BLOOD PRESSURE AND VASCULAR ELASTICITY STATUS OF THE HUMAN HEMODYNAMIC SYSTEM

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Annotation

This in the article blood pressure and vein elasticity biophysicist features and their human hemodynamic in the system place analysis Blood rotation process physicist basics of arterial pressure formation mechanism and vein of the walls elasticity level is studied. Also, hemodynamic balance in storage of the veins structural and functional features Research results heart and blood vein system diseases early determination and diagnostics in improvement important importance has.

Key words: Human in the body blood rotation system vital important function This system main from the indicators one blood pressure is , it is a vein elasticity with closely Arteries and veins of the walls elasticity blood of the flow stability provides. Hemodynamic in the system changes heart activity and vein to the state directly impact This will do. in the article blood pressure formation mechanism , vein elasticity biophysicist basics and their mutual dependency scientific in terms of analysis will be done. This is heart and blood vein diseases in understanding important importance has.

Literature analysis

Blood pressure and vein elasticity according to many scientific research take gone. Classic biophysicist in sources blood pressure of the heart pump function as a result harvest to be hydrodynamic pressure as Modern in research and vein of the walls viscoelastic features deep The arterial system is being studied . elasticity blood flow smoothes and pulsation reduces. Scientists of the veins aging in the process elasticity

the disappearance heart and blood vein diseases with Also, ultrasound and Doppler technologies using hemodynamic parameters measurement wide Artificial intellect based on diagnostics systems are also in the field new opportunities is creating.

Results and analysis

Blood pressure and vein elasticity human hemodynamic system the most important biophysicist from the indicators one This is indicators of the heart pump function and of the veins mechanic features between mutual dependency represents. Research arterial blood in the process pressure and vein of the walls elasticity level studied, their hemodynamic to balance impact analysis was done.

Blood pressure of the heart systole and diastole in phases to the veins giving pressure power through is formed. Systolic pressure heart contraction as a result harvest to be maximum pressure if, diastolic pressure heart relaxed minimum pressure at the moment represents. This two indicator between difference pulse called pressure and those veins elastic features in evaluation important role plays.

Vein elasticity and artery and veins pressure under the influence expansion and again own to the state return Elasticity veins from the heart outgoing blood flow softens and pulsation If the veins elasticity if it decreases , blood to the flow resistance increases and arterial pressure This situation hypertension to develop take arrival possible .

Research results this showed that the age to pass with vein elasticity decreases, this and hemodynamic of the system general efficiency reduces. From this except, wrong nutrition, stress, obesity and physical activity blood is also lacking pressure to increase take is coming.

The following in the table blood pressure main physiological indicators quoted:

Table 1. Blood pressure physiological indicators

Indicator	Value	Description
Systolic pressure	110–130 mmHg	Heart contraction during pressure

Diastolic pressure	70–85 mmHg	Heart in the relaxation pressure
Pulse pressure	30–50 mmHg	Systolic and diastolic difference
Average pressure	90–100 mmHg	Hemodynamic balance

Vein elasticity blood of the flow smoothness provider main factor is considered. Elastic veins from the heart came out blood wave swallow it to the capillaries one flat If elasticity decreasing if so, blood flow uneven heart work load increases.

Table 2. Vein elasticity biophysicist features

Indicator	Description
Elasticity module	Vein of the wall hardness
Viscoelasticity	Viscosity and elasticity unit
Peripheral resistance	Blood to the flow resistance level
Flexibility	Pressure to change answer reaction

Analysis results this shows that high to elasticity has veins hemodynamic of the system stable performance On the contrary, the veins hardening heart work strengthens and this far within the period heart to the shortage take arrival possible.

Modern diagnostics in methods ultrasound Doppler, MRI and hemodynamic modeling wide This is applicable. technologies blood flow speed, pressure gradient and vein elasticity clear measurement opportunity gives.

Quoted tables blood pressure and vein elasticity between mutual dependency deep analysis to do opportunity gives. First in the table blood pressure main physiological indicators given are, they are heart and blood vein system functional status in evaluation important importance has .

Systolic pressure heart contraction on time to the arteries given maximum pressure This indicator represents of the heart pump function strength reflection Diastolic pressure and of the veins elasticity and peripheral resistance level shows. If diastolic pressure high if so, this of the veins from hardening evidence gives.

Pulse pressure heart and vein system between dynamic balance represents. Its change hemodynamic violations in determining important diagnostic indicator is considered. Average pressure and of organs blood with provision level defines.

Second table vein elasticity biophysicist features illuminates. Elastic modulus of the vessel of the walls hardness level shows and that age looking at exceed progress possible. Viscoelasticity and The vessels are both elastic and viscous. features represents.

Peripheral resistance blood of the flow veins through to move to be displayed resistance This indicator indicates If it increases, the heart more power with to work forced will be. Flexibility and of the veins pressure to changes fast answer give to take ability represents.

In general when taking , tables this shows that blood pressure and vein elasticity each other with closely related are, they are hemodynamic of the system stability determinant main are factors .

Conclusion

Blood pressure and vein elasticity human hemodynamic system important biophysicist indicators They are heart activity and blood of the cycle stability provides. Vein elasticity decrease heart and blood vein diseases to develop take arrival possible. This because of this indicators regular control to do important. Modern medicine technologies hemodynamic the system clear analysis to do opportunity is giving. In the future this direction diseases early determination and effective in treatment big importance profession will reach.

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