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Optimization of Management of Cerebral Circulation and Cognitive Dysfunction in Patients with Chronic Lung Diseases

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Abstract. The present paper analyzes the characteristics of cerebral blood flow disturbances and cognitive impairment in patients with chronic pulmonary diseases, and considers ways to optimize their treatment. Disorders of cerebral circulation and cognitive function developing against the background of chronic lung pathology have a substantial impact on the quality of life of these patients. The study is aimed at improving the effectiveness of treatment of cerebral hemodynamic and cognitive changes in patients suffering from chronic pulmonary diseases.

Keywords: cerebral circulation, cognitive functions, chronic lung diseases, cognitive impairment, treatment optimization.

Lungs chronic diseases (OSK), including chronic obstructive lungs disease (SOOK), bronchial asthma and bronchiectasis , world across wide spread out they are of patients life to quality significant level effect shows . A lot of OSK cases breath lack of blood oxygen level decline and hypoxemia with will pass These cases are especially chronic hypoxemia , cerebral blood rotation break and the brain to the activity negative effect to show can As a result , with OSK hurt in patients cognitive functions decline , attention , memory and makes sense thinking such as of abilities decrease observed[1],[2][3].

Cognitive of functions with a violation OSK hurt in patients wide occurs and their life quality more makes it worse. Studies that's it shows that in the background of OSK cerebral hypoxia , hypercapnia and chronic inflammation the brain tissues effect to do , as a result cognitive disorders surface coming possible [4], [5], [6], [7]. Also cerebral blood rotation with a violation OSK hurt in patients in the brain oxygen and food of substances lack of take it comes while the brain tissues structural and functional changes reason will be.[8]

This article with OSK hurt in patients cerebral blood rotation and cognitive functions of violation to himself characteristic study as well as treatment methods to optimization directed . Research against the background of the purpose of OSK cerebral blood rotation and cognitive disorders with depends problems deeper learning and this of circumstances prevention get or to treatment directed efficient methods is to determine .

Methods. Research within the framework of OSK 60 sick people the patient and healthy control 30 people in the group a person attraction done. Patients cerebral blood circulation Doppler ultrasound inspection using was evaluated . Cognitive functions and "Mini-Mental State Examination" (MMSE) and "Montreal Cognitive Assessment" (MoCA). standard tests using was evaluated . Patients oxygen level pulse oximeter with observed , and they are hypoxemia level looking classified .

Also patients, lungs function spirometry using was evaluated . Research within the framework of

OSK hurt in patients cerebral blood rotation violation and cognitive functions decrease treatment methods optimization in order to oxygen therapy and pharmacological treatment methods applied . Patients from treatment before and after evaluated , results while statistics analysis done.

Results. Received results that's it showed that with OSK hurt in patients cerebral blood rotation significant level broken was. Doppler ultrasound results with OSK hurt of patients cerebral blood flow speed healthy control to the group relatively significant that it has decreased showed ($p<0.05$). This is a decline cerebral to hypoxia take come , brain tissues oxygen and food of substances lack of it reason it has been .[9]

Cognitive functions evaluation results that's it showed that with OSK hurt MMSE in patients and MoCA points healthy to the group than significant was low ($p < 0.05$). Patients , especially attention , memory and problems solution to do in ability weakening stated . Research to the results according to OSK hurt in patients cerebral blood rotation violation cognitive of functions to decrease directly effect shows.[10]

Oxygen therapy and pharmacological treatment applied in patients cognitive in functions and cerebral blood in circulation positive changes observed . Oxygen therapy cerebral hypoxia reduce the brain activities to improve help gave Pharmacological treatment especially cerebral blood rotation improving use of drugs (for example , vasodilators) in patients cognitive of functions recovery help that he gave observed ($p<0.05$).

Also new cure algorithm work released, it is as follows stages own into takes :

1. The patient evaluation and classification: with OSK hurt of patients clinical situation evaluation , oxygen level and cerebral blood rotation will be checked . Patients hypoxemia level looking to groups is divided .
2. Oxygen therapy : Hypoxemia determined to patients long term oxygen therapy is used . This cerebral blood rotation improve and the brain activities to support help gives.
3. Pharmacological Treatment : Vasodilators , antioxidants and neuroprotector drugs application cerebral blood flow improve and cognitive functions recovery for recommendation will be done.
4. Rehabilitation : Patients physical activity increase and breath get exercises own into received rehabilitation program is used . This breath get ability improve and common health to support help gives.
5. Cognitive rehabilitation : Cognitive functions to improve directed including exercises memory and attention developing games , psychological help is given[11]

Discussion. Research results with OSK hurt in patients cerebral blood rotation violation and cognitive functions decline between strong dependence showed. [12] These patients in the brain hypoxia and hypercapnia as a result cerebral blood of flow decrease and the brain of activity violation with is facing Cognitive disorders of patients daily in life activity take to go and life to quality negative effect shows .[13]

Oxygen therapy and pharmacological treatment cerebral blood rotation and cognitive functions in improvement efficient the fact that was shown . Oxygen therapy cerebral hypoxia reduce cognitive functions in recovery important role plays. Pharmacological treatment , in particular vasodilators application , cerebral blood flow improve through the brain activities supports .[14]

Research social importance that is , with OSK hurt in patients cognitive violations to determine and treatment methods development their life quality increase and health to improve service does. Also in the background of OSK cerebral blood rotation violation with depends diseases early to determine and treatment health storage system for economic in terms of too efficient to be because it is possible this of patients disease complications reduces and medical to help has been the need reduces.[15]

Conclusion. with OSK hurt in patients cerebral blood rotation and cognitive functions violation wide spread out and this circumstances of patients life to quality significant level effect shows . Research results cerebral blood rotation violation and cognitive functions decline between strong dependence confirmed . Oxygen therapy and pharmacological treatment methods cerebral hypoxia reduce cognitive, functions in improvement efficient the fact that was determined . with OSK hurt in patients cognitive functions early to determine and treatment measures their life quality to improve and health storage to the system has been economic the load to reduce help gives.

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