Comparing Degenerative Diseases: Parkinson's and Alzheimer's POINT-BY-POINT METHOD, adapted from the text written by Léa Tremblay

"Systematic degenerative diseases, characterized by the gradual deterioration of tissues and organs over time, exert a significant influence on health and impose a substantial burden not only on individuals but also on society and healthcare systems" (Sheikh et al., p.1). Alzheimer's and Parkinson's are both progressive disorders that affect a lot of people each year. While these two neurodegenerative diseases lead to both physical and cognitive decline, they differ significantly in their symptoms, causes, and consequences.

Hook

Background information that connects the hook to the thesis.

Clear thesis statement that introduces the topic and the strategy used to develop it.

Body paragraph 1: symptoms

One of the primary distinctions between Alzheimer's and Parkinson's disease lies in their symptoms. Alzheimer's disease (AD) primarily impacts cognitive functions, leading to memory loss and cognitive decline (Sheikh et al., 2024). In fact, Paolini Paoletti et al. (2021) cite Jack et al. (2018), stating that Alzheimer's "is the most frequent neurodegenerative disorder evolving to dementia" (section 3, p.4). In contrast, Parkinson's disease mainly impacts motor functions and movement. It is "characterized by motor symptoms like tremor and rigidity" (Sheikh et al., 2024, p.6, section 3.2). Healthcare practitioners may suspect Parkinson's when a patient develops abnormal physical symptoms such as muscle spasms or tremors. While Alzheimer's gradually robs individuals of their ability to think, Parkinson's significantly affects mobility and coordination.

Alzheimer's

Parkinson's

Concluding statement

Body paragraph 2 : causes

The causes of these diseases also differ. The "deposition of aggregated amyloid β (Aβ) peptide is considered the main cause of AD" (Ross, 1999, as cited in Paolini Paoletti et al., 2021, section 3.2, p.6), but it can also be a consequence of bad genetics. Similarly, PD also has a genetic component, but it is more commonly linked to vascular dysfunction (Sheikh et al., 2024). As other degenerative disorders, aging and genetic predisposition are also significant risk factors for PD (Sheikh et al., 2024). Thus, while Alzheimer's

Alzheimer's

Parkinson's

develops due to the accumulation of harmful proteins in the brain, Parkinson's is largely the result of vascular impairments.

Concluding statement

Body paragraph 3 : co-existing conditions and consequences

Finally, both diseases are often complicated by coexisting health conditions, which can worsen their effects. AD can evolve into other major health problems when it coexists withdiseases like small vessel disease (SVD) (Paolini Paolettiet al., 2021). This mix of cerebrovascular disorders has beenassociated with an increased risk of developing diabetes and hypertension in midlife (Paolini Paoletti et al., 2021). Similarly, Parkinson's can present additional risk factors when combined with another health condition. Sheikh et al. (2024) explain that hypertension, diabetes, and dyslipidemia may have a link with PD. In both cases, managing these coexisting conditions is crucial in slowing disease progresion and improving patients' quality of life.

Alzheimer's

Parkinson's

Concluding statement

To conclude, while Parkinson's disease mainly affects motor skills and mobility, and Alzheimer's leads to cognitive decline, both disorders involve the devastating impacts related to neurodegeneration. Parkinson's manifests throughmotor dysfunction, whereas Alzheimer's results in cognitiveimpairment and memory loss. Addressing these diseasesrequires ongoing research, advancements in treatment, and increased public awareness to support affected individuals and their families effectively.

Rephrased thesis statement

Summary of the main ideas

Final thought

References

Paolini Paoletti, F., Simoni, S., Parnetti, L., & Gaetani, L. (2021). The contribution of small vessel disease to neurodegeneration: Focus on Alzheimer's disease, Parkinson's disease, and multiple sclerosis. International Journal of Molecular Sciences, 22, 4958. https://doi.org/10.3390/ijms22094958

Sheikh, A. M., Manos, T., Tabassum, S., & Nagai, A. (2024). The role of the vascular system in degenerative diseases: Mechanisms and implications. International Journal of Molecular Sciences, 25(4), 2169. https://doi.org/10.3390/ijms25042169