



Continuous Home Infusion of Blinatumomab within the Outpatient Setting

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Background / Introduction

Blinatumomab is a newer immunotherapy that is being effectively used to treat resistant/relapsed Acute Lymphoblastic Leukemia.

Blinatumomab is administered as a 28 day continuous infusion that can not be bolused or interrupted for greater than 4 hours. Currently it requires hospitalization for the duration of the treatment cycle. This causes significant financial and quality of life burden on patients and families.

Home infusions of chemotherapy are proven to be safe and effective. Home infusions also decrease financial burden and increase quality of life. With proper planning and weekly clinic visits, a 28 day course of Blinatumomab can be administered as a 7 day continuous infusion in the home.

Figure 1: Child wearing infusion pump backpack



Methods

- Hospital:** Initially admitted to hospital for central line establishment and start of infusion to observe for and manage acute toxicity. (3-4 days).
- Pharmacy:** Stability and mixing guidelines were established by pharmacist. (24 hour bag vs 48 hour bag vs 168 hour bag) Infusion bag preparation coordinated with exact timing of outpatient clinic visits.
- Home Infusion Pump:** Two pumps provided with backpack, batteries, electrical cord back up, and 24 hour technical pump support.
- Navigator:** Developed and implemented action plan for home infusion of Blinatumomab. This included insurance authorization, pharmacy coordination, staff and family education. Detailed calendar provided as reference for family and staff.
- Nurses and Physicians:** Information presented for on-call physicians regarding pump and/or infusion concerns. Nursing specific education provided regarding central line care during infusion. Weekly neurotoxicity evaluations documented in the clinic with handwriting test.
- Patient and Family Education:** Patient and family required to review home infusion pump video and sign consent. Training completed for how to address pump alarms, changing batteries on a schedule and performing ADL's during a 28 day continuous infusion. (i.e. shower, sleep, etc.) Specific bag position reviewed.

Figure 2: Curlin pump in backpack



Figure 3: Curlin Pump



Figure 4: Example of calendar that was provided to patient

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Clinic Closed for New Year's Day					
					clinic appt: 10:00 admit to start Blinatumomab started at 2300	Septa
			discharge to home change to home infusion bag Blinatumomab infusion started at 12:15		change batteries at 5pm	Septa
Septa	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab
			clinic appt: 11:00 bag change at 11:30			
Septa			flush hickman/cap change in clinic			Septa
change batteries at 5pm		change batteries at 5pm		change batteries at 5pm		change batteries at 5pm
Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab
			clinic appt: 11:00 flush hickman/cap change in clinic			Septa
Septa	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab
			change batteries at 5pm		change batteries at 5pm	
Septa			clinic appt: 11:00 flush hickman/cap change in clinic			
Blinatumomab	Blinatumomab	Blinatumomab	Blinatumomab			
change batteries at 5pm		change batteries at 5pm				

Outcomes

After two 28 day cycles of Blinatumomab in the outpatient setting, no interruptions occurred and the patient felt managing the infusion at home was easy. The patient and family also reported appreciation for improved quality of life.

Summary

A continuous 28 day infusion of Blinatumomab can successfully be managed in the outpatient setting with a weekly clinic visit. With proper planning, Blinatumomab infusion bags can be changed every 7 days and interruptions greater than 4 hours can be avoided. Costs are decreased significantly for patients and families through the use of home infusion when compared to a 28 day inpatient hospitalization.

References

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