Summary of: Dental assessment prior to stem cell transplant: treatment need and barriers to care

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FULL PAPER DETAILS

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Objective To assess the treatment needs of patients undergoing pre-haematopoietic stem cell transplant (HSCT) dental assessment, to collate the examination findings and treatment provided and to define the management issues impacting on care. **Design** Single centre retrospective analysis. **Setting** Salaried Primary Care Dental Service, Western General Hospital, Edinburgh, UK. **Subjects and methods** One hundred and sixteen available charts of patients who attended for pre-transplant dental assessment during April 2004-June 2007 were examined. **Results** Ninety-four patients, 52 men (55.3%) and 42 women (43.6%), were included. Patients were referred a mean of 31.5 (SD 18.82) days before admission for transplant. Dental assessment occurred, on average, 7.88 days (SD 6.78) following referral. Eighty-eight (93.6%) patients were dentate, while six (6.3%) were edentulous. Eighty-eight (93.6%) patients presented with oral disease; 89 (94.7%) patients received dental care. Issues impacting on care were medical (n = 88, 93.6%), time constraints (n = 73, 77.7%), no GDP (n = 25, 26.7%), dental complexity (n = 5, 5.3%) and anxiety management (n = 1, 1.1%). **Conclusion** The majority of patients required dental care, most of which, for healthy adults, would normally be completed within a primary care setting. However, the issues surrounding the care of patients destined for HSCT indicate that there is a place for a dedicated dental service as part of the multidisciplinary team.

EDITOR'S SUMMARY

A bone marrow transplant is a serious procedure and finding out that this treatment is required can be extremely worrying and stressful for the patient. Dental assessment and treatment may not be the first things that come to mind when considering the many factors that need to be taken into account before a bone marrow transplant is performed. However, when one considers that the patient will be extremely susceptible to infection and haemorrhage in the period when their existing bone marrow is being destroyed, it is easy to see the benefits of ensuring that their dental and oral health is as good as it can be before transplant treatment begins.

The authors of this study set out to investigate the treatment needs of patients referred for dental assessment prior to a bone marrow transplant and the factors that impact on their care. During the three-year period of the study they looked at 94 patients and found that the majority required dental treatment of some kind, most of which would normally have been completed in a primary care setting if the patient had been healthy. Among the factors that impacted on dental care, medical complexity was the most frequently cited, followed by time constraints and patients having no general dental practitioner (GDP). As the authors mention, all these factors can be significant barriers to patients accessing the care they need if they are left to seek it without assistance: general dental practitioners may not feel able to provide dental treatment in medically complex cases, treatment requiring more than one appointment may not be able to be performed in primary care within the time available before bone marrow treatment begins, and if the patient is not registered with a GDP then these problems will only be exacerbated. There is also the potential cost of treatment to be taken into account.

The patients in this study had their treatment provided by the salaried primary care services within the study hospital in all but one case, and the authors point out the advantages of dental assessment and treatment being provided by specialised dental services as part of the multidisciplinary team already in place for patients undergoing bone marrow transplants. This arrangement may not be available to all bone marrow transplant patients at present, but research such as this provides important evidence for its benefit – hopefully the first step towards more universal availability.

The full paper can be accessed from the *BDJ* website (www.bdj.co.uk), under 'Research' in the table of contents for Volume 206 issue 9.

Rowena Milan,
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IN BRIEF

- Provides an introduction to the use of haematopoietic stem cell transplants in the management of patients with haematological malignancies.
- Describes the RCS guidelines for the oral care of these patients.
- Outlines the aims of pre-transplant dental assessment and treatment.
- Highlights the issues affecting the provision of dental care in these patients and the role of special care dentists in their treatment.

RESEARCH

COMMENT

It has long been accepted that patients need a comprehensive oral assessment prior to organ transplant. The mouth has been described as a potential source of sepsis which may be life threatening or interrupt therapy and this is never more important than in the group of patients requiring bone marrow transplant (BMT), for whom neutropenia is part of their diagnosis even before they are profoundly immune-suppressed during and post-transplant.

There is no universal evidence-based protocol for treatment planning prior to transplant, but recent work has suggested a rather more conservative approach when deciding whether to extract teeth or not. This is particularly relevant for patients with multiple myeloma who may have been taking intra-venous bisphosphonates for long periods as part of their therapy and for whom extraction of teeth of doubtful prognosis carries a significant risk of osteo-chemonecrosis.

This paper retrospectively analysed the dental treatment needs of a group of 94 patients scheduled for BMT in Scotland. Their treatment needs were rarely complex, but often urgent and their diagnosis required close working with medical teams as haematological intervention was required in many cases. The findings of this useful study show the importance of designing and implementing a dental service which meets all the needs of the target group ensuring that their oral status does not adversely affect their medical outcome both short and long-term.

Anecdotally, with a treatment window of as little as two weeks prior to transplant, patients not having their own dentist and the financial constraints related to non-availability of NHS care have been cited as barriers to accessing necessary care in the time frame. Furthermore GDPs are often not confident to treat patients with complex medical conditions or do not have the necessary information immediately to hand until lengthy correspondence with specialists has been undertaken.

In the centre in Scotland, a special care team trained and experienced in dealing with the medical complexities and treatment planning issues was embedded as part of the inter-disciplinary transplant team. This service allowed close liaison between medical and dental teams, which reduced delays and importantly, moved away from last-minute, exclusively extraction-based approaches. They organised a full range of surgery, restorative, preventive, hygiene and follow-up care as was deemed necessary to ensure good oral health post transplant. Nowadays, survival rates following transplant are high and so this type of care seems essential to ensure better oral health-related quality of life as life gets back to normal for this relatively young patient group.

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AUTHOR QUESTIONS AND ANSWERS

1. Why did you undertake this research?

This work was undertaken to establish the dental health of patients diagnosed with a variety of haematological conditions requiring haematopoietic stem cell transplant. Treatment provided following assessment was also recorded and considered along with factors impacting upon the delivery of care. This showed the complicating factors in the provision of care for these patients. Timely and appropriate targeting of what may be limited resources is extremely important, especially when untreated dental disease may have potentially life threatening consequences. It is hoped that knowledge of the basic treatment needs and the issues that complicate the dental care of these patients will improve patient experience and service provision.

2. What would you like to do next in this area to follow on from this work?

Extensions of this work could include a measurement of the outcome of dental assessment and subsequent treatment in terms of the number of acute events related to immunosuppression. Investigating the differing dental treatment needs of patients with specific oncologic diagnoses, a phenomenon that may be age dependent, may also be useful. If it was possible to identify a group of patients likely to require more appointments in order to render them dentally fit for transplant, assessment could be arranged with more urgency.

Finally, improving our understanding of the patient's perspective with regard to their dental health would help us to relate to them and improve the provision of care.