

A Service Evaluation of a Dental Pathway for Patients

Diagnosed with Multiple Myeloma at East Surrey

Hospital

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Introduction

Multiple myeloma (MM) is a type of blood cancer that affects plasma cells, which are responsible for making antibodies. The cancerous plasma cells accumulate in the bone marrow, eventually depleting the presence of normal cells, and they produce abnormal proteins instead which leads to damage to bones, kidneys and multiple other organs. When these cancerous cells build up, they form lytic lesions which make the bones weaker, cause severe pain and even be disabling for the patient. MM usually affects older people, with many being diagnosed at the age of 75 or above^[1]. Its incidence shows to affect 4.5-6 per 100,000 people per year^[1]. A common treatment used for MM is the use of bisphosphonates which inhibits the osteoclastic activity caused by the cancer. There is a risk of medicine related osteonecrosis to the jaw (MRONJ) in patients who have had IV bisphosphonates following extractions^[2]. For this reason, it is important that patients are made dentally fit prior to commencing bisphosphonate therapy to minimise future surgical/invasive dentistry and also ensure they are treated in a timely manner to allow cancer treatment to commence.

Aims

1) To undertake a service evaluation of the dental myeloma referral pathway over the last two years at East Surrey Hospital and assess the number of patients seen, dental interventions required and whether all patients have been given preventative dental advice.

Methodology

- Over the last six years, any new patient who had been diagnosed with multiple myeloma was referred to the dental team at East Surrey Hospital by the Haemoncology team.
- The referral would include an OPG.
- The patient was then assessed either by Special Care Dentistry or Oral Surgery depending on treatment need.
- Treatment was either provided by the Dental department or the patients own GDP prior to IV bisphosphonate therapy.

Diagnosis of multiple myeloma

Haemoncology team refer to Dental team with OPG

Dental assessment

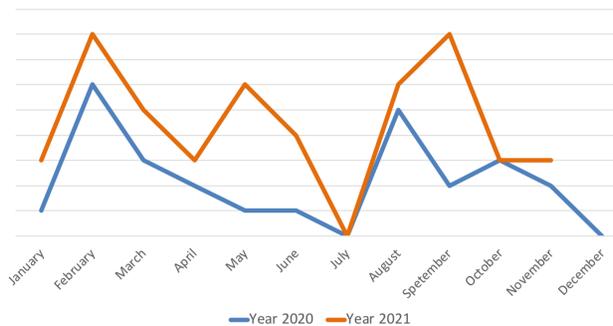
Treatment at dental unit at East Surrey Hospital

Treatment with general dental practitioner

Commence bisphosphonate therapy

Results

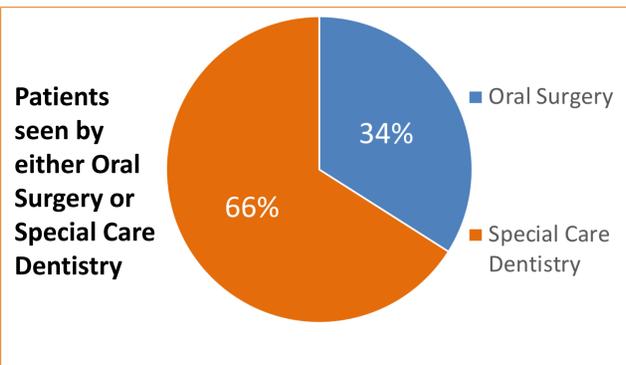
A total of **61 referrals** received over the last 2 years



Average age of those referred was **72 years old**

50 patients needed further review by the dental team

26% of those patients were **not registered** with a general dental practitioner



Oral Hygiene Advice

100% of all patients referred were given **preventative and oral hygiene advice**. The following leaflet is also provided to each patient:

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Medication-related osteonecrosis of the jaw (MRONJ)

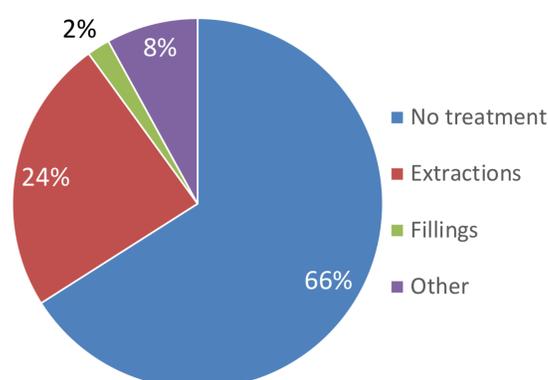
Information for patients before starting intravenous (IV) bisphosphonates or bone modifying agents (e.g. Denosumab)

What can I do to help prevent this?

- Future-proof your oral health by carrying out any necessary dental work required
- Visit your dentist for regular check-ups to treat dental disease before you need dental surgery
- Tell your dentist about the medications you are taking so they are aware of the risks
- Maintain excellent oral hygiene to reduce your chance of requiring dental surgery in the future
- Your dentist may prescribe a high dose fluoride toothpaste to help prevent dental decay
- Reduce the frequency of sugary snacks and drinks as regular consumption will increase your chance of tooth decay
- If relevant stop smoking, speak to your GP about advice on how to quit smoking
- Limit alcohol intake – regular heavy consumption can increase dental disease

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Delivering excellent, accessible healthcare

Dental Treatment Provided



Discussion

The motivation behind the internal dental-haemoncology service was to provide an efficient way to address patients dental needs prior to commencing IV bisphosphonate therapy for Multiple Myeloma. This is to avoid the need to carry out invasive dental treatment in the future which can lead to complications such as MRONJ.

This service is provided as an additional service on an ad-hoc basis, which is not commissioned and dental clinicians have set up as good will. Clinicians often need to overbook these patients onto fully booked clinics which is not ideal. The results show that the number of patients referred to the clinic varied across 2020 and 2021, with February and August, in particular, having higher number of referrals in both years.

Advantages of providing this service:

- Clinicians liaise directly with the haemoncology team to create a treatment plan and have a full medical history and access to blood test results.
- Clinicians were able to provide a dental service during the Covid-19 pandemic, when dental practices were closed.
- Patients dental needs are addressed in a timely manner to commence IV bisphosphonate therapy.

Drawbacks of providing this service:

- Lack of capacity on clinics. Patients dental needs need to be addressed quickly so they can commence bisphosphonate treatment.
- No commission for this service, and therefore it is an additional clinic on top of clinicians normal work-load.

Future Considerations

- A long term solution to this service could be to set up a **dedicated MRONJ clinic**. Clinicians would receive commissions for the service and the dental team will be able to manage the capacity when Clinicians are absent.
- Patient satisfaction** could be assessed to see how to improve the service further.
- Improve data collection** to ease presentation of results.

Conclusion

Overall, this dental pathway has shown to be effective for many patients diagnosed with multiple myeloma as their dental needs can be addressed in a timely manner, especially as many are not registered with a GDP, and also when other dental services have been low during the Covid-19 pandemic.

References

- NICE Guidelines. (2021). *Multiple Myeloma - Prevalence*. Available: <https://cks.nice.org.uk/topics/multiple-myeloma/background-information/prevalence/>. Last accessed 14/11/2021.
- SDCEP. (2017). *Oral Health Management of Patients at Risk of Medication-related Osteonecrosis of the Jaw*. Available: <https://www.sdcep.org.uk/wp-content/uploads/2017/04/SDCEP-Oral-Health-Management-of-Patients-at-Risk-of-MRONJ-Guidance-full.pdf>. Last accessed 14/11/2021.