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REM sleep without atonia as prodromal marker of Lewy body disease: Fake news or the real deal?

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ABSTRACT

Dijkstra and collaborators provide interesting and important issue in clinical research addressing REM sleep without atonia as a possible prodromal marker for Lewy body disease, an early finding in Parkinson's disease. Though prodromal studies are relevant, it is also mandatory to consider the causes of mortality of Parkinson's disease once it is stablished, such as Sudden Unexpected Death in Parkinson's Disease.

Always on the lookout for articles in the *Parkinsonism and Related Disorders Journal*, one in particular [1] has attracted a lot of attention because the results are really fascinating. Although replication is needed, Dijkstra and colleagues addressed a priority issue in clinical research demonstrating that isolated REM sleep without atonia (RSWA) is a possible prodromal marker of Lewy body disease (LBD), providing a time-window for disease modification before manifestations of Parkinson's disease (PD) [1]. (see Fig. 1)

Indeed, it is well established in the literature that RSWA is a implicit diagnostic criterion of REM sleep behavior disorder (RBD) and most importantly, RSWA has been proposed as a biomarker for diagnosing LBD [1]. In this sense, the prodromic aspects of PD are highlighted once again with such information. By definition, prodromal PD refers to the stage in which symptoms or signs of neurodegeneration are detectible, but the condition has not yet progressed sufficiently to diagnose PD [2]. Thus, after more than a decade of important studies, it has been described at least 16 prodromal markers of PD (RBD occupies a prominent place as a marker in most studies) [2].

Despite all this important scientific information and markers, it is certain that PD patients will still visit their neurologists in the near future. An important issue but still neglected by neuroscientists is the aspect of mortality in PD [3]. Unfortunately, epidemiological studies are clear in demonstrating that PD is accompanied by high rates of premature death compared with the general population [4,5]. Due to

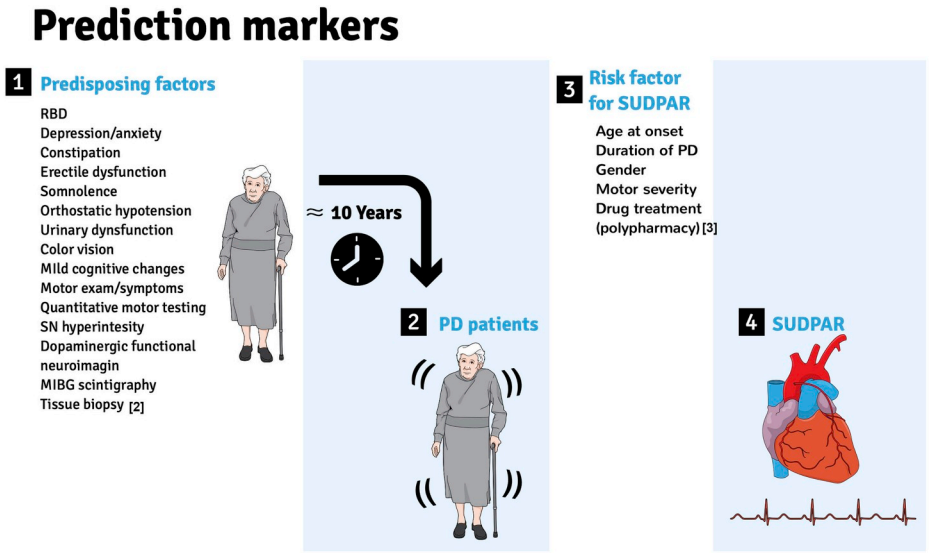

Fig. 1. Possible natural evolution of PD: from prediction markers to SUDPAR. Figure was created in the Mind the Graph platform http://www.mindthegraph.com under Creative Commons License CC community as "attribution share-alike 4.0 licensing": https://creativecommons.org/licenses/by/4.0/.

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these studies, PD has been considered a malignant disease [5] and this has to be assessed and discussed as a serious public health topic [4,5]. Classically, the main causes of death in PD are pneumonia, cerebrovascular and cardiovascular diseases [4]. Additionally, sudden unexpected death in PD (SUDPAR) is increasingly discussed as a contribution to mortality in PD [5]. In a didactic way, SUDPAR is defined as unexpected death of a patient with PD without any satisfactory cause of death as determined by autopsy [4]. Until now, causes of SUDPAR remain elusive [5]. However, the results of translational studies suggest that cardiac abnormalities and autonomic dysfunction play key roles in SUDPAR [5]. In addition, a number of risk factors may be directly associated with SUDPAR such as age at onset, duration of PD, gender, motor severity and drug treatment (polypharmacy) [5], but these factors require further investigations in experimental and clinical studies.

Overall, our research group is sure that there is a long way to go. Obviously, while not knowing the cardiovascular causes responsible for fatal events in individuals with PD, strategies for routine cardiovascular screening (ECG, Holter-monitoring, reveal-recording, echocardiography) should be performed.

Disclosure

The authors report no conflicts of interest.

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