

ABO Blood Groups as a Risk Factor for the Development of Deep Vein Thrombosis of the Lower Extremities in Elderly and Senile Patients

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Background: It is believed that non-ABO blood groups increase the likelihood of deep vein thrombosis (DVT), however, their effect on the risk of VTE in the elderly and senile has not been sufficiently studied.

Aims: To evaluate the effect of different ABO blood groups on the risk of deep vein thrombosis of the lower extremities in elderly and senile patients.

Methods: 55 patients with DVT were examined and their ABO blood groups were determined. There were 33 males (60%) and 22 females (40%). The median age was 74.2 (± 8.7) years. The control group was represented by patients without a history of DVT (n=49). All subjects were divided into two groups: elderly (60-74 years) and senile (75-90 years).

Results: In the general group of DVT B blood group was the most common, which was almost three times more than in patients without a history of DVT. Group B in half of the cases occurred in women with DVT, which was twice as much as in men with DVT (50.7% vs. 24.2%; OR=3.1; p=0.05) and seven times as much as in women of the control group (50.7% vs. 7.1%; OR=13.0; 95% CI: 2.5 – 68.6; p<0.001). O blood group was detected almost three times less frequently among patients with DVT than in the control group. Non-O blood groups were found in the elderly in 90% of cases, which was 1.6 times more common than in the control group of the same age category (90% vs. 55.6%; OR=7.2; 95% CI: 1.8-28.9; p=0.003) and almost 1.5 times more common than in patients with DVT older than 75 years (90% vs. 66.7%; OR=4.5; 95% CI: 1.1 – 19.9; p=0.038).

Conclusions: Non-O blood groups can be considered as a risk factor for the development of DVT in elderly patients. Women with B blood type have the highest exposure to DVT.

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