



Bisphosphonates in myeloma patients

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Bisphosphonate use



- Reduction in skeletal related events
- Cochrane meta-analysis
 - No superiority of one bisphosphonate over another
- Zoledronic acid
 - Superior overall survival c/w placebo

Audit areas

- Type of bisphosphonate
- Duration of therapy
- Dose of bisphosphonate
- Adverse effects encountered
- Monitoring whilst on bisphosphonates

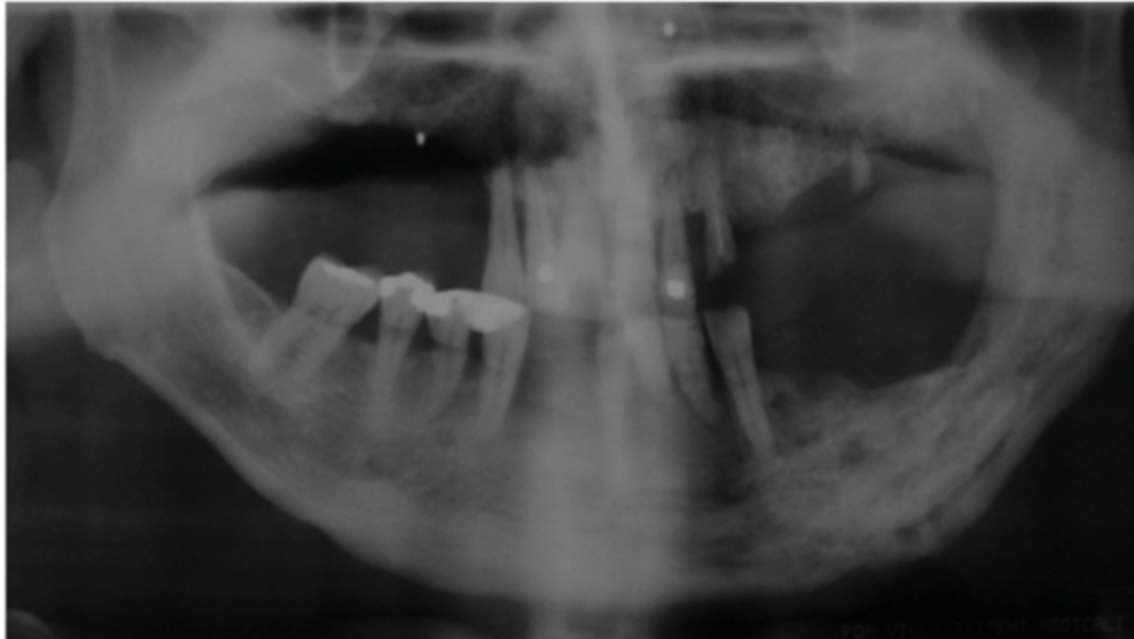
	Pamidronate N=84	Clodronate N=8	No Bisphosphonate N=14
Average age	70.1	79.6	71.4
Myeloma subtype			
IgG kappa	26 (31%)	4 (50%)	7 (50%)
IgA kappa	19 (23%)	2 (25%)	1 (7%)
IgG lambda	19 (23%)	2 (25%)	0
IgA lambda	8 (9%)	0	1 (7%)
Free kappa	6 (7%)	0	3 (21%)
Free lambda	5 (6%)	0	2 (14%)
IgM kappa	1 (1%)	0	0
Bony disease at diagnosis			
Yes	64 (76%)	4 (50%)	4 (29%)
No	20 (24%)	4 (50%)	10 (71%)

Monitoring on bisphosphonates

	Pamidronate	Clodronate	No bisphosphonate
Calcium levels monitored monthly Yes No	84 (100%)	8 (100%)	N/A
Vitamin D levels monitored annually Yes No	4 (5%) 80 (95%)	2 (25%) 6 (75%)	N/A

Adverse effects

- Deterioration in renal function
- Osteonecrosis of the jaw



Adverse effects

	Pamidronate	Clodronate
Deterioration in renal function Average onset time	12 (14%) 14.5 months	1 (12.5%) 3 months
Osteonecrosis Average onset time	3 (4%) 29 months	0

Duration of treatment

	More than 2 years N = 36	Less than 2 years N=48
Average duration	42.7 months	11.9 months
Deterioration in renal function Average onset time	7 (19%) 17.8 months	5 (10.4%) 9.6 months
Osteonecrosis Average onset time	3 29 months	0

Conclusions/further work

- Review of data from Oxford
- Consensus on bisphosphonate type and dosage
- Optimal duration of therapy
- Improved monitoring whilst on treatment

References

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