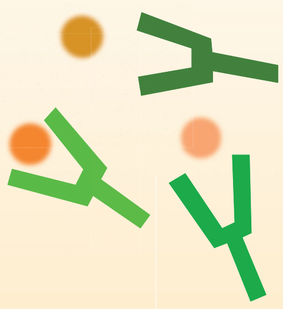
Denosumab prescribing in primary care: optimal prescribing is not just about the prescription.

Alexander Hammant

LAKESIDE HEALTHCARE
At Lakeside Surgeries Corby

Denosumab is prescribed infrequently in primary care so, when it is prescribed, there should be an easy-to-use framework.



Shared care agreements can empower primary care clinicians to make their own clinical prescribing judgements. However, it is important to document the clinical reasoning behind any of these judgements.

It is imperative that clinicians practice "holistic prescribing": can they influence modifiable risk factors like smoking status and BMI?

Aim and Objectives:

Denosumab is prescribed infrequently in primary care to treat patients who have osteoporosis and are at high risk of fragility fractures. It must be initiated in secondary care. It needs to be carefully monitored due to the potential of dangerous side-effects. This second cycle of data collection and interpretation occurred after an initial audit in 2017. However, since then the local shared care agreement had changed leading to an expansion in the audit's focus.[1] This meant increased emphasis placed on patient reviews and monitoring.

The scope of the 2019 audit can be summarised by measuring if:

- bloods, specifically urea and electrolytes (U+Es), calcium and vitamin D were monitored at 6 monthly intervals;
- each patient was referred back to secondary care after 6 injections;
- each patient had a yearly review;
- each patient was prescribed vitamin D and calcium when required.

In addition the presence of certain modifiable risk factors were noted and compared with the first audit cycle.

Methods:

Systemone was searched to identify patients who were both diagnosed with osteoporosis and prescribed denosumab. 4 patients were excluded. (Prescription recently completed or discontinued due to side effects.)

Results:

Do patients have regular blood monitoring?

The percentage of patients routinely monitored had more than doubled since 2017. 100%, 100% and 93% of patients had their U+Es, calcium and Vitamin D checked respectively.

Are patients referred back to secondary care after 6 injections?

7% of patients were overdue their re-referral. The majority had not yet received 6 injections. This was not audited in 2017.

Does each patient have a yearly review?

92% of applicable patients had had their yearly review. This also, had not been audited previously.

Are calcium and vitamin D supplements prescribed?

Calcium supplements were prescribed to 69% of patients and vitamin D supplements to 75%. (Compared to 67% and 67% in 2017). Valid reasons behind withholding supplementation, such as already adequate dietary intake, were present in many cases. However, these were sometimes not documented.

Are modifiable risk factors being addressed?

The number of patients both taking denosumab and concurrently smoking had increased. There was no significant difference between the percentage of underweight and overweight patients across both audits.

Conclusions:

There was improvement in the way that denosumab was prescribed. Most importantly bloods were almost universally done before each 6-monthly injection. This could have been partly due to increased use of systemone "reminders" and the use of a newly upgraded "denosumab prescribing template". This is so important because there have been several serious hypocalcaemia cases reported relating to denosumab.[2]

When shared care plans empower primary care clinicians to prescribe supplements "if necessary" maintaining strong documentation will help whole team case-by-case understanding.[1]

Finally, and arguably most importantly, it is integral to look at the big picture of denosumab prescribing – for example, men with a low BMI have been shown to be 4.4 times as likely to develop osteoporosis when compared to their overweight counterparts.[3] Therefore, it would appear that efforts to curb unhealthy modifiable risk factors may have better long term effects than simply offering a denosumab prescription.

This work scored 17/25 using CASC's clinical audit critiquer.[4] In future, this audit would benefit from greater engagement with key stakeholders such as patients and the multi-disciplinary team. This will help build further a holistic picture of denosumab prescribing outside simply its prescription.

1 NHS Nene CCG. 2019. Denosumab. [ONLINE] Available at: http://gp.neneccg.nhs.uk/drugs/denosumab-prolia/70342. [Accessed 10 June 2019].
2 Autio KA, Farooki A, Glezerman IG, et al. Severe Hypocalcemia Associated With Denosumab in Metastatic Castration-Resistant Prostate Cancer: Risk Factors and Precautions for Treating Physicians. Clin Genitourin Cancer. 2015;13(4):e305–e309. doi:10.1016/j.clgc.2014.11.008
3 Salamat MR, Salamat AH, Abedi I, Janghorbani M. Relationship between Weight, Body Mass Index, and Bone Mineral Density in Men Referred for Dual-Energy X-Ray Absorptiometry Scan in Isfahan, Iran. J Osteoporos. 2013;2013:205963. doi:10.1155/2013/205963
4 Clinical Audit Support Centre. 2018. Latest News. [ONLINE] Available at: http://www.clinicalauditsupport.com/ [Accessed 13 Jun. 2019].