

Nutritional Factors Influencing the Course and Management of Parkinson's Disease: Organizational and Clinical Perspectives

Abdurasulov Sardor Sultanmurodovich

Assistant, Department of Neurology, Bukhara State Medical Institute

Akhrorova Shakhlo Botirovna

Associate Professor, Department of Neurology, Bukhara State Medical Institute, DSc

Annotation: This article investigates the clinical and functional effectiveness of dietary therapy in patients with Parkinson's disease. A total of 65 patients participated in the study, divided into two groups: one received individualized dietary treatment, and the other served as a control group without dietary intervention. Results based on the UPDRS scale, gastrointestinal symptoms, SF-36 quality of life questionnaire, and antioxidant intake demonstrated that the dietary intervention group showed significant improvement in symptoms, digestive function, and quality of life. Dietary therapy is recognized as a valuable adjunct to conventional Parkinson's disease treatment strategies.

Keywords: Parkinson's disease, dietary therapy, UPDRS, quality of life, gastrointestinal symptoms, antioxidants.

Parkinson's disease (PD) is chronic, slow developing neurodegenerative disease, mainly dopamine working neuron loss. This disease clinical signs include tremor, rigidity, bradykinesia, postural disorders and many non-motor symptoms, including gastrointestinal activity disorder, mood changes, sleep disorders and food digestion problems [1,2]. The last in years diet therapy – that is food through disease signs and of patients life quality to improve was interest increasing is going on.

Parkinson's disease (PD) today on the day the most many occurring second level neurodegenerative disease is considered. World health storage According to the World Health Organization (WHO), According to, in 2019, Parkinson's disease played people number 8.5 from a million more than by 2030 this number 12 million increase forecast [1]. Disease mostly over 60 years old increased in the population is detected, but in 5-10% of cases young beginning forms are also occurring [2]. Especially developing in countries population aging pace increasing progress because of, with PK related health storage problems increasingly current become is going on.

Parkinson's disease dopamine working neuron nigrostriatal neurons degeneration with related is clinical in terms of bradykinesia, tremor, muscle rigidity and postural disorders with manifestation [3]. The disease complicated clinical landscape not only movement functions, but cognitive activity, spiritual condition, nutrition, intestines activity and substance negative for exchange impact shows [4].

Latest in years scientific Research in Parkinson's disease food and diet of the regime importance very high that showing. That's right organization done diet not only medicine of tools absorption improves, maybe symptoms relieves, gut-brain arrow through neuroinflammation reduces and of the disease progression slow down possible [5]. Including the Mediterranean (Mediterranean land sea) diet, fruits and vegetables rich in polyphenols, omega-3 fatty acids, group B Vitamins, antioxidants (e.g., vitamins E and C) in Parkinson's disease neuroprotective impact to show identified [6].

Dopamine agonists or levodopa medications acceptance doing in patients protein-rich foods consumption to do medicine of tools absorption reduce possibility. Therefore, the diet should be individualized. planning demand is [7]. Such in patients protein consumption mainly evening for food correction recommendation will be done. This with together, with PK sick in patients inside stiffness,

body weight loss of appetite loss , food of substances bad absorption such as situations many meeting because of them food needs control to do and adaptation is necessary [8].

Scientific research this shows that diet therapy can help treat Parkinson's disease treatment inseparable to the component rotation In particular , diet plan physiological necessities , medicine preparations with mutual impact and disease to the stage accordingly working exit – modern clinical in practice current direction This is Parkinson's disease . in management complex approach the necessity again one there is confirms .

Scientific in sources It is emphasized that diet plays a role in Parkinson's disease. role two main in the direction manifestation will be : first , food through dopamine to the synthesis directly or indirectly impact show , secondly , the effects of drugs (especially levodopa) to be absorbed and impact to the efficiency help to give or him/her restriction through pharmacodynamics management [3,4].

Below we will discuss Parkinson's disease. diet place and him/her organization to grow their ways to study dedicated scientific research the results statement we will.

Materials and methods. Research 2024–2025 during Republic specialized neurology in the center take went . Parkinson's disease in research diagnosis 65 people were placed patient participation reached . Patients average age 62.1 ± 5.8 years , of which 38 male and 27 people from women consists of was .

Research participants following to groups split into :

- ✓ Home group (n = 33) – individual diet therapy program based on treatment those made ;
- ✓ Control group (n = 32) – usual without diet treatment chair those who received .

All Levodopa -based drugs for patients standard treatment plan given . Eating order and main to the group relevant in those who are nutritionist individually by structured , basic attention protein , fiber products and to antioxidants focused .

Research during following methods used :

- ✓ using UPDRS (Unified Parkinson Disease Rating Scale). clinical of symptoms evaluation ;
- ✓ Monitoring of gastrointestinal symptoms (constipation , flatulence , appetite) ;
- ✓ SF-36 health quality questionnaire through life of quality evaluation ;
- ✓ Eating food 7 days on daily analysis.

Research results . Initial results of patients disease level and general health with related was clinical indicators based on analysis Clinical of symptoms decrease level , food digestion to do activity and life quality between dependencies clarified .

Table 1. UPDRS scores from diet therapy before and next change ($M \pm m$)

Group	At the beginning points	3 months after	Change
Home group	46.2 ± 2.1	35.4 ± 1.8	-10.8
Control group	45.7 ± 2.0	42.1 ± 1.9	-3.6

This table main in the group clinical of symptoms much relieved , especially bradykinesia and rigidity of signs noticeable at the level decreased shows. Control in the group and such positive changes less observed is , this diet therapy positive clinical efficiency justifies .

Table 2. Food digestion to do problems according to symptoms frequency (%)

Symptom	Home group (n=33)	Control group (n=32)
Constipation	18.2%	53.1%
Flatulence	21.2%	40.6%
Loss of appetite	12.1%	34.4%

Food digestion to do with related symptoms diet therapy used in patients two times more decreased. Especially constipation of the situation decrease – fiber- rich foods consumption and water drink order normalized with This is due to gastrointestinal discomfort . to decrease take arrived.

Table 3. “General” section of the SF-36 questionnaire " health " indicator (in points)

Group	At the beginning	3 months after	Difference
Home group	42.5 ± 2.3	57.3 ± 2.7	+14.8
Control group	43.2 ± 2.4	45.0 ± 2.5	+1.8

Home in the group general health of the situation improvement SF-36 questionnaire through clear was shown . In particular , energy level , social activity and psychological situation in components positive changes record These patients on a diet answer reaction scale shows .

Table 4. Daily in eating antioxidant substances amount (mg/day)

Substance	Home group	Control group
Vitamin C	92.4 ± 4.1	56.8 ± 3.2
Vitamin E	18.6 ± 1.2	10.3 ± 0.9
Beta-carotene	4.2 ± 0.3	2.1 ± 0.2

This table main group food diet not only quantitative , maybe quality in terms of also richer that Vitamin C , E and beta-carotenes neuroprotection doer to the feature has Parkinson 's in illness oxidizing to stress against in the fight important This is diet of elements right selected proves .

Conclusion. Conducted research results this showed that Parkinson 's in illness individual in a way structured diet programs of patients status in improvement important role plays . Diet therapy based on of patients clinical symptoms noticeable at the level decreased , especially bradykinesia and hardness symptoms relief record From now on outside , food digestion to do of activity normalization and life of quality rise of patients social and spiritual adaptation also improved .

Home in the group used diet therapy program antioxidant substances , food to the fibers and evening for food protein to direct based is , this levodopa of drugs to be absorbed and to the efficiency positive impact showed . This because of, diet the patient's general treatment in the strategy important place occupies.

So Therefore , an individual approach to Parkinson's disease based on organization done diet therapy health storage in the system clinical rehabilitation tool as wide current to be necessary . In the future diet far term efficiency study and large in the population implementation to grow according to wider research take to go to the goal appropriate will be.

Used literature

1. World Health Organization. Parkinson's disease . Geneva: WHO; 2022. <https://www.who.int/news-room/fact-sheets/detail/parkinson-disease>
2. Dorsey ER, Bloem BR The Parkinson's pandemic—a call to action. JAMA Neurol. 2018 ;75 (1):9–10.
3. Kalia LV, Lang AE Parkinson's disease. The Lancet . 2015 ;386 (9996):896–912.
4. Pfeiffer RF Gastrointestinal dysfunction in Parkinson's disease. Parkinsonism Relat Disord . 2011 ;17 (1):10–15.
5. Mischley LK Nutrition and neurological disease: Parkinson's disease as a model. Curr Nutr Rep. 2016 ;5 (1):53–65.
6. Maraki MI, Yannakoulia M., Panagiotakos DB, et al. Mediterranean diet adherence is related to reduced probability of prodromal Parkinson's disease. Mov Disord . 2019 ;34 (1):48–57.

7. Cereda E., Barichella M., Cassani E., et al. Clinical features of Parkinson's disease when onset of diabetes came first: A case-control study. *Neurology* . 2012 ;78 (19):1507–1511.
8. Barichella M., Cereda E., Pezzoli G. Major nutritional issues in the management of Parkinson's disease. *Mov Disord* . 2009 ;24 (13):1881–1892.