

# The experience of physiotherapy for patients with acquired hemophilia A in a single hemophilia center

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## Introduction and objectives

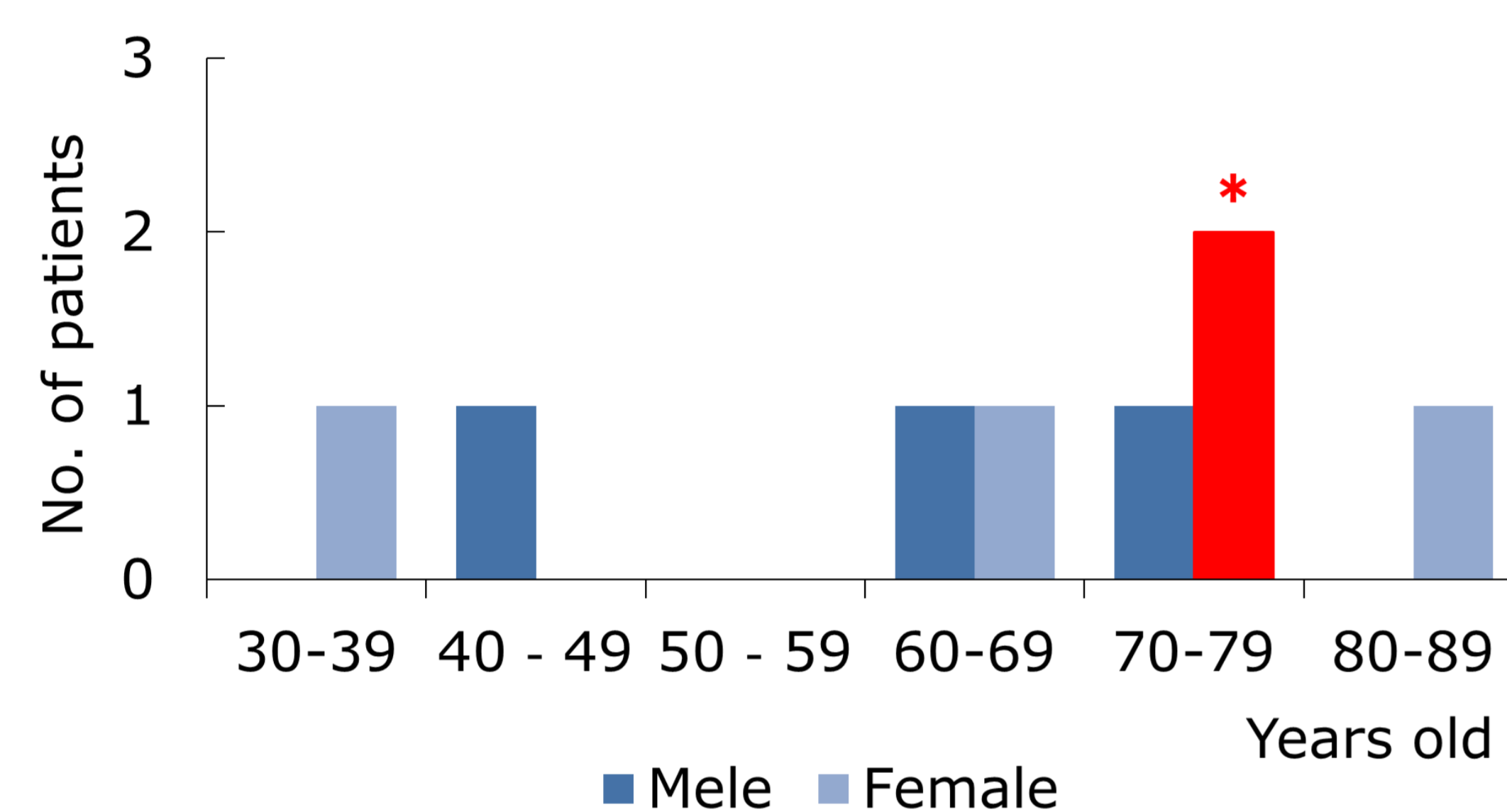
We report our experience in providing physiotherapy to 8 patients with acquired hemophilia A (AHA) at our center.

## Methods

Eight patients with AHA received physiotherapy at our center from 2008-2015. We investigated the association between their medical and their physiotherapeutic status (activities of daily living [ADL], muscle strength and walking ability). In this study, 8 patients were divided to two groups according to change of gait function during hospitalization; functional "maintenance group" (6 patients) and functional "decline group" (2 patients).

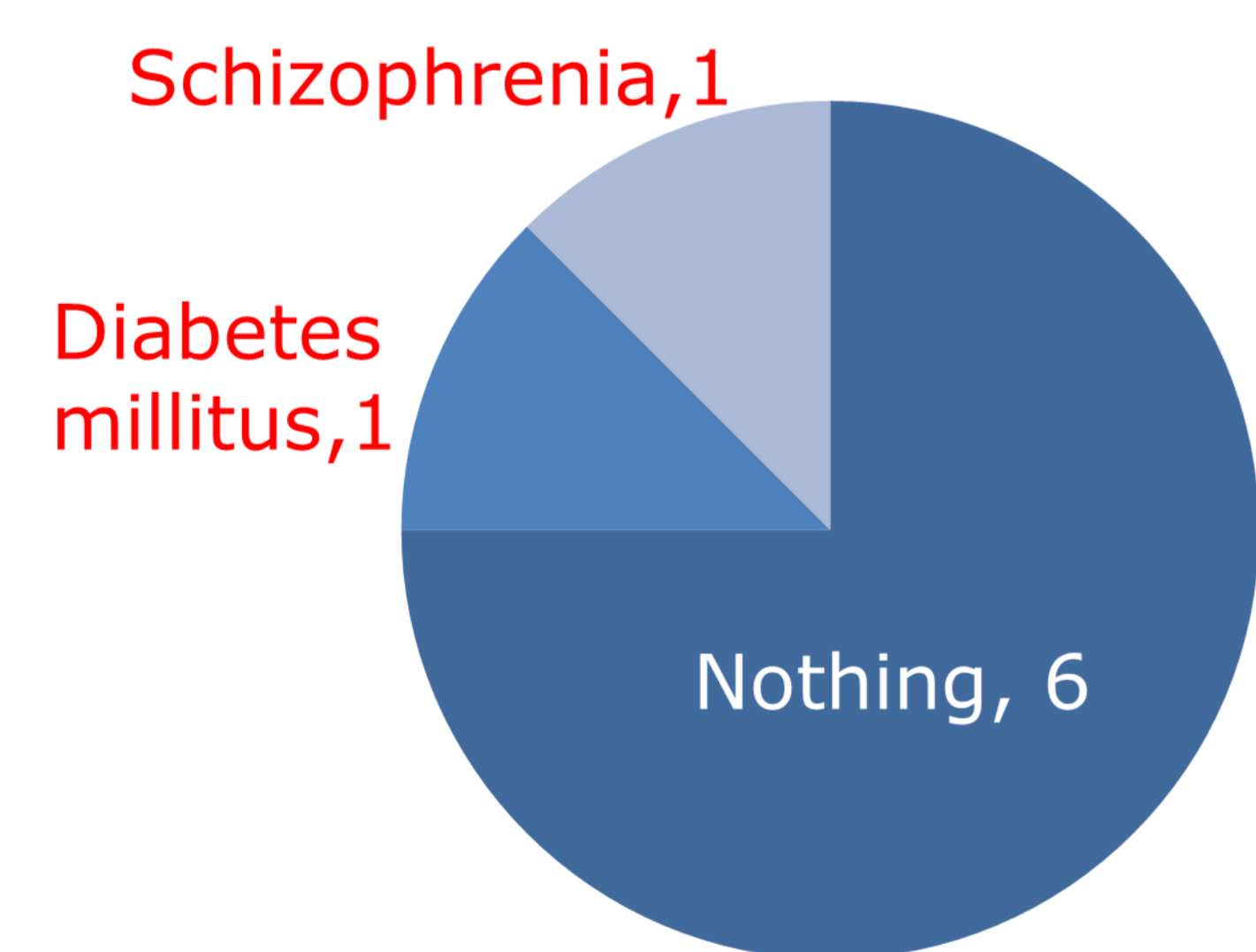
## Result

**Figure 1: Characteristics of patients**



**Figure 1-1. Distribution of age**

Female were 5 and Male were 3 patients, and most of them were over age 60. All of two in decline group were over seventy and females.



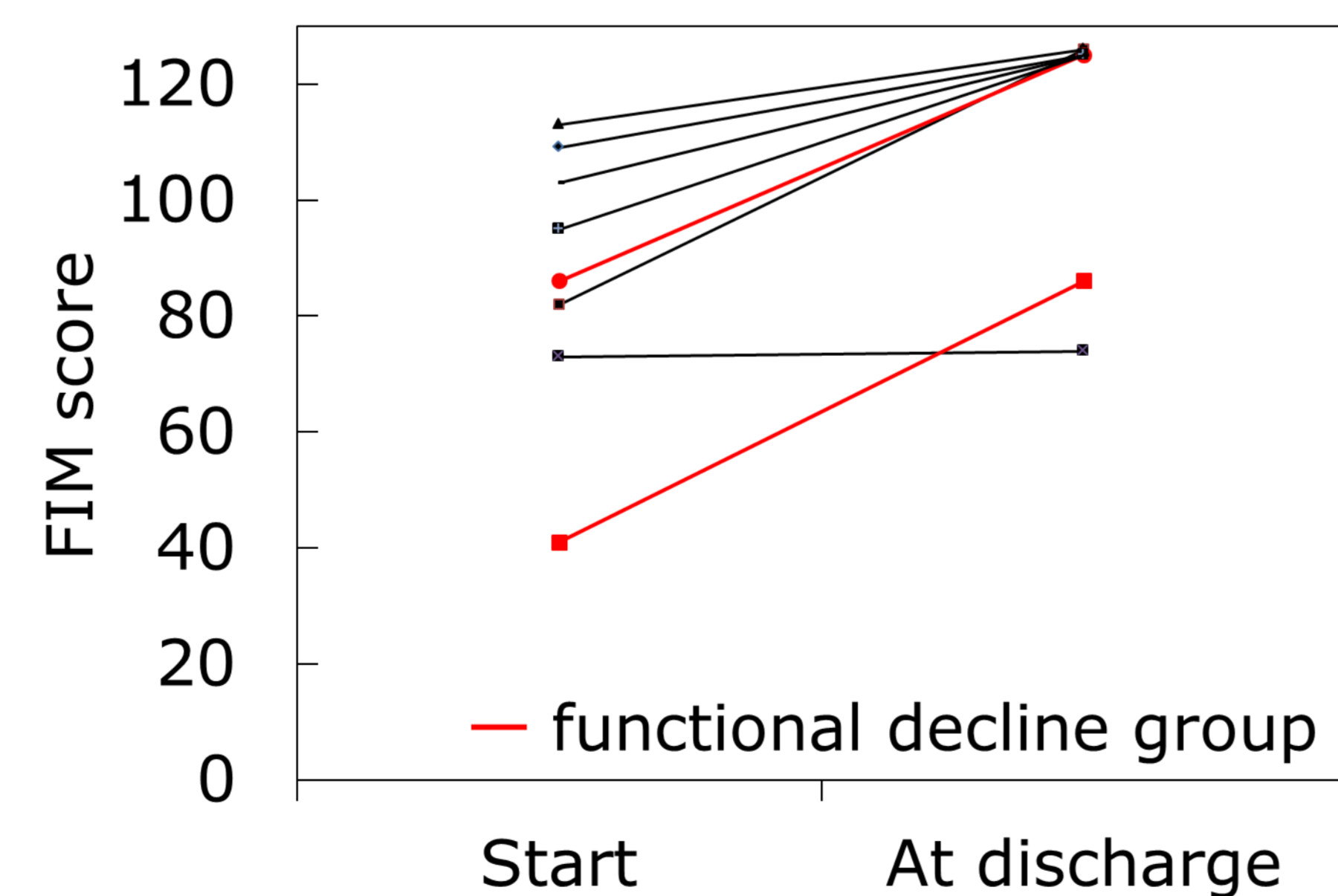
**Figure 1-2. Underlying medical problems**

Six patients had no underlying medical problems, such as affect the progress of the physiotherapy. One of them in decline group have diabetes mellitus and other have schizophrenia.

**Table 1. Data according to the group of function maintenance or the functional decline**

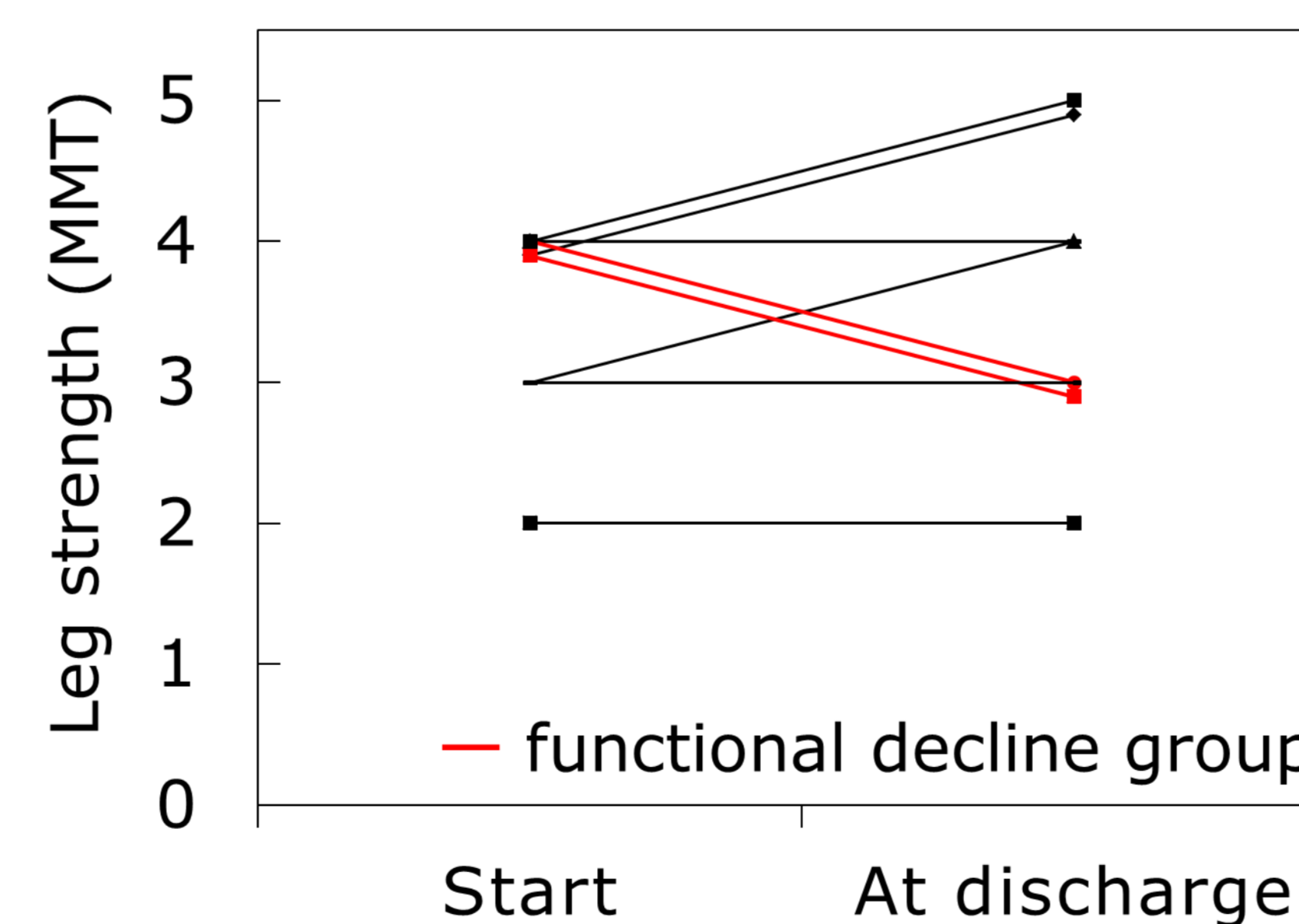
	Functional maintenance group (N=6)	Functional decline group (N=2)
Age, years old (median)	66	73.5
Underlying medical problems, no	0	2
Inhibitor titer at hospitalization, betesda unit (median)	21	141
Treatment	PSL <sup>1)</sup> +CPA <sup>2)</sup> =2 PSL+AZP <sup>3)</sup> +CsA <sup>4)</sup> =1 PSL+CsA=1	PSL+CPA=1 PSL alone=1
Periods of hospitalization, day (median)	46.5	69
Physiotherapy, day (median)	37	46

1) PSL: Prednisolone, 2) CPA: Cyclophosphamide, 3) AZP: Azathioprine, 4) CsA: Cyclosporine



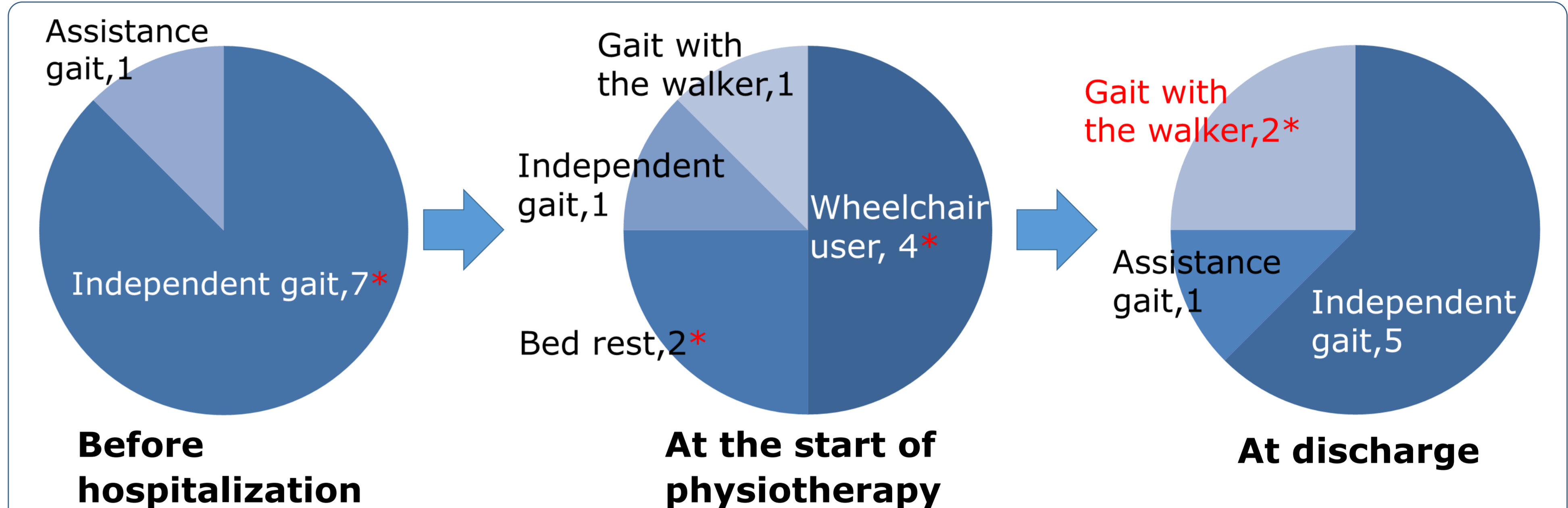
**Figure 2. Changes in the Functional Independence Measure (FIM)**

This showed the change of FIM score from at start of physiotherapy to at discharge. FIM scores of all patients included all of 2 in decline group improved.



**Figure 3. Changes in the Manual Muscle Testing (MMT)**

Two patients in decline group were admitted a drop in lower leg muscle strength.



**Figure 4. Changes in the gait function**

Gait function of all of two in decline groups was declined to gait with walker level at discharge, however they were possible independent gait before hospitalization and one case of the two was bed rest, the other was a wheelchair user at the start physiotherapy.

## Conclusions

Physiotherapy is not popular for patients with AHA due to their high risk of bleeding; however their physical function was generally weakened due to long periods of hospitalization and medical therapy.

In this study, all patients with AHA received physiotherapy; not bleeding episode in physiotherapy practice, there was no difference in the hemostasis management in the functional maintenance group and functional decline group. However, some did not recover their previous level of physical function due to myopathy resulting from long-term PSL treatment and complications.

We concluded that physiotherapy could be effective for patients with AHA. We should strengthen physiotherapy for AHA patients, especially those with high inhibitor titers and complicated backgrounds.

