practice I did some of this surgery, but very quickly referred the more complex cases to the super specialist hand surgeons. One of the big issues with this surgery, was that various operations may help the pain and the hand may seem to even look better, but there was no improvement or even on occasions deterioration in function and as a result a very unhappy patient.

With regard to the thumb, one of the commonest procedures was arthrodesis of the first metacarpo-phalaneal joint in about 15° of flexion. Fusion of the thumb interphalangeal joint may be undertaken placing the fixed joint in 25° to 30° of flexion.

Strangely enough, involvement of the carpo-metacarpal joint was unusual, unlike the osteoarthritic carpo-metacarpal joint, but on occasions arthrodesis, excisional arthroplasty or replacement arthroplasty may be required.

With flexor tendon synovitis in the fingers, synovectomy may be performed, but in general the results were poor, as were repair of ruptured tendons in the fingers.

The main emphasis in rheumatoid hand surgery with regard to the metacarpo-phalangeal joints, was replacement arthroplasty providing fairly predictable results in terms of control of pain and correction of deformity. Synovectomy of these joints early in the course of the disease before there was gross deformity, helped to control the condition. Associated with synovectomy, various procedures were used such as division of the ulnar collateral ligament, plication of the radial collateral ligament and centralization of the extensor mechanism.

Replacement arthroplasty of the metacarpo-phalangeal joints had been performed since the 1950's and the most popular prosthesis was the Swanson silastic prosthesis. If it was technically not possible to insert the distal stem of the prosthesis into the proximal phalanx, an interpositional arthroplasty was undertaken using the anterior capsule (volar plate) of the joints, that is the Tupper volar plate interpositional arthroplasty.

Finally, there are a variety of procedures that can be performed in the interphalangeal joints of the fingers, such as synovectomy of finger joints, flexor tendon synovectomy, soft tissue release operations, tendon reconstructive procedures and arthrodeses. Correction by a variety of procedures is undertaken to improve function associated with mallet finger deformity, Boutoniere deformity of the PIP joint and swan-neck deformity, which involves hyperextension of the PIP joint and flexion of the DIP joint, which occurs with rheumatoid flexor tendon synovitis, as well as contracture of the intrinsic muscles often associated with severe involvement of the PIP joint itself.

There is therefore a very long list of procedures that can be undertaken. The decision to advise surgery on the hand is always difficult. The gains achieved are often small, but they can still help the overall function considerably. On the other hand the losses that may occur are often quite significant. The patient needs to be highly motivated and willing to take part in a programme that may involve a lot of splinting and physical hand therapy.

Lumbar spine - Rheumatoid arthritis rarely involves the lumbar spine as such. On the other hand, the sero-negative spondyloarthropathies such as psoriatic arthritis, may involve the sacro-iliac joint, although in my experience the symptoms were not severe enough to warrant surgery such as fusion of these joints. Of course the lumbar spine may be involved with the consequences of rheumatoid arthritis, such as osteoporosis and multiple compression fractures, as well as the possibility of spinal osteomyelitis in the immuno-suppressed patients on steroids or other medications.

Hip joint - At the hip joint the decision was fairly straight forward since the introduction of total hip joint replacement surgery and so with significant destruction of the joint, total hip joint replacement in rheumatoid arthritis was revolutionary. Prior to

this one had to consider arthrodesis or a Girdlestone arthroplasty. Initially I used the Charnley prosthesis with trochanteric osteotomy, but since the early to mid 1980's, I used the more modern prostheses, although it was generally preferable to use cemented femoral components. In general the results of surgery were excellent, because the procedure relieved pain and improved mobility. However, the complications of the operation were more common, particularly infection. Excessive peri-operative bleeding was always an issue, given the patients were generally being maintained on Aspirin plus or minus anti-inflammatory agents, which did increase the risk of bleeding and I am sure as a result, increased the risk of infection.

In general any injury to the hip joint was a subcapital or basal fracture of the neck of femur and if this occurred, then the treatment of choice was total hip joint replacement as the result from internal fixation using various forms of pin and plate fixation were not good.

I had minimal experience of synovectomy of the joint as my practice was well before the days of hip arthroscopy. On a couple of occasions, patients presented with groin swelling and hip pain, with a large psoas bursa consisting of rheumatoid synovitis often connecting to the joint. Removal of the large cyst and a limited open synovectomy was performed and this would help, albeit short term, although total hip joint replacement surgery was always on the agenda.

Knee joint

Perhaps involvement of the knee joint in rheumatoid arthritis was the most common surgical operation undertaken and the procedures were fairly wide ranging. I started my career before total knee joint replacement was popular and so I had a lot of experience with synovectomy of the knee and in fact wrote a number of papers etc on the results and technique of open surgical synovectomy (see references).

Often one would see a rheumatoid arthritis patient with a very swollen knee that could not be controlled by aspiration and injection of Hydrocortisone by the rheumatologist. On many occasions I would wash out the knee using a trochar and cannula and the joint would be full of fluid and fibrinous loose bodies, rather like long grain rice. When arthroscopy was introduced in the mid seventies, rather than using the trochar and the cannula, I would do the same with the arthroscope, as well as assessing the joint and doing a limited synovectomy. Open surgical synovectomy however, was a very successful procedure, giving the patient long term relief and only rarely was recurrent synovitis a problem. The patient often developed a stiff and later a painful osteoarthritic joint which subsequently may have required a total knee joint replacement.

At no stage did I embrace arthroscopic synovectomy. I had seen some of my colleagues performing the operation and in my opinion the synovectomy was only partial at best. In open synovectomy, I removed the proliferative layer of the synovium, as well as its underlying capsular layer, as it was in this particular layer that there were immune complexes that triggered the development of recurrent synovitis. As well as that, I always excised the meniscus, so that I could remove completely the "invasive" synovium causing erosion around the articular margin of the tibia deep to the "menisco-tibial" capsule. Also all synovium involving the bone and causing rheumatoid "cysts" were curetted out. Rheumatoid synovitis never involves or invades joint ligaments, as opposed to the invasion and destruction of tendons that one sees in the wrist, hand and ankles. Joint instability due to ligament destruction is therefore most unusual. Most joint instability was due to bony collapse of the articular surfaces, both on the tibial and femoral sides. Occasionally there can be erosive disease seen at the attachment of ligaments to bone and resultant joint instability. With arthroscopic synovectomy, I always

believed that it was just giving the joint a “crew cut”, when what was needed was “scalping”, that is removing both the “hair and underlying scalp”!

To see if there was any significant difference in the two procedures, I did a small study with John Bartlett in the 1990’s. He performed what I regarded as a very extensive arthroscopic synovectomy, albeit a superficial one, although it would often take him more than an hour to do. I did a similar group of patients using open synovectomy of the knee and we compared our results some years later. This study was presented to the AOA at an annual scientific meeting. Because the arthroscopic synovectomy was much less invasive, the early results were much better, but after five years or so, the results were very similar.

Again, when total knee joint replacement was introduced, it was clear that this would be an important procedure in the rheumatoid patients. In 1972, Jonathan Hooper and myself performed the first total knee joint replacement at St. Vincent’s and this was a hinged Waldius type prosthesis. It was clear however, that this procedure was too destructive and that loosening and prosthesis failure was almost inevitable. Slowly surface replacement was developed, initially by surgeons like Gunson who had been Charnley trained at Wrightington and then at the Mayo Clinic with the development of the Geomedic prosthesis. I went over to the Mayo Clinic and worked with the late Dick Bryan, who was popularising the procedure at the time. I returned to Melbourne and we did a number of these procedures with mixed results. It was a difficult procedure and the instrumentation did not allow accurate alignment. I carried on using this prosthesis until the mid seventies when the Insall-Burstein prosthesis and instrumentation was introduced. This was a much better procedure, as were the results. Late in the 1980’s, I changed to the Miller Galante prosthesis and continued with similar prostheses until I ceased operating in the late 1990’s. Occasionally patients developed a synovitis in the joint, but this was not recurrent rheumatoid arthritis, but rather polypropylene wear synovitis, with resultant loosening of the prosthesis. Despite this however, revision total knee joint replacement was unusual.

Initially it was always “preached” that in rheumatoid arthritis one must always replace the patella as the articular cartilage and surrounding tissue would lead to recurrence of the aggressive synovitis. Often the bone of the patella was small or osteoporotic and one had trouble with fixation of the patella button. As a result in the last ten years or so of my surgical career, I stopped replacing the patella surface unless the patella was so destroyed it would not track satisfactorily in flexion.

There is no doubt that the development of hip and knee joint replacement revolutionised the surgical management of the rheumatoid patient and they were always regarded as “winners” if such surgery was indicated.

Ankle and Foot - With regard to the ankle region, I did perform synovectomy of the peroneal tendon sheaths, as well as the tibialis posterior tendons on a number of occasions. Often tibialis posterior tendon rupture occurred which did contribute to the plano-valgus deformity that one commonly saw in rheumatoid arthritis, although joint involvement of the talo-navicular and subtalar joints would always be present and significant.

Only rarely did I perform open synovectomy of the ankle joint itself. If the ankle was severely involved, I would generally opt for arthrodesis using a dowel technique from an anterior approach and employing the special instruments devised by Harry Crock for anterior lumbar fusion. Internal fixation was often not used. It was uncommon for me to perform total ankle joint replacement, as the reported results of this procedure were

always poor, even from places like the Mayo Clinic and revision of a failed prosthesis was difficult particularly to achieve a sound arthrodesis. However, on occasions I would perform the operation using a surface type replacement. This was indicated if the patient was severely disabled and had trouble walking up or down an incline, as there was minimal if any ankle joint flexion and extension. Ankle joint replacement would give the patient a few degrees of movement, which made it much easier for them walking on an incline.

In the hindfoot it was usual to correct the severe plano-valgus deformity and if indicated, I would carry out a lateral inlay triple fusion of the Price RCH type. In nearly all cases, the talo-navicular joint was involved and so it was necessary to include this joint in the arthrodesis. It was a difficult operation and it was always difficult to achieve sound union and I am sure that today the foot and ankle surgeons would be much more expert in correcting the deformity and achieving sound union. I personally had no experience of replacement arthroplasty of the talo-navicular or subtalar joints.

Finally, there is the common problem of rheumatoid arthritis involving the forefoot, particularly the metatarso-phalangeal joints, with dorsal subluxation and severe clawing of all the toes. Of all the procedures undertaken on the foot, forefoot arthroplasty was by far the commonest. I avoided any “sophisticated” surgery such as synovectomy, soft tissue releases, osteotomies or even arthrodeses. In the latter part of my career, there was a tendency for many surgeons to perform arthrodesis of the first MTP joint, but I always found it difficult to perform and often difficult to achieve a sound arthrodesis. Initially, I would carry out a procedure described by Kessel and Kates in 1967. This involved an elliptical incision on the sole of the foot, excising callosities on the skin and then incising in turn each metatarsal head so that there was a slight curvature of the excised metatarsal necks. The problem with the procedure was that if wound breakdown occurred, healing was slow, interfering with early ambulation. I used a special wooden soled boot made by the orthotists which the patients all found very comfortable. Because of the wound problem, I changed to a transverse dorsal incision and excised in turn all the metatarsal heads, including the first metatarsal. It was the procedure that had been described by the American rheumatoid surgeon Mac Clayton in 1960, although he also excised the base of the proximal phalanx. I did not carry out any surgery on the clawed lesser toes, but rather corrected any deformity of these toes by manipulation (rather like osteoclasis!). On occasions, I would fuse the interphalangeal joint of the great toe. When the deformity was extremely severe, I carried out amputation through the metatarsal necks via a dorsal approach. I was always surprised by how well the patients ambulated after this, as they were so delighted to be free of the pain associated with the gross deformity.

On occasions, after forefoot arthroplasty, one of the excised metatarsal necks was longer than the adjacent ones and the patient developed a painful callosity and a relatively minor procedure was required to re-operate and excise the prominent metatarsal neck.

Finally, there is no doubt that over the years the medical management of rheumatoid arthritis improved considerably and the incidence of surgical intervention in rheumatoid arthritis has decreased markedly. I noticed this particularly with the introduction of Methotrexate as an important drug in the management of severe rheumatoid disease and of course more recently, the use of second line DMARDS (disease modifying anti-rheumatic drugs) such as TNF alpha inhibitors and other “biologic” drugs. The development of an early cure for the disease is clearly on the agenda and the need for rheumatoid surgery may well disappear!! For many years I was the only Australian member of the European Arthritis Surgical Society (ERASS) but because of the decline in the specialty, this organization has ceased to exist. In my time however, it was

important to attend their regular meetings to meet those rheuma surgeons such as Vanio, Gschwend, Tillman, Soutter and many others, to learn about advances in surgical technique and strategies of management.

Jonathan Rush

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