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## THE CURRENT ISSUES OF PARKINSON DISEASE IN KAZAKHSTAN: SURVEY RESULTS



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*The managing of healthy ageing of the population represents one of the main actual problems of the national health care systems around the world as the aged population is increasing, so, for instance, it is estimated that there will be over 2 billion people worldwide over the age of 65 by the year 2050 [6]. As countries have aged, the rate of age-related chronic diseases and frailty has also risen to epidemic proportions, so that in the U.S. only, 80% of those over 65 have at least one chronic condition, while 50% have more than two chronic conditions [4]. In particular, the age-related neurological disease such as Parkinson Disease (PD) has seen a dramatic increase in international prevalence. Projections suggest that the neurodegenerative diseases like PD will surpass cancer as the leading cause of death by the year 2040 [7]; thus presenting an ever-growing challenge to more effectively diagnosis, treat and manage symptoms while maintaining an optimal quality of life of the patients. This article mainly aims to discuss the most actual social issues of PD in Kazakhstan based on recent epidemiological survey on the current situation on PD [2] as well as to suggest a possible future strategy to improve the quality of life of the patients.*

**Key words:** Parkinson Disease, social problems, rehabilitation.

### The discussion of the Almaty PD survey results

In some countries where the proportion of people over 65 is lower than most developed nations, determining the prevalence of chronic diseases and other implications of an aging populace is in the early stages of assessment. In Kazakhstan, where people 65+ represent only 6.6% of the population and the average life expectancy is 68.6 years, the first epidemiological study on the prevalence of Parkinson's disease was recently completed based on a survey of the Almaty region. Findings from the study revealed a prevalence of Parkinson's of 62:100,000 based on a sampling of outpatient clinics in the region. The study also supported age as a risk factor with those 50+ having a significantly higher risk of having Parkinson's representing 97.1% of all cases, and PD in women – who live longer – was more prevalent than men, 58.49% to 41.56% respectively [1]. The authors suggested as the life expectancy in Kazakhstan continues to increase the prevalence of Parkinson's disease will also grow, thus placing a greater burden on society to manage the economic and quality-of-life implications of the disorder. Discoveries from the Kazakhstan study, also translate to problems experienced in other countries. A key finding from the study was the lack of early intervention for Parkinson's due to either individuals waiting until more extreme symptoms are evident before seeking medical assistance or a lack of detection by the primary care physicians to the prodromal symptoms of the disease. The study found that 80% of the sample sought medical assistance only when the disease had reached an advanced stage. The importance of early diagnosis cannot be underestimated. Although, early pharmaceutical treatment for PD remains controversial among the medical establishment,

recent clinical trials that initiated early dopaminergic support for PD patients have shown promising results in modifying the course of the disease [8]. Furthermore, Lohle, et al. suggested that early pharmaceutical intervention could have indirect economic benefits as patients may stay independent and employed while procrastinating premature retirement which would offset the cost of early pharmaceutical intervention [8].

Early detection of Parkinson's symptoms is problematic internationally as primary care physicians and individuals affected typically do not attribute prodromal symptoms – such as axial muscular skeletal pain, depression/anxiety, hyposmia, disturbance of color vision, sleep disturbance, increased drooling and dizziness – to Parkinson's disease. For example, Jacob and colleagues discovered that depression symptoms in males often begin 5-20 years prior to a clinical diagnosis of Parkinson's. Lack of awareness to the implications of these symptoms underscores the importance of better educating primary physicians and the public to their potential relationship to the disease [15]. A growing reliance on primary care will continue as health-care organizations look at controlling costs. Specialists, such as neurologists, may in-turn assume a consulting role in health care with only periodic contact with the patient [10]. As the initial point of contact between the patient and the health care system, primary care physicians need to have a better understanding of the prodromal symptoms of Parkinson's. A diagnostic criterion of early detection was proposed by Plouvier and colleagues [11] with a recommendation that primary care physicians should consider the potential of Parkinson's when a patient presents two or more prodromal symptoms during an examination.

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Another important finding of the Kazakhstan study that can be generalized to other countries is an urgent need to improve the quality of life among PD patients. The authors of the study found that many individuals with PD lack socialization opportunities and could benefit from rehabilitation support along with education to families about the importance of staying active. Negatively affecting the ability to socialize is *apathy* which has been determined as a common feature of PD – as opposed to a psychological response to a physical disability. Symptoms of apathy include the lack of interest in activities and a general lack of motivation. People with PD will often prefer passive pursuits such as watching TV or doing nothing and are at risk of de-socialization and deprivation of stimulation [9] found that patients with PD were 29% less active than a control group which places the individual at an increased risk of muscle atrophy and frailty. Treatment for apathy continues to rely primarily on dopaminergic therapy although individual outcomes remain mixed [3]. Another study showed that studied 45 PD who were defined as having apathy and found a correlation between apathy and executive dysfunction consistent with the descriptors of frontal-cortical dementia [12]. Rehabilitation support may also offer some benefit in treating apathy. Several studies have found that cognitive training of executive tasks resulted in improved executive function among individuals with PD [13, 14]. In addition, research on cognitive training has found that depression and anxiety can be decreased which also could affect one's motivation to participate in activities.

#### Future strategy for the PD rehabilitation therapy

Having avenues for social support would also be of benefit for people with PD. One example is the growth of adult day-care programs would provide the person with Parkinson's disease with the opportunity to be with others while also receiving medical supervision. A unique model used in the United States is a program in Dexter, Michigan called "Generations Together" which has both an adult and children's day-care within the same facility. Another promising innovative program Connect. Parkinson's [1] is currently undergoing study trials. This program provides telemedicine and social outreach for those that cannot physically access more traditional social and medical establishments. Because many individuals with PD live outside areas where resources are provided, innovative programs like Connect. Parkinson will help meet both medical and social needs of the patients.

#### Conclusion

In conclusion, demographic changes in aging are an international phenomenon resulting in common challenges among nations. The treatment and care of people with Parkinson's disease requires collaboration among all stakeholders to develop medical research and programmatic innovations, based on the international collaboration, all these in turn will help to improve the quality of life of the patients.

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#### ОБСУЖДЕНИЕ ТЕКУЩЕЙ СИТУАЦИИ ПО БОЛЕЗНИ ПАРКИНСОНА В КАЗАХСТАНЕ

Обеспечение качества здорового старения населения является одной из наиболее актуальных проблем национальных систем здравоохранения во всем мире, к примеру, предпола-

гаются, что к 2050 году возраст более 2 миллиардов человек по всему миру будет более 65 лет [6]. Поскольку население стран стремительно стареет, количество возрастных хронических заболеваний возросло до эпидемических пропорций. К примеру, только в США 80% людей старше 65 лет страдают как минимум от одной хронической патологии, в то время как 50% имеют две и более патологий [4]. В частности, наблюдается резкое возрастание распространенности нейродегенеративных болезней, например, болезнь Паркинсона (БП), неврологическое заболевание, связанное в первую очередь с возрастом. Кроме того, ожидается, что нейродегенеративные заболевания, такие как БП, превзойдут рак, как основную причину смерти, к 2040 году [7], что в свою очередь остро ставит вопрос о ранней диагностике, эффективном лечении и сохранении оптимального качества жизни пациентов. Целью данной статьи является обсуждение наиболее актуальных социальных проблем БП в Казахстане на основе последних эпидемиологических исследований по текущей ситуации по БП [2], а также рассмотрение потенциальных стратегий повышения качества жизни пациентов.

**Ключевые слова:** болезнь Паркинсона, качество жизни, реабилитация.

#### Т Ұ Ж Ы Р Ы М

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#### ПАРКИНСОН АУРУЫ БОЙЫНША ҚАЗАҚСТАНДАҒЫ АҒЫМДЫ АХУАЛДЫ ТАЛДАУ

Сау қартаюдың сапасын қамтамасыз ету бүкіл әлемнің денсаулық сақтау жүйесінің маңызды тақырыбына айналып отыр, мысалы, эпидемиологиялық мәліметтерге сүйенсек, 2050 жылы әлемде 2 миллиардтан астам адам 65 жастан асады деп күтілуде [6]. Қарт адамдардың үлесінің артуы салдарынан жасқа байланысты дамиды созылмалы аурулардың саны өсуде, мысалы, АҚШ-та 65 жастан асқан адамдардың 80%-ы кем дегенде бір созылмалы аурумен, 50%-ы екі патологиядан астам аурудан зардап шегеді [4]. Соның ішінде неврологиялық аурулардың, атап айтқанда – Паркинсон ауруының (ПА) кең таралуы байқалады. Болжам бойынша нейродегенеративті аурулар, оның ішінде 2040 жылы өлімнің басты себебі – ісік ауруларын ПА басып озады деп күтілуде [7]. Соның салдарынан ПА ауыратын науқастарды зерттеу, емдеу және науқастардың өмір сапасын жақсарту өзекті болып табылады. Бұл мақаланың басты мақсаты Паркинсон ауруы бойынша эпидемиологиялық зерттеулерге сүйене отырып [2], Қазақстанда ПА басты маңызды мәселелерін талдау және халықаралық тәжірибені негізге ала отырып, аурулардың өмір сапасын жақсартуға бағытталған ұсыныстар мен бағдарламалар жасау.

**Негізгі сөздер:** Паркинсон ауруы, өмір сапасы, реабилитациялық сауықтыру.

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