The challenge of the increasing demand for joint replacement
Gary Hooper

In 1962, Sir John Charley implanted his first cemented total hip replacement and opened the world to an immediate remedy for hip arthritis. Over the last 50 years, countless patients have benefitted from this procedure with relief of pain and return to functional activities. New Zealanders, in the past, have had relatively good access to this procedure through the public health system. The ‘Joint Initiative’ in 2004 highlighted a growing need for surgical intervention in osteoarthritis, which resulted in increased Government funding. However, the ageing population and projected incidence of debilitating osteoarthritis has seen the rate of joint replacement increase to 363/100,000 in 2014, with projections of increasing to around 600/100,000 by 2026. Gwynne-Jones et al have investigated the demand for joint replacement in the Otago region, concluding that the demand has increased by 19% since 2012, and that patients qualifying for surgery are more disabled than in previous years. They argue that more patients are being returned to their GPs for ongoing conservative management who would have qualified for joint replacement only 4 years ago. This is likely to have multiple effects. Firstly, replacing joints in patients who have lived with disabling arthritis for a significant period of time, and who have more co-morbidities, is likely to result in poorer outcomes with higher post-operative complications. Secondly, managing these patients in the community will require increased resources. Thirdly, operating on ‘end-stage’ osteoarthritis can be surgically demanding, resulting in the use of more expensive implants, more extensive rehabilitation and intensive nursing; all of which require added resources.

Gwynne-Jones et al rightly point out that the decision to reduce waiting list times and introduce a 4-month waiting list has compounded the problems of access to surgery. The narrowing of the time band for the procedure to be completed, combined with the significant financial penalties placed on non-compliant DHBs, has resulted in rigid monitoring of the waiting list, with patients being ‘dropped off’ the list in order to remain compliant. Rather than give patients surety of care, this has created uncertainty with large numbers of patients not even making the threshold, when only 4 years ago they would have been offered surgery.

Currently, the Ministry of Health and a number of surgical societies, including the New Zealand Orthopaedic Association, have been working on the development of a new scoring tool (CPAC) to assess a patient’s need for surgery. This tool has been trialled in two centres, and has been validated and shown to have good inter-observer reliability. It is about to be introduced nationwide for all orthopaedic departments. The hope is that this tool will identify the areas of increased need, such as that reported by Gwynne-Jones et al, and allow the appropriate re-direction of central funding. If used appropriately, it will document the unmet need and any inequalities of access occurring across the country.

Although joint replacement is often associated with a marked improvement in a patient’s quality of life, complications do occur, which can have devastating effects on both the patient and the surgical team. Infection is a rare event following arthroplasty surgery, but Gow et al have shown it results in significant increase in the hospital length of stay and cost, estimated to amount to up to 8 million dollars across all DHBs per year. This expense results in less funds for primary joint replacements, impacting significantly on waiting lists,
further limiting the access to care for some patients. They conclude that the National Surgical Site Infection Improvement programme, with its approach to universal antibiotic prophylaxis and improved antiseptic techniques, needs to be communicated across all hospitals to reduce surgical site infection. Improving the communication within all DHBs is likely to close this ‘implementation gap’.

The problem with implant infections is that although many occur early in the life of the replacement, any patient with a joint replacement has a lifetime risk of infection from haematogenous spread. This is confirmed by the New Zealand Joint Registry, showing ongoing new joint infections 15 years after the index procedure. The marked increase in the rate of replacement surgery has resulted in a large catchment of patients within the community who are prone to infection and the subsequent costs associated with treatment. All doctors need to remain vigilant with patients who have potential sources of infection (urinary tract, respiratory tract) and have a joint replacement. Early aggressive treatment is likely to avoid a bacteraemia.

With a finite health budget, it is obvious that the demand for joint replacement and dealing with the subsequent problems—such as infection—will be extremely challenging to meet. There will always be rationing of public hospital resources, and the onus is on the Government to be transparent and inform the population of what they can expect from the public hospital and, if need be, give them alternative options to fund their health care. The time is right for a public debate on the role of a Government-backed health insurance scheme to help those that ‘fall outside’ the threshold for treatment in public facilities.

**REFERENCES:**


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