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Health advice for international travellers living with Parkinson disease

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Abstract

Parkinson disease is a progressive neurodegenerative disorder affecting the dopaminergic neurons of the basal ganglia, affecting approximately 1% of individuals over the age of 65. The travel health challenges of patients with Parkinson disease have not been adequately addressed in the medical literature. This perspective article discusses the barriers to healthy travel in this vulnerable population and considers mitigating measures. It focuses on difficulties with mobility, cognitive impairment, chronic medications, and medical devices.

Keywords: Parkinson disease, movement disorder, accidental falls, travel medicine

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Background

The unique challenges encountered by international travellers with chronic neurologic disorders have received limited attention in the travel medicine literature.[1,2] This article highlights the perspective of patients with Parkinson disease (PD). PD is a progressive neurodegenerative disorder affecting the dopaminergic neurons of the basal ganglia, which affects approximately 1% of individuals over the age of 65. It is likely that a greater proportion of people will suffer from this condition as global populations continue to age. The travel patterns of patients with PD have not been described but a study of clinic websites found that PD was among the most common motivations for stem cell tourism, the ethical aspects of which have been debated elsewhere.[3]

Practical considerations for travellers with Parkinson disease

Initiation of movement is often difficult for patients with PD and so travellers should allow additional time during travel. Travellers with PD may have to remove their medications from their luggage at airport security in order for them to be examined. They should carry a doctor's letter and prescription. If the patient has undergone deep brain stimulation surgery, passing through metal detectors may interfere with the device, including inadvertently turning the device off. The patient should therefore avail of alternative security screening procedures. Other infused PD medications need to be kept chilled so the actual distance travelled in relation to the longevity of ice blocks is another consideration.

Another challenge relates to the transport of luggage while walking. This may result in loss of balance and falls if the patient has postural instability. They may thus require extra support with transportation, wheelchair assistance, and additional boarding time. Patients who drive abroad should be counselled that certain medications used in the management of the condition, such as dopamine agonists or anticholinergics, may

induce drowsiness. It is advisable not to start a new medication regime immediately prior to travelling. Travellers with PD may find high traffic volumes at some destinations challenging as they attempt to cross streets at pedestrian crossings, owing to bradykinesia and/or freezing of gait.

Speech disorders are experienced by almost all patients with PD, including hypophonia, monotonous speech, freezing of speech, and sometimes a harsh or even breathy voice. This dysphonia adds to the difficulty caused by hypomimia and hypokinesia, rendering multiple aspects of communication difficult. Patients report frustration due to an inability to make their needs clearly known to others.

A common issue facing patients while travelling is that they may not bring sufficient amounts of medication with them to cover the duration of their trip. This problem manifests itself particularly if there are significant delays during travel or if the patient becomes ill and requires a higher dosage of medication. It may be difficult for an individual to obtain their prescribed medication at some destinations. It is important that PD medications are taken at their scheduled times. This can be particularly challenging if the individual is travelling on their own without any caregivers to remind them. They should also make advance arrangements to identify local neurologists or a gerontologist in the event of a significant exacerbation of their symptoms abroad.

Many patients with severe PD require wheelchairs for transport, especially when moving over long distances. Wheelchairs are infrequently provided for such individuals beyond popular tourism sites. Therefore, patients are often limited in the extent to which they may travel and the sites that they may access, irrespective of poor disabled access. Another issue which may obstruct travellers when searching for accommodation is the lack of appropriate disabled access accommodation including accessible wardrobe rails, reachable towel rails and walk-in showers with support bars. Some destinations are choosing to become more inclusive by adopting city-wide accessibility guides in order to ensure that travellers with special needs, such as those with PD, are able to create an itinerary that respects their physical limitations.

Cognitive and emotional barriers

PD can significantly alter the cognitive and information processing capacity of patients. A prospective longitudinal multicenter cohort study reported that 19% of patients suffered from some degree of cognitive deficit at the time of their diagnosis, but this is considered a gross underestimate, with up to 80% affected over the course of the disease.[4,5] Cognitive impairments arising from the condition may include memory difficulties, poor problem-solving skills, reduced executive functioning, disorientation, and dementia. These cognitive deficits reduce a patient's ability to travel independently. Additionally, the stress associated with travel may contribute negatively to the individual's mental state, resulting in an exacerbation of PD symptoms, including cognitive issues. A previous systematic review discussed general considerations in air travellers with cognitive impairment.[6]

A poorly acknowledged issue that patients with PD report arises from the potential misinterpretation of their symptoms by fellow travellers. Clinical features such as dysarthria, bradykinesia, unsteady gait, tremor, and masked facial expression may be incorrectly perceived by others as an intellectual disability, intoxication, nervousness, or even an unfriendly demeanour. Such assumptions may manifest as unwelcoming stares and a lack of empathy from others, which in turn creates an isolating travel experience for both patients and their carers.

Thermoregulatory challenges during travel in Parkinson disease

High temperatures are associated with exacerbations of PD symptoms. PD contributes to a higher risk of mortality, particularly among older individuals, during heat waves.[7] Disorders of thermoregulation and the presence of hyperhidrosis and hypohidrosis are frequently reported in PD. Moreover, the use of particular antipsychotic medications in the management of PD complications is associated with an increased risk of heat-related mortality. An additional effect of heat on patients living with PD is the potential for hypotensive episodes, which may result in dangerous falls. Certain medications used in the management of the condition, such as levodopa, may reduce blood pressure. Patients with PD are susceptible to postural hypotension during periods of warm weather. This is a reflection of autonomic nervous system dysfunction.

Recommendations for patients with PD travelling by air are presented in Table 1. For cruise-ship passengers, it is advised to search for "accessible cruising" on the cruise-line company's website, to enquire whether any ports of call require a license for a motorized wheelchair, and to establish if the cruise offers any wheelchair-accessible excursions.

Table 1. Practical recommendations for airline passengers with Parkinson disease

Phase of Air Travel	Recommended Measures
Pre-travel	• Check airline website information about special assistance services available • Prefer to book late morning or early afternoon flights • Request early priority boarding • If direct flights are not possible, ensure a generous flight transfer interval • Aisle seats close to the lavatory are preferred • Consider need for a special meal request • Add a name label to assistive equipment, such as a walking stick, before packing
At the airport	• Arrive earlier than airlines suggest to avoid having to rush to departure gate • Where possible, empty the bladder just prior to boarding • Avail of special assistance at departure and arrival airports • People in wheelchairs may request private checkpoint screenings • If using travellators, be careful with stepping on and off
Aboard the plane	• Inform flight attendant of patient's condition and any special needs • Keep well hydrated and avoid alcohol and caffeine • Gastroparesis is worsened during flights so eat smaller quantities of food more frequently and limit fiber intake • Use ear plugs and eye shades if desired • Caregiver should accompany travelers to lavatory if allowed • Follow advice for the minimization of jet lag symptoms • Exercise great care in descending airplane steps

Conclusion

People living with PD who travel overseas face numerous challenges. These should be sensitively and openly addressed in the pre-travel consultation. Patient organization websites should contain practical and well-informed travel health information for patients and their carers.[8] Greater use should be made of mobile health technology and telemedicine in supporting these vulnerable travellers.[9,10] We recommend that future qualitative research should explore the lived travel experiences of patients with PD.

Authors' contributions

GTF was responsible for study conceptualization and supervision. All authors contributed equally to the drafting and review of this manuscript. The final draft was read and approved by all authors.

Conflict of Interests

The authors declare that they have no conflict of interest.

Ethical Approval

Not applicable.

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Review Highlights

What Is Already Known?

Patients living with Parkinson disease face multiple challenges with their activities of daily living. Only basic information about international travel with Parkinson disease is provided in patient organisation websites

What This Study Adds?

This mini review considers the practical difficulties faced by travellers with Parkinson disease in the airport environment and at all stages of their travel experience. Recommended mitigating measures are provided to assist the traveller with this disease and their travel medicine provider. Recommendations for original research are proposed.

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