“Sleep in Wilson’s disease: Questionnaire based study” – Comments on the article

Sir,

We read with great interest the paper titled “Sleep in Wilson’s disease: Questionnaire based study”,[1,2] published earlier in this journal. This study aimed at evaluating the frequency and nature of sleep abnormalities in patients with Wilson’s Disease using two validated questionnaires. A defined control group was used in order to further delineate these differences from apparently healthy population. However, there are certain points or clarifications, which we feel compelled to raise, so that the findings of the study can be placed in perspective.

- The study population is drawn from the weekly Wilson’s disease clinic and in-patient services Department of Neurology. The authors have not mentioned the standardization procedure used for defining the cases. Furthermore, there is a mention about Magnetic Resonance Imaging evaluation done on the selected patients in the abstract but the radiological data is not presented in the text.

- The sample was recruited prospectively over a 2-year period. During this period, only 25 cases were deemed eligible for selection. No information is gleaned on the number of subjects deemed ineligible or those who were not consenting. Did the authors attempt a comparison between these groups if information is available? This would have implications on the external validity of the findings.

- The study sample is inherently heterogeneous with regard to age range (14-62 years) and duration of illness (2-312 months). In a study such as this, it would have been better to use a more homogenous sample. It is conceivable that factors like age, obesity, duration, etc., will have a bearing on sleep parameters studied and therefore will be potential confounders. The authors have not mentioned about the possible effect of these confounders although they have acknowledged sample heterogeneity briefly in their discussion.

- The authors have not given the distribution of patients who are drug naive and on de-coppering treatment. The study has found that patients with longer duration of illness and those on de-coppering treatment had significantly lesser daytime somnolence. However, on scrutiny, the number of abnormal Epworth Sleepiness Scale scores in de-coppered patients was 19 and in drug naïve cases, it was 3. This is confusing to us. The authors have not mentioned the corresponding percentages and the P value for statistical significance.

- We also notice a flaw in the selection of control group. They were essentially staff of the institute or healthy relatives of in-patients who were admitted for other disorders. No mention is made of their medication status, if any. The sleep quality of these relatives who were attending to the patients in the ward will naturally be affected compared to their home settings and therefore, cause distortion in interpretation of findings. This may explain the high prevalence of sleep abnormalities noted in control group in the study. Lack of age and gender matching is also noticed between cases and controls. This is at variance with previous comparable studies. [2,3] It is also possible that the case population being drawn from a specialty clinic in a tertiary hospital, the catchment area will be wider and this further affects the comparability between cases and controls. All these factors point to an unmatched control group.

- The study concludes that a significant proportion of patients with Wilson’s Disease suffer from sleep abnormalities. It is a moot point whether the sleep symptomatology noted were independent of depression or not. Various studies across cultures put the estimates of co-morbidity between Wilson’s Disease and depression at 20-30%. [4,5] If the former were the case, it would mean that distortions in sleep duration and architecture are inherent to the disease and not just an epiphenomenon of depression.

In summary, we would say that though the study has attempted to uncover a relatively unexplored area, the limitations in design and reliance on questionnaire based data compromise the comparability and validity of the findings. Future studies with objective sleep measures may throw more light into this area and to whether successful treatment may reverse some of these impairments noted.

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