

# EVALUATION OF ECONOMIC AFFORDABILITY OF ANTITHROMBOTICS OF HEPARIN GROUP, WHICH ARE PRESENTED AT THE PHARMACEUTICAL MARKET IN UKRAINE

Adonkina V.Yu., Munir L.A., Terentyeva Yu.K., Michshenko O.Ya.

The National University of Pharmacy, Kharkiv, Ukraine

Vidonis@yandex.ru

The aim. Antithrombotic agents have a special place in the treatment of patients with ischemic stroke (IS), effect of which is aimed to improve cerebral perfusion. Their effect is connecting with the improvement of the rheological properties of blood and the prevention of recurrent thrombosis. As drugs anticoagulant therapy for IS the direct-acting anticoagulants have used traditionally. The aim is to assess the affordability of antitrombotic drugs of heparin.

Materials and methods. For studding the data of informatics research system "Morian" were used. To assess the economic affordability ratio of anticoagulant therapy used solvency adequacy ratio ( $Ar$ ) that characterizes the dynamics of the ratio value of therapy and solvency of a consumer. The proposed rate - the ratio of the cost of the course antithrombotic therapy of IS in accordance with the standards of treatment to the average monthly wage in Ukraine, expressed as a percentage. The higher ratio ( $Ar$ ) is the less affordability of a drug for a consumer. Affordability ratio of anticoagulant therapy was calculated in several ways:  $Ar_1 = (\text{average drug price} / \text{average wage}) \times 100$ ;  $Ar_2 = (\text{average drug price} / \text{minimum cost for living}) \times 100$ .

Results. Analysis of wholesale prices showed that the cost of antithrombotic drugs of heparin varies widely (from 53 UAH to 900 UAH per packing). Clexane (solution for injection 8000 anti-Xa IU / 0,8 ml syringe dose № 10; 902,21 UAH) and Fragmin (10,000 IU / ml amp. 1 ml № 10; 807,52 UAH) had the highest cost of packing. The lowest cost per packing was found for drugs Fraxiparine (2850 IU anti-Xa 0,3 ml syringe № 2; 58,37 UAH) and Gizende (5000 IU / ml vial. 5 ml № 10; 80,71 UAH.). Affordability ratio of antitrombotic drugs of heparin are: for enoxaparin sodium ( $Ar_1 = 0,20$ ;  $Ar_2 = 0,03$ ); heparin sodium ( $Ar_1 = 0,05$ ;  $Ar_2 = 0,01$ ); nadroparin calcium ( $Ar_1 = 0,13$ ;  $Ar_2 = 0,02$ ); dalteparin sodium ( $Ar_1 = 0,30$ ;  $Ar_2 = 0,05$ ); pentosan polysulfate sodium ( $Ar_1 = 0,08$ ;  $Ar_2 = 0,01$ ); sulodexide ( $Ar_1 = 0,20$ ;  $Ar_2 = 0,03$ ); bemiparin sodium ( $Ar_1 = 0,17$ ;  $Ar_2 = 0,03$ ).

Conclusion. Heparin sodium and pentosan polysulfate sodium are the most affordable drugs of antithrombotic therapy. These data can be used to optimize the possible costs for treatment of ischemic stroke.