

# **Osteoporosis, falls and fractures in chronic inflammatory rheumatic disease**

## **Lay Summary**

### **Overview**

This generous scholarship from Arthritis Australia provided funds for me to undertake my second year of studies for my PhD. Osteoporosis, fractures and falls are an important cause of morbidity and mortality within the general population. Patients with chronic inflammatory rheumatic diseases (CIRDs), including rheumatoid arthritis (RA), psoriatic arthritis (PsA), systemic lupus erythematosus (SLE) and ankylosing spondylitis (AS) are at higher risk of osteoporosis, falls and related fractures. Our research is aimed at understanding the experience of clinicians and patients in the management of osteoporosis, falls and fractures and better defining the burden of disease in these high-risk patients in Australia.

### **What problems did you try to solve, or gaps in knowledge did you try to fill? What did you discover during the course of the grant?**

To understand the existing perspectives of clinicians in the diagnosis, management and prevention of osteoporosis, falls and fractures we conducted a systematic review of primary qualitative studies. There were 27 studies, with 1662 participants (including two mixed-methods studies with open-ended questionnaires) with 521 participants from studies utilising semi-structured interviews and focus groups. The participants included various types of clinicians, with physicians (primary care, specialists), surgeons, allied health professionals, pharmacists and nurses, who reported low priority with unclear health significance, challenges with collaboration and lack of clinical confidence as barriers to provision of care. Despite barriers, clinicians acknowledged their role in promoting healthy ageing and voiced the desire for educational opportunities and increased public health awareness.

A primary qualitative study with interviews or focus groups was conducted with 25 patients with CIRDs and osteoporosis on their experience in management of their bone health. We found patients were ambivalent about osteoporosis, falls and fractures, whilst paradoxically disappointed with deteriorating health and changing sense of self. They described frustration with generic management approaches without consideration of their underlying rheumatic disease, poor accessibility to treatment and exhaustion by the increasing burden of healthcare. However, patients with CIRDs took pride in health ownership by embracing autonomy, information seeking and building community while entrusting care in clinicians whom they trust.

Complementing this, we are currently undertaking a primary qualitative study with GPs and rheumatologists in their experience in osteoporosis, falls and fractures in patients with CIRDs. 12 (7 GPs, 5 rheumatologists) interviews have been conducted

thus far, with emerging themes including the complexity of CIRDs obscuring preventive care, variability in clinical confidence with GPS reporting comfort in delegating to specialist care, building trusting longitudinal therapeutic relationships and disappointment with suboptimal care delivery with constrained resources. We plan to conduct an additional 10-20 interviews with GPs and rheumatologists from broad backgrounds to enable further development of comprehensive and rich themes.

A scoping review was performed to describe the currently available literature on the epidemiology and risk factors associated with osteoporosis, falls and fractures in CIRDs. While there were 279 studies identified, most studies were in RA, in single-centre cohorts using cross-sectional data. There was limited research available on osteoporosis, falls and fractures in other CIRDs, most notably in falls. Additionally, despite widespread use of biologic and targeted synthetic disease-modifying anti-rheumatic drugs (bDMARDs and tsDMARDs) since 2000, there are limited studies exploring the impact of these medications on osteoporosis, falls and fractures. Notably there were only 5 studies from Australia and New Zealand. This highlighted the need for future research using prospectively collected longitudinal data in CIRDs, inclusive of non-RA conditions. Thus, we are currently undertaking a study utilising data obtained from the Australian Longitudinal Study of Women's Health (ALSWH), which includes linked data from Medicare, the Pharmaceutical Benefits Scheme (PBS), hospital admissions and emergency department presentations to explore the epidemiology of osteoporosis, fractures and falls in CIRDs and relevant risk factors.

Are you planning to continue the research?

Yes. We hope to utilise the findings of the above studies to design a multi-faceted intervention addressing barriers and incorporating ideas obtained from primary qualitative studies which is acceptable to key stakeholders including rheumatologists, GPs and consumers.