

## Letter to the Editor

### LONG-TERM USE OF LOW MOLECULAR WEIGHT HEPARIN FOR VENOUS THROMBOEMBOLISM PROPHYLAXIS IN FRENCH GERIATRIC SETTINGS

#### To the Editor:

Venous thromboembolism (VTE) is a common disease in hospitalized elderly patients. Low molecular weight heparin (LMWH) prophylaxis has been recommended for hospitalized medical patients with risk factors for VTE, which include advanced age, prolonged immobility or paralysis, stroke, myocardial infarction, cardiopulmonary failure, chest infections, cancer, and hypocoagulable states (1,2). In France, this practice is widely accepted by physicians and particularly for elderly patients with VTE risk factors. However, the duration of LMWH prophylaxis has never been studied in controlled trials. For instance, it is not easy to decide when to discontinue prophylaxis, especially in elderly patients with chronic conditions in long-term care settings, where the risk of VTE persists.

In 1992–1997, we have been concerned by a large increase of LMWH consumption in a French geriatric hospital that comprised a large number of long-term care patients (3). The aims of this clinical study were to assess the use and the duration of LMWH for VTE prevention in French long-term care settings.

A questionnaire was sent to 150 geriatricians, selected from members of the French Geriatrics Society, to be filled out for each patient of their institutions who received LMWH during 1 day of December 1997. Information about their risk factors for VTE and heparin therapy was recorded. In particular, the date of the beginning of the treatment and its aim (VTE prophylaxis/other) were recorded. Moreover, the number of patients present in those settings on the day of the survey was also recorded.

In the 96 centers that participated (representing 64% of the 150 questionnaires), 7762 long-term care patients were present on the day of the study (representing 10% of all the long-term care beds in France). Among these patients, 436 (5.6%) were receiving heparin, 377 (4.9%) for VTE prophylaxis and 61 (0.8%) for other reasons. The patients receiving heparin for VTE prophylaxis were  $84.4 \pm 9.1$  years of age, and comprised 333 (76%) women. All these patients received LMWH (nadroparine 49%, enoxaparine 26%, dalteparine 16%, tinzaparine 9%). Their risk factors for VTE are shown in Table 1. The mean duration of the treatment for VTE prophylaxis at the day of the study was 298 days ( $n = 372$ , 5 missing values), ranged from 5 to 4915 days. The duration exceeded 30 days in 273 (73%) patients and 1 year in 92 (25%) patients. There were large differences between the centers for the percentage of patients receiving LMWH prophylaxis (ranging from 0% to 26%) and for the mean duration of treatment (4 to 1263 days). In 39 of the 77 centers (51%), there was at least one patient receiving LMWH for 6 months or more.

This 1-day survey shows that LMWH is widely used in French long-term care settings in order to prevent VTE.

Moreover, most patients received this treatment for long periods of time, ranging from months to years. In this population, the long-term use of LMWH probably resulted from the high prevalence of chronic risk factors for VTE (Table 1). Most patients were older than 65 years and bedridden, and many of them had a history of VTE, all conditions which are not reversible.

Long-term prophylaxis of VTE is classically based on mechanical methods and in some cases oral anticoagulation, but these methods are difficult to implement in long-term care settings. Elastic stockings and intermittent compression are poorly achievable therapies, because most of the patients are unable to use them alone, and the nursing staff is very low in number and focus on helping for dependency. Oral anticoagulation in frail elderly patients is refrained, due to an increased risk of bleeding, frequent drug-drug or drug-disease interactions and the need for careful biological monitoring. However, long-term use of LMWH for VTE prophylaxis has not been investigated and validated, like it has with short-term VTE prophylaxis by LMWH after orthopedic surgery or during an acute medical illness (4).

Recently, LMWH therapy (3 to 6 months) has been proposed in the long-term treatment of deep venous thrombosis in elderly adults (5). However, the long-term use of LMWH for prophylaxis of VTE in elderly patients with chronic risk factors is not supported by controlled trials. Long-term LMWH therapy might have negative consequences, like adverse effects (bleeding, osteoporosis, hyperkalemia), discomfort related to blood puncture for platelets monitoring, and high cost. The risk/benefits of such treatment should be carefully assessed and compared with other methods for VTE prophylaxis in long-term care elderly patients. Recom-

Table 1. Risk Factors for VTE Among the 377 Long-term Care Patients Receiving Prophylaxis Treatment by LMWH

	<i>n</i>	(%)
Age (greater than 65)	365	(97)
Bedridden	333	(89)
History of VTE	147	(39)
Heart failure	127	(34)
Respiratory failure	58	(15)
Cancer	49	(13)
Recent surgery (<60 days)	24	(6)
Recent stroke (<30 days)	14	(4)
Recent myocardial infarction (<30 days)	0	
Number of risk factors for VTE		
1	11	(3)
2	106	(28)
3	136	(36)
4–6	124	(33)

Note: VTE = venous thromboembolism.

mendations for medical VTE prophylaxis should be more explicit about long-term prevention of VTE by LMWH.

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