IS THE ETIOLOGY OF SPORADIC PD PREDOMINANTLY ENVIRONMENTAL OR GENETIC?

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According to the actual scientific data, the nosologic entity known as Parkinson's disease, which is characterized by a certain clinical picture and symptomatic therapeutic response to dopaminergic treatment, is not an etiological homogenous disease. There have been identified more familial forms of this disease with well defined genetic alterations and mendelian type of inheritance, but also some epidemiologic studies have identified in larger populational groups an increased prevalence of some genetic alterations correlated with an increased presence of the sporadic form of disease. More than these genetic entities with mendelian type of inheritance, recent studies have also identified more genetic mutations which are not enough powerful to determine by themselves the phenotype of PD, but when are associated with other genetic alterations and/ or some environmental factors, could determine the clinical appearance of the disease in its sporadic form. It seems that these types of mutation and probably some others which have not yet been identified are able to determine a certain susceptibility of those individuals to develop clinically defined PD if some other factors, including environmental factors are present. This seems to be the most probable explanation why in larger populational groups living in the same environment, only some of them develop clinical PD in its sporadic form. This does not exclude the possibility that in a minority of PD cases, the trigger of the neurodegenerative process could be a well defined environmental, probably toxic factor. In the light of the actual etiopathogenetic data on PD, my personal view is that this nosologic entity is very probable represented by many etiopathogenetic subtypes of disease, which in most instances are multifactorial on the background of a genetic susceptibility, due to different types of genetic mutations which are not yet completely identified but only in some cases.