Synopsis of Osteoporosis Conference 2016, Birmingham ICC 7th to 9th November.
Bi-Annual International Conference organised by the National Osteoporosis Society
www.nos.org.uk

A report on sessions attended by Dr Margaret Smith.

Day 1

The conference was officially opened by Mrs Claire Severgnini (Chief Executive, NOS) and Sir Bruce Keogh (NHS England Medical Director) both highlighted how NOS and other patient-oriented charities made vital contributions at a time when both the scale and complexity of NHS work continue to rise.

The initial ‘Setting the Scene’ theme highlighted the major developments in Osteoporosis since the 1990s including the WHO Definition of Osteoporosis in 1994, and the explosion in fracture rates with ageing populations (Prof Elaine Dennison), a compelling case was made for surgical intervention in hip fracture in frail older patients (i.e. ASA grade 4) (Prof Antony Johansen). Community based systematic screening reported in the SCOOP study seems to reduce hip fractures (Prof Lee Shepstone).

Advances in genetics and epigenetics are improving understanding of people at risk of Osteoporosis. The importance of good clinical and family history taking in identifying other family members for potential referral to the Osteoporosis Clinic was highlighted (Dr Trevor Cole).

- Professor Eugene McCloskey compared the two main fracture risk assessment tools used in the UK (FRAX and Q Fracture) and referred to evidence from the SCOOP trial.
- Further papers addressed the contribution of DXA scans (Dr Nicola Crabtree) and the importance of accurate and reliable screening for vertebral fractures (Dr Emma Clark).
- The effect of intermittent high dose glucocorticoids and increased fracture risk was noted in a Danish population (Dr Andrea Burden); information on specific underlying conditions was not available to researchers using this dataset.
- Increased risk of fracture tends to be under recognized in people with Type 1 Diabetes (Prof Serge Ferrari).

The parallel workshop, ‘Management of the individual with symptomatic vertebral fracture’ was delivered by Prof Opinder Sahota and highlighted cases where surgical intervention was highly beneficial.

In the evening Satellite Symposium Session (Eli Lilly & Company) several papers addressed developments in drug treatments for osteoporosis. Professor Astrid Fahrleitner-Pammer focused on changes to bone microarchitecture as a result of treatment with anti-resorptive and anabolic therapies. Dr Jennifer Walsh reported on treatment with Teraparatide (evidence demonstrates 24 months duration is safe). The specific management of Chronic Kidney Disease Mineral Bone Disorder was presented by Professor J Eustace.
Day 2

Professor Bilekizian discussed Parathyroid Hormone (PTH), its effect on bone, and referred to a new drug, Abaloparatide- unlike Teraparatide it does not need to be stored in the fridge (Professor Bilezikian).

Oral presentations covered diverse topics including the following:

- Increased risk of fracture in a population in Catalonia receiving medication for Type 2 Diabetes was reported by Sanni Ali.
- The importance of visual screening in patients admitted with LTFs was supported with evidence by Rebecca Bolton. She recommended referral and optimization of vision as an important way to minimize falls and fracture risk in older people.
- A study on the impact of falls on fractures and mortality in women aged over 70 years revealed that fallers and non fallers had different FRAX scores and women with higher BMIs were also at increased risk of fracture. Falls history may be included in future FRAX tool (if results are repeated in larger datasets) (Sarah Chiu et al.).
- A series of oral research abstracts focused on Osteoporosis in young adults and included factors influencing peak bone mass (Prof Nick Harvey), management (Dr Jennifer Walsh), transition from paediatric to adult services (Dr Rachel Tattersall) and pregnancy associated Osteoporosis (Prof Ashok Bhalla). The importance of maximizing bone health through out the lifespan was a clear message.

Parallel Workshop

Gait and balance (Prof Tash Masud).
This workshop covered clinical assessment, presenting signs and symptoms and the differentiation of underlying pathophysiology (as high, middle and low level neurological pathology). The value of gait analysis and assessing people’s walking was emphasized. Participants were asked to simulate different types of gait with performance scores marked out of 10! This session was highly interactive.

Oral presentations included the following:

- Professor Jon Tobias analysed properties of trabecular and cortical bone. As cortical bone is responsible for most of the mechanical strength of bone research and drug treatment needs to focus more on this going forward. Potential option for combination therapies to maximize positive effects of different drugs was mentioned.
- The issue of combination therapy in Osteoporosis was further developed by Prof Richard Keen, and limitations were identified. As high resolution imaging continues to advance, combination drug studies in the future will want to incorporate these new ways of measuring treatment effects at the bone microstructure level.
- Dr Frank De Vries reported an epidemiological study of patients post hip fracture in England although causal links between hip fracture and patient outcome are difficult to infer as people who fracture may already have other illnesses contributing to poorer outcomes such as mortality within one year of hip fracture.
- Arti Bhimjiyan presented a study of the effects of social deprivation on hip fracture using three separate sources (Hospital Episodes Stats, Index of Multiple Deprivation, and Outcome Index Hip Fractures). More deprived males had higher rates of hip fracture.
• Kate Ward presented a study focusing on muscle function and muscle strength and bone microarchitecture using ‘jumping mechanography, a Hertfordshire Cohort Study.

Conference Debate- ‘Bisphosphonates, to stop or not to stop’ made excellent use of an interactive app. Dr Steve Cummings and Prof Richard Eastell presented lively cases ‘for’ and ‘against’ the motion.

Day 3

Parallel sessions focused on renal bone disease and advancing AHP practice in Osteoporosis. Findings from the GLOW study were presented by Anna Litwic and focused on bone microarchitecture and history of fracture.

• The effects Vitamin D3 supplementation in adolescents was reported using an RCT by Taryn Smith.
• Terry Aspray reported on evidence of effects of Vitamin D supplementation on BMD in older people in the North West where Vitamin D deficiency is common.

A series of oral abstracts focused on the approach to falls and fractures in the frail elderly.

• Dr Carolyn Greig, an exercise physiologist, presented sarcopenia and interventions, and noted that links between this sarcopenia, osteopenia and osteoporosis require further exploration.
• Professor Dawn Skelton reported on the use of exercise programmes that aim minimize falls. She emphasized the importance of ‘being active, sitting less, building strength and improving balance!’ The hazards of forward flexion and twisting movements in people with vertebral osteoporosis were made clear.
• Drug therapies to prevent fracture in the frail elderly were evaluated by Prof Tash Masud. He emphasized that people age 80+ should be offered drug therapy to improve bone health and minimize fractures.
• The discipline of orthogeriatrics was explained by Prof Madhavi Vindlacheruvu, a service for which there will be an increasing demand with the ageing population. Sarcopenic obesity in which there is both low muscle mass and increased fat leads to poorer outcomes, more research is needed on obese older adults, areas of interest include signaling work on Vitamin D receptors in older adults.

The final oral presentation of the morning on day 3 by Professor Juliet Compston surveyed the many advances in the management of osteoporosis over recent decades and areas requiring attention. She particularly highlighted the issue of under treatment of people at risk and why this problem persisted. Some of the reasons advanced were as follows:

- Fear of adverse events (health professionals need to manage the media better and ensure accurate and reliable evidence is reported by journalists).
- Poor coordination of systems for managing hip fracture patients (models of care such as FLS are known to be effective).
- Limited attention to Osteoporosis as a chronic disease (Osteoporosis has been an ‘orphan’ specialty and needs to be much higher profile).
- Poor knowledge and lack of education about osteoporosis (we need to educate the media, the general public, lawyers, and understand what methods are
best to do this- we have come a long way but there is plenty still to be done

Poor adherence to treatment (improve partnerships with patients so that they understand side effects of treatment better and are not unduly influenced by reports of rare complications)

Limited access to diagnosis and treatment (increase screening of high risk individuals. We clearly need to education healthcare professionals about Osteoporosis as a priority).


http://link.springer.com/journal/198/27/2/suppl/page/1