Constitutional Thrombophilia in the Elderly

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Introduction :

The abnormalities of hemostasis predisposing to venous thromboembolic disease are poorly studied in the elderly, while this population is at high thrombotic risk.
The purpose of our study is to evaluate the frequency of constitutional thrombophilia in this age group.

Patients and methods :

A descriptive retrospective study including patients followed in the internal medicine department of Fatouma Bourguiba university hospital in Monastir, for a thromboembolic event occurring after 60 years, over a period of 13 years (2006 - 2018).

Results :

- eight patients aged 60 years and over.
- average age of 65.5 years and an extreme of 73 years.
- 5 ♀ / 3 ♂.
- family history of thromboembolism: n=0.
- Only one patient had previously presented a superficial vein thrombosis.
- deep thrombosis : n=7 / superficial: n=1
- proximal thrombosis : 6 cases.
- The thrombus was unilateral in the lower limbs in all cases.
- Only one patient had developed pulmonary embolism.
- factors favoring blood stasis were found in 3 cases.
- The assessment of constitutional thrombophilia in all these patients was positive.

Activated protein C resistance	n=6
protein S deficiency	n=5
protein C deficiency	n=3

- Five patients had two or three concomitant abnormalities.
- All these patients are kept under long-term curative anticoagulation based on anti-vitamin K.

Discussion:

Thromboembolism occurs as a consequence of the genetic predisposition, underlying diseases, and triggers of dehydration, infection, and injury. Aging is a potent risk factor for the development of venous thrombosis [1].

Few data are available regarding biological risk factors for venous thromboembolism in the elderly who are at high risk of thrombosis.

In laboratory screening, an isolated or combined inherited thrombophilia can be observed. In our study, activated protein C resistance was the most frequent abnormality followed by protein S deficiency. In a french cohort including 78 patients mean aged 86 years, no deficiency in natural coagulation inhibitors was found [2].

Further prospective studies should help to determine the risk/benefit ratio of laboratory screening for hereditary thrombophilia and therapeutic intervention in the elderly.

Conclusion:

Constitutional abnormalities in the haemostasis assessment are rare. Nevertheless, and considering the therapeutic impact, their screening seems to be necessary in thrombo-embolic incident in the elderly, even if atypical signs were absent.

Bibliography:

1- Ohga, Shouichi, and Masataka Ishimura. "Thrombotic Disorders." Hematological Disorders in Children. Springer, Singapore, 2017. 205-221.
2- Anard-Michelot, Hélène, et al. "Screening for thrombophilic abnormalities in very elderly patients." Annales de biologie clinique. Vol. 68. No. 6. 2010.