TRANSPLANT NURSING-CLINICAL

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PREVENTION OF INFECTION BETWEEN IMMUNOCOMPROMISED PATIENTS IN THE OUTPATIENT SETTING

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Background/Objectives: The population of this outpatient unit was pediatrics, aged 4 months to 22 years with moderate to severe immunocompromise following bone marrow transplant. This unit had open bed spaces, no visitor control, patients seen on first-come, first-served basis, and the inpatient attending physician making rounds on the patients when time permitted. Baseline data obtained from IT revealed 48 readmissions from January 1 through March 31, 2009. The objective of this project was a decrease in readmissions due to infection, thereby improving patient outcomes.
Methods: A literature search as well as structured telephone interviews with other facilities with similar programs was conducted to discover the best practice in outpatient settings. The information obtained revealed the following changes in this unit's process were indicated: restructure of physical environment creating individual patient rooms, limitation of visitors, computerized appointment scheduling, and assignment of a physician dedicated to outpatients only. Following planning sessions of the Medical Management Team (MMT), a plan was developed. A business plan was submitted to the Chief Financial Officer that included the cost of the construction of the individual patient rooms, a letter was sent to the parents explaining the proposed changes along with rationales, and education for the staff was carried out concerning the new process. The new plan was put into place, and data was collected during January 1 through March 31, 2010, following the revisions.
Results: Following reconstruction of the open bay area into individual patient rooms, limiting visitors, implementing computerized appointment scheduling, and dedicating a physician to outpatients only, this unit saw an 83% decrease in readmissions during the time period of January – March 2010 as compared with January – March 2009. Not only did the new process decrease admissions, it also decreased morbidity, thereby improving patient outcomes.
Conclusions: The new isolation plan in this outpatient unit provided a significant decrease in the number of readmissions during the time period studied. Due to this decrease, it is recommended that similar units: provide individual patient rooms, limit the number of visitors, implement computerized appointment scheduling, and provide physician time dedicated to outpatients only in order to improve patient outcomes.

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MANAGEMENT ON CENTRAL VENOUS ACCESS DEVICE: A RETROSPECTIVE AUDIT

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Introduction: Hickman line (HL) or other central venous access device (CVAD) insertion is essential prior to Bone marrow transplant or high dose chemotherapy. Unfortunately is management of CVAD's is not without complications.
Method: A retrospective audit was carried out to evaluate CVAD complications in 69 patients in 104 episodes. 31(45%) patients were male and 32(46%) patients were female, 6 (9%) of them unknown as information was lost to poor documentation and median age 49 yrs (14-80).

Diagnosis: 14 (21%) Acute Leukaemia, 4 (6%) Chronic Leukaemia, 7 (10%) Multiple Myeloma, 6 (9%) Lymphoma, 3 (4%) Myelo Displasic Syndrome, 28 (41) Solid Tumours 6 (9%) unknown.
Result: 62 patients with CVAD are 46 HL, 16 Groshong 4 Porthacath, 2 picc lines and was 1 neckline. There were 104 recorded complications. 57 (55%) of these were treated as an inpatient and 47 (45%) as an outpatient. 70 (67%) febrile episodes were observed of the 104 episodes. 16(15%) treated as an outpatient with oral antibiotics (AB), they were not neutropenic. 51 (49%) were treated as in patient episodes and with intravenous AB. It is suggesting that patients should care for their own lines during their hospital stays.19 (18%) of complications experienced was a blocked CVAD, only 4 episodes requiring urokinase. Others solved with flushing with Hepsal. While patients are outside the hospital, the line should be flushed as per local protocol. 11 (11%) of CVAD ended with line removal. Because of either infection or accidental removal by patient at home.19% of blood cultures taken from the CVAD were sterile. 25 (23%) results were lost to poor documentation. 58% of blood cultures were positive and microorganisms outlined in Table I. Appropriate AB's were given.

Table 1. Micro organism growth from the blood cultures

ORGANISM GROWTH	Number	%
Gram + cocci	28	27
Gram - cocci	1	1
Gram – rods	21	21
Gram + rods	5	5
Fungal infection	2	2
Anaerobic spores	2	2
No Growth	20	19
Unknown	25	23
Total	104	100

Conclusion: It is vital that patients receive training in the management of their CVAD's, regarding signs of infection, dressing and flushing of their lines. During any neutropaenia, nursing staff remain responsible for checking the CVAD's, but care of the lines, unless infected should continue to lie with the patient. As our audit shows some hospitalization episodes are preventable with training or early detection of infection.

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IS RITUXIMAB INFUSION GETTING EASIER? (IS IT SAFE TO GIVE RITUXIMAB FASTER?)

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Introduction: Rituximab is a mono clonal antibody which causes lysis of B lymphocytes, it is licen sed for the treatment of chemo therapy resistant NHL often in com bination with chemo therapy. Infusion related side effects are commonly reported, usually with the first infusion.
Methods: A retrospective audit has been carried out of 16 patients, 7 female and 9 male. 13 were diagnosed DLBCL. Prior to the Rituximab infusion 13 patients received premedication with Hydrocortisone 100mg, Piriton 10 mg, Paracetamol 1 gm, three received Dexametasone 12 mg instead of Hydrocortisone on doctor's instruction. During their first Rituximab infusion 4 patients experienced fever and chills and 1 had tumour pain. 2 patients were generally unwell during the infusion, resulting in discontinuation of the Rituximab. In 5 episodes, infusion rates had to be slowed, because of poor tolerance. Second infusions were better tolerated without reducing the infusion rate. Side effects have been listed below in table I.
Result: When Rituximab is infused for the first time, patients were given all pre-medications as stated. When there was no incidence of side effects reported the third infusion of Rituximab was given at an increased rate as advised by the manufacturer. As indicated in Table I there were no side effects reported such as fever, which earlier occurred in 36% in the first infusion.
Conclusion: Rituximab is a monoclonal antibody, with the potential of many side effects. When Rituximab is given for the first time, even though a pre-medication was given, some side effects may still occur, most commonly fever. Once the first infusion is completed, most side effects resolved, third infusions can be given over a shorter period as advised by manufacturer (as long as previous infusions are uneventful).

Our audit has shown that when Rituximab is given uneventfully twice, third and subsequent infusions can be given over a shorter period with less pre-medication (as manufacturer advises).