

Total femur and total knee replacement in a patient with Severe Hemophilia A and history of high titer factor VIII inhibitor, HIV and hepatitis C: A Case Study

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Introduction and Objectives: Persons with hemophilia (PWH), high responding inhibitors, hepatitis C, and HIV are at increased risk for bleeding during surgery. Total joint replacement is a complicated surgery even in patients without a bleeding disorder. This case study reviews the successful management of a severe hemophilia A patient with the above conditions.

Methods: Male, aged 44, with a failed total hip replacement with proximal femoral prosthesis that had erosion of cement and bone loss. The prosthesis migrated 4 cm into the intrapatellar soft tissue. He was unable to bear weight on his leg for four years prior to surgery and ambulated using crutches. As a result, he had severe muscle atrophy and was unable to lift his leg without assistance. Although he had no current inhibitor, he had a history of high responding inhibitor so the decision was made to avoid factor VIII products.

Surgery for a combined femur/knee replacement commenced after much planning and coordination of care. The surgical goal was to balance the risk for excessive bleeding and avoid thrombosis. Hip and knee replacement carries with it an increased risk of thrombosis, even in PWH if factor levels are adequate.



Prosthesis migration after 4 years



Prosthesis migration prior to surgery



Prosthesis after replacement surgery

Blood results post-op:

Date	Time	Hgb (13-17)	Hct (39-51%)	APTT (23-32.4)
5-9	1737	11.7	36	
5-9	1906	13.8	41	
5-9	2027	12.4	38	
5-9	2144	11.6	36	
5-10	0220	11.8	36	50.1
5-10	0540	9.7	30	
5-10	0827	9.0	28	
5-10	1111	7.5	23	
5-10	1545	8.2	26	
5-10	2013	9.3	29	
5-11	0152	9.6	28.5	
5-11	2216	7.8	24	
5-12	0712	9.7	30	
5-12	1248	7.9	23.5	
5-12	2021			151.3
5-13	0401	8.9	26.5	
5-13	0707			136.5
5-14	0254	9.2	28.3	
5-14	2352			63.3
5-15	1229	9.6	28.9	
5-16	0424			66.6
5-17	1049	8.8	26.9	54
5-18	0219	9.0	27	
5-20	2320			56
5-22	2200			72.1
5-23	2130	7.1	22.8	81.2
5-23		9.9 after 2 u PRBCs	29.5	

His treatment plan included:

NovoSeven	Frequency	Duration
190 mcg/kg	Pre-op	once
115 mcg/kg	Every 2 h	surgery
75 mcg/kg	Every 2 h	5 days
75 mcg/kg	Every 3 h	2 days
75 mcg/kg	Every 4 h	5 days
75 mcg/kg	Every 8 h	4 days
75 mcg/kg	Every 12 h	19 days
75 mcg/kg	Daily	14 days
75 mcg/kg	QOD	30 days

Results: He did not suffer any bleeding episodes. Anticoagulants were not given; he was closely monitored with ultrasounds of the legs to evaluate for deep vein thrombosis every 48 hours for the first week.

Physical therapy started on day one and continued for 16 months. He is now able to walk short distances without crutches.

Conclusion: High responding inhibitor patients can successfully undergo joint replacement with aggressive factor replacement therapy.



Identifier: Multidisciplinary, Nursing Issues

