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07.02.2011

: 616.1/4 - 06 - 085.322

**O.I. Voloshyn, T.P. Garnyk, L.O. Voloshyna, V.L. Vasyuk  
THE APPLICATION OF HERBAL REMEDIES IN  
THE CLINIC OF INTERNAL DISEASES AS ONE OF THE  
IMPORTANT WAY OF THE SOLUTION OF COMORBIDITY  
PROBLEMS**

*(review of literature and original investigation)*

**Key words:** comorbidity, diseases of internal organs, treatment, application of herbal remedies, perspectives

The problem of comorbidity in the clinic of internal medicine, the common nonspecific pathophysiological links lying in the basis of comorbidity, debatable questions of diagnostics, treatment and prognostic tendencies had been considered. The application of herbal remedies in contemporary standards of therapy is considered as one of the most important way of the improvement of treatment results in patients with comorbidity conditions. The necessity of further research of comorbidity diseases, making supplements in existing treatment standards of diseases of internal organs in type of multicomponent herbal remedies, professional training of physicians of general practice-family medicine in branch of phytotherapy are grounded.

612.275: 616.248: 615.015: 615.032

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( ) [27,40,44].  
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[22]. [7,28,33,45].

[22,49].

[34], [10,22,26,29,37]. «

[37]. [22,37,49].

[22,23,29]. 10 ; CO2

CO2 [37].  
C  
[37,40]:

[30]. (A C);

(Er),

(Er)

[40,42,44,49].

( 2 2), [2,3,12,14,26,30,31,36,43].

Er, (Hb) 4%

95% Hb. Er Hb

( -1, -6, - )

- PG, ( )

[5,15,22,37,49]. [12].

2 [1,5,12,18,27]. (XC) ; XC

( ) XC

[22,24,44]. ( ) « »

(« » XC),

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[24]. de novo

25%

[30,37,46,49]. XC , XC

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[4,7,12,14].

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[7,8,16,33].

[5,12,19,27,30]. ( ) ( ), GSH 2

( ) 2 [10,12,20,33,38,39].

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[7,12].

[24,40]. ( ). ( , )

[14,15,24,35].

[12,14,24,29,37,45].

[14,24,43,44].

[12,25,45]. ( 2 ) -

[1,3,10,12,14,25,43]. ( 1 ),

(GSH), 1 ;

[12,19,28,33]. ( ) 1 , 2+, Mg2+

2 2;

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GSH- 2 2 ; 2+

( ) 1,4,5,9,12,20,21,23,31,33,36].

[2,7,10,12,14,17,26].

« » - [14].

1 [8,25,26,29,35]. -

( - )

[6,28,33,37,38].

[24,37]. ^ ( ),

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[4,8-10,12,15,31,33,42].

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02,

2, 3),

[14,24,37].

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[24].

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[29,37].

[29,43,44]. /

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[5,15,17,19,27,35]. «

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202 , .

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» ( , ( ), ) [15,18,33].

[16,30,33,36]. 50%

« » [30]. [2,7,25,27,33,37,42].

; GSH, ( - , -

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SH- [23,37].

( , (GSH, - - -

[8,9,17,20,21,23,28,31,33]. ( - ) -

(GSH) (GSSG) ,

SH- , GSH

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GSH

[9,10,16,20,25,41,47]. GSH

( ) ( . .1.11.1.9). ( GSH [20,47]. - )

“ ( , ) GSH ” GSH , , -

GSH, [20,41,47]. [14,16,20]. ( )

: 1) ; 2) , ; 3) , .

2 2 ( - ), [36].

GSH [15,19,33,35,41,47]. GSH , , -

GSH : GSH [6,20,38,47]. ( - ) ( ). -

GSH 2 2 , ; [4,9,15,19,21].

GSH ( .1.11.1.9.) -

GSH [20,47]. 2 2 , -

GSH [16,20,47]. : 1) , -

[48]. GSH ; 2) 2 2 , -

- ( 2.5.1.18) - GSH ( 2 2; 3) -

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; 4, , , PG, 2 2 [18,19,33]. ^ ), -

[16,20,21,33,35]. 11 : 1) R+GSH=HRSH ROOH ( )

4 : RX+GSH=HX+SG; 3) [20,21]. -

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PG), GSH ; 4) ( , [20,21,25,35,36,47]. -

[20,36,38,47]. - GSH

2 2, [15,20]. / GSH/GSSG

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( , 4- ), -2- , - GSH/GSSG, -

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[10,20,21,33]. -

[11,45]. NO  
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 Fe3+ [23,27,28,33]. NO- 02,  
 [11,45]. NO-  
 [36,37]. NO-  
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 [6,11,13,23,45]. NO 0 NO  
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07.02.2011

612.275: 616.248: 615.015: 615.032

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**LIPID PEROXIDATION AND ANTIOXIDANT  
DEFENCE OF ERYTHROCYTES IN ASTHMA:  
PHYSIOPATHOLOGICAL ASPECTS**

**Key words:** bronchial asthma, lipid peroxidation, antioxidant enzymes activity, erythrocytes, hypoxia

The article contains information on the interrelations between hypoxia, lipid peroxidation activation, antioxidant enzymes activity and erythrocyte membrane properties in bronchial asthma pathogenesis. Data about the role of glutathione-dependent and others enzymes disorders, imbalance of pro- and anti-oxidative factors in disturbances of cardiorespiratory system function during asthma attack have been analyzed.