Coronary Bypass Surgery in Patients With Haemophilia A: Single Centre Experience

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Introductions and Objective: Haemophilia A is an X linked recessive hereditary bleeding disorder accounting for 80-85% of all haemophilia cases. It can be sporadic in 1/3 of cases (1). Haemophilia care and medical treatment has undergone substantial improvement during the past 40–50 years (2). Life expectancy of these patients increased over time with better care and the advent of new treatment strategies for bleeding and viral diseases (3). With advancing age people with haemophilia have been shown to face with ischemic heart diseases, diabetes and hypertension at increased rates similar to normal population (3).

We report here three patients with haemophilia A who underwent coronary bypass grafting (CABG) at our centre between 2008-2015.

Materials and Methods: Retrospective data were collected from patient files.

Results: Two patients with mild, and one with severe haemophilia A were referred to our centre due to coronary artery disease requiring CABG. All patients were heavy smokers. None of them had FVIII inhibitors. All patients had undergone coronary angiography before operation and all of them had 3 vessel disease requiring CABG. All patients received recombinant FVIII with a target FVIII level of 100% and a normal aPTT level before operation. No bleeding complication was observed during preoperative and postoperative period. Patient characteristics are shown in Table 1.

CASES:

Case 1: The first patient was suffering from chest pain during effort and was transferred from emergency department to coronary intensive care unit with the diagnosis of unstable angina pectoris. Preoperative FVIII level was 10.9%. He was given 2x4500 IU/d FVIII on the day of surgery. During the operation he was administered 4 units of FFP and 1 pack of red blood cell transfusions. He then received 2x3000 IU FVIII between 2nd and 8th days and was discharged 2 weeks after the operation without any complication.

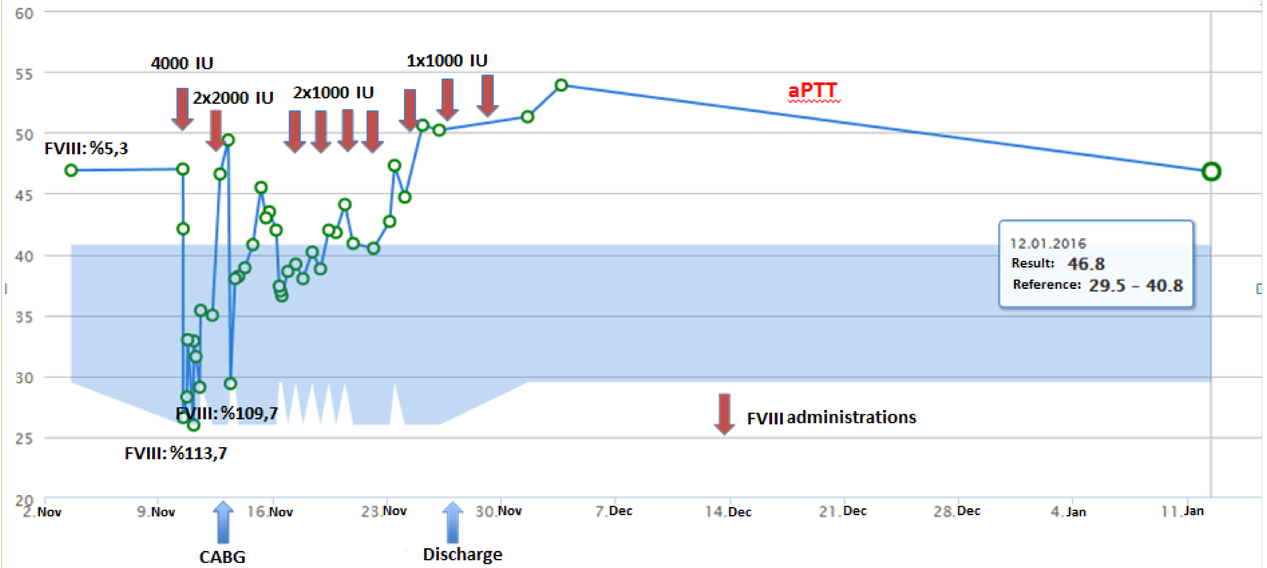
Table 1: Characteristics of patients

Characteristics/Patient	1	2	3
Age	48	49	60
FVIII level at haemophilia A diagnosis	11.9%	5.3%	1.7%
FVIII level before CABG	10.9%	5.3%	0.7%
Inhibitor status before CABG	absent	absent	absent
aPTT at diagnosis	46,2 sec	46 sec	88,7 sec
Prophylaxis/treatment	PUP	PUP	on demand
Comorbidity/body weight	hypertension/86 kg	-/70 kg	hypertension, hyperlipidemia/68 kg
Medication	ASA, clopidogrel, isosorbitde mononitrate	-	irbesartan, atorvastatin, nebivolol
Smoking status	50 pack/yr	30 pack/yr	80 pack/yr
Coronary angiography	3 vessel disease	3 vessel disease	3 vessel disease
Pre-op FVIII level/aPTT	10,9%/51 sec	5,3%/46 sec	0,7%/97 sec

Case 2: The second patient showed myocardial ischemia on exercise test and referred to our centre, his FVIII level was 5.3%. In coronary angiography 3 vessel disease was detected. He was given 4000 IU FVIII prior to CABG and 3x2000 IU FVIII on day1. Between 2nd and 7th days he received 2x2000 IU FVIII. He was discharged 2 weeks after the operation without any complication.

Case 3: The third patient had severe haemophilia A (FVIII: 0.7%) receiving on-demand treatment. He had myocardial infarction and preoperative aPTT was 97 sec. He was given 5000 IU FVIII preoperatively and maintained with 2x2000 IU FVIII until 5th day and discharged 1 week after the operation without any complication. No bleeding complication was observed during preoperative and postoperative period.

Figure 1: aPTT monitoring of case 2



Conclusions: The life expectancy of haemophilia patients increased over the years with the advent of modern treatment techniques. However, prolonged survival resulted in increased frequency of aging problems including coronary artery disease. This group of patients can only be managed using a multidisciplinary approach which requires active collaboration of teams from surgery, haematology, intensive care, laboratory and physiotherapy (4).

REFERENCES

1. Turkish Society of Hematology, Hemophilia Diagnosis and Treatment Guide, 2011
2. Modern haemophilia care. Lancet 2012; 379(9824):1447-56.
3. The aging patient with hemophilia: complications, comorbidities, and management issues. Hematology Am Soc Hematol Educ Program. 2010;2010:191-6
4. Cardiac surgery in patients with haemophilia. Haemophilia 2009;15(1):101-7.