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Moving cancer care closer to home: a single-centre experience of home chemotherapy administration for patients with myelodysplastic syndrome

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INTRODUCTION

Myelodysplastic syndrome (MDS) is a disease of elderly with a median age of 70.[1] Azacitidine is approved for high-risk MDS, chronic myelomonocytic leukaemia (CMML) and acute myeloid leukaemia (AML) with less than 30% blasts.[2] Treatment with azacitidine has shown reduced transfusion requirement, improved leukaemia-free and overall survival.[2 3] However, many elderly patients may find it difficult to attend day case 7 days a month until progression and further additional attendances for blood tests, clinics and transfusions. We recognised that the requirement for patients to make multiple hospital visits for chemotherapy treatment was having an increasingly negative impact on their quality of life and that of their relatives/carers. This also resulted in patients declining accessible treatment for their disease.

Community chemotherapy service was set up with a view to improve the outcome and quality of care by taking treatment closer to home. National Health Service white paper in 2010 focused on extending choice for patients and moving cancer services away from major cancer centres when feasible. Key driver for community chemotherapy is improved patient choice and experience.[4 5] In this article, we explain our community chemotherapy initiative project and our experiences so far.

Aim

The initial aim of the service was to reduce the number of visits required by patients to hospital, giving greater choice in the delivery of their treatment and therefore reducing the impact of their disease on their daily lives. The service was also aimed to increase efficiency in the delivery of chemotherapy by the Trust. These continued to be the overarching aims of the service to ultimately improve the experience of our patients and efficiency of the service.

Project details

All suitable patients who are under the care of a Heart of England Foundation Trust (HEFT) haematology consultants receiving treatment with subcutaneous chemotherapy within the Birmingham and Solihull area are referred to this service. These nurses are specially trained to deliver chemotherapy and have knowledge of the drugs and underlying haematological conditions. Once a referral has been made, community chemotherapy nurse made arrangements to meet with the patient. Where possible, this was done during their first cycle of treatment in the hospital, or via telephone to ensure the patient had consented to having their treatment at home and to complete the community assessment documentation. Any patient who declined to have their treatment at home continued to receive treatment in the day unit. All patients were given a community chemotherapy information leaflet and contact numbers for the community chemotherapy nurse. Patients also receive all the other information and contact numbers for the hospital at their new patient assessment prior to treatment commencing which always include the emergency triage number.

Medications are stored and transported according to manufacturing guidelines, maintaining cold chain when needed. Special bags were ordered for azacitidine to ensure correct handling of azacitidine. This was directly sourced from the company.

In order to be able to continue to deliver a high-quality service and in agreement with pharmacy to ensure that drugs were able to be ordered and dispensed in time, the number

of chemotherapy patients being treated by the service was initially held at a maximum of 30. Any patients over this number were kept on the waiting list and added when capacity became available.

Monthly meetings were held with the relevant haematology consultants to discuss all patients on the service so that concerns could be highlighted and any adjustments/amendments to treatment could be discussed if necessary. This therefore enabled the community chemotherapy nurses to remain in constant contact with the treating consultants to ensure that treatment was continued in the safest manner. Patients also had regular clinic appointment pretreatment for toxicity and efficacy assessments.

In September 2016, an additional community clinic was held at general practitioner surgery. This occurred once every week with a haematology consultant to review patients who received chemotherapy on the same day in a one-stop clinic. This, therefore, further reduced visits to the hospital for patients and also aided hospital clinic capacity for those patients who did need to attend the hospital.

So far, our community team has treated 27 patients with MDS. On average per month, community nurses deliver between 40 and 70 azacitidine treatments. In addition to treatment, blood tests are also done at home and transfusions are arranged at hospital or local hospice, whichever is the closest.

Twenty-seven patients receiving azacitidine were followed up over a mean period of 13 months. They had a median of 10 cycles of azacitidine delivered during the follow-up period with a median of 6 cycles delivered at Kay Kendall. Cumulative survival was 42.8% for patients reciving azacitidine by key Kendall service when the survival was calculated from the time of starting of azacitidine by the Key Kendall nurses.

Community chemotherapy team also delivers low-dose cytarabine, bortezomib subcutaneous rituximab, zometa and darbepoeitin treatments. In the 2 years the community chemotherapy service has been operational, it has enabled the transfer of 104 patients from the day unit to the community setting and saved 1708 appointments in the day unit.

Patient feedback

Over the 2 years that the service has been operational, further surveys have been conducted to get regular patient feedback and identify how patients have felt about the service, whether it has made any difference to their treatment experience either positive or negative and also whether they feel any improvements could be made. Questions included to capture details about their satisfaction with the information they received prior to starting community chemotherapy, assessment of needs, support offered, holistic need assessment, relevant hospital contact details, suitability of appointment date and time for community chemotherapy treatment and if they felt confident in the nurses giving chemotherapy at home. They were also asked to comment about any delays with given appointment time and if they felt that being able to have their treatment at home made a positive difference to your treatment experience.

After 3 months, patients felt that the service was making a positive difference to their experience, but they felt that a second nurse would be a benefit to assist with treatment times and to increase the number of patients that could be treated.

The proceeding satisfaction survey has been ongoing since December 2016. Both existing patients and new patients (once they have had 2–3 cycles of treatment in the community) were asked to complete the questionnaire.

The results showed that 100% of patients felt that the community service made a difference to their treatment experience.

Data recording and audit

The community assessment and holistic needs assessments are currently being completed on paper and stored in patient community chemotherapy notes with the community chemotherapy nurses. A daily record sheet is completed on each visit to the patient in their home and then the data are uploaded to dendrite on return to the hospital. The paper chemotherapy prescriptions are checked against the drugs by both Kay Kendall nurses before leaving the hospital. The drug is then checked with the patient at the patient's home prior to administration, as per the single-nurse checking policy.

The community chemotherapy nurses are responsible for collating patient data to enable regular auditing of the service. Each month, the number of patients treated, the drug and dose, place of treatment (home or GP), length of treatment and numbers of visits/treatments administered are sent to the lead chemotherapy nurse and to finance so that service performance can be monitored and any financial savings can be identified.

Patient records are updated every month to reflect accurate patient numbers and treatments being offered. These are also sent to pharmacy so that they are aware of the patients that are being treated by the service and any deferrals/cancellations can be identified and communicated

Additional benefits

In addition to the administration of subcutaneous chemotherapy, the community chemotherapy nurses also provide support and education for patients and their families receiving treatment at home. They complete a holistic needs assessment for every patient and are able to assess the needs of the patient and relatives/carers on a regular basis as they see them in their own environment. The community chemotherapy nurse is in regular contact with the other members of the multidisciplinary team ensuring there is a link at all times between the patients and their medical team.

In the 2 years that the community chemotherapy service has been in operation, the service has continued to develop and provide care and treatment for more

patients in the comfort of their own homes. With the addition of the community GP clinic, patients are able to attend for both chemotherapy and to see the consultant so that they do not have to attend the hospital and they also have continuity of care, seeing the same nurse and consultant on a regular basis. This has proven to be of great benefit to the patients as identified through the patient satisfaction feedback, not only improving their quality of life but their overall experience with treatment from HEFT.

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