

Post-COVID Cognitive Recovery in a Hemodialysis Patient Using Neuroprotective Supplements

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COVID-19 has been shown to cause significant long-term effects, particularly on cognitive function, in recovering patients. Patients with chronic illnesses, such as chronic kidney disease (CKD), are at higher risk for severe COVID-19 complications and post-COVID cognitive dysfunction (PCCD).

Post-COVID Cognitive Dysfunction (PCCD) is defined as:

- New cognitive impairment 3 months post-infection
- Symptoms: inattention, aphasia, amnesia, fatigue, lack of motivation.
- Structural/functional brain changes observed.

COVID-19 and Cognitive Dysfunction - CNS Impact:

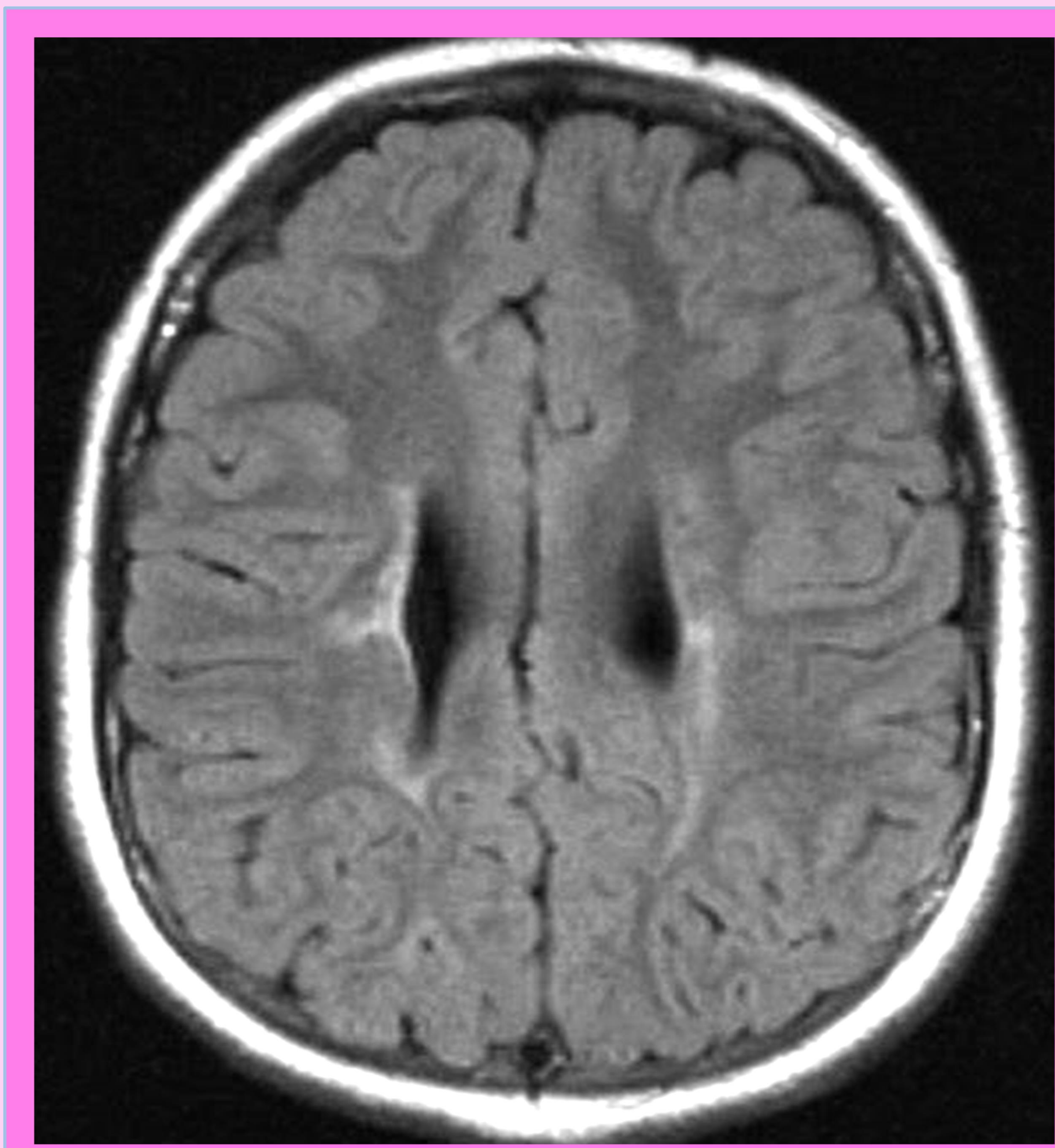
- Respiratory inflammation triggers CNS inflammation
- Impaired neurogenesis, myelin disruption, neurotoxic astrocyte reactivity.

Case report

A 68-year-old patient recovering from severe COVID-19 pneumonia in sopor comatose state for 2 weeks on oxygen support, on hemodialysis with chronic kidney disease stage 5 for 20+ years. This patient also has secondary anemia and chronic hepatitis C infection. Initial MMSE (Mini-Mental State Examination) Score was 21 which indicates that the patient has cognitive impairment.

CT Scan of the Brain (Native Series):

Small lacunar infarcts in the basal ganglia in the sections of the cerebrum. Hypodense areas of chronic ischemic vascular character around the frontal horns. More pronounced cortical atrophic changes are observed in the cerebral convexity, with secondary dilation of the ventricular system.

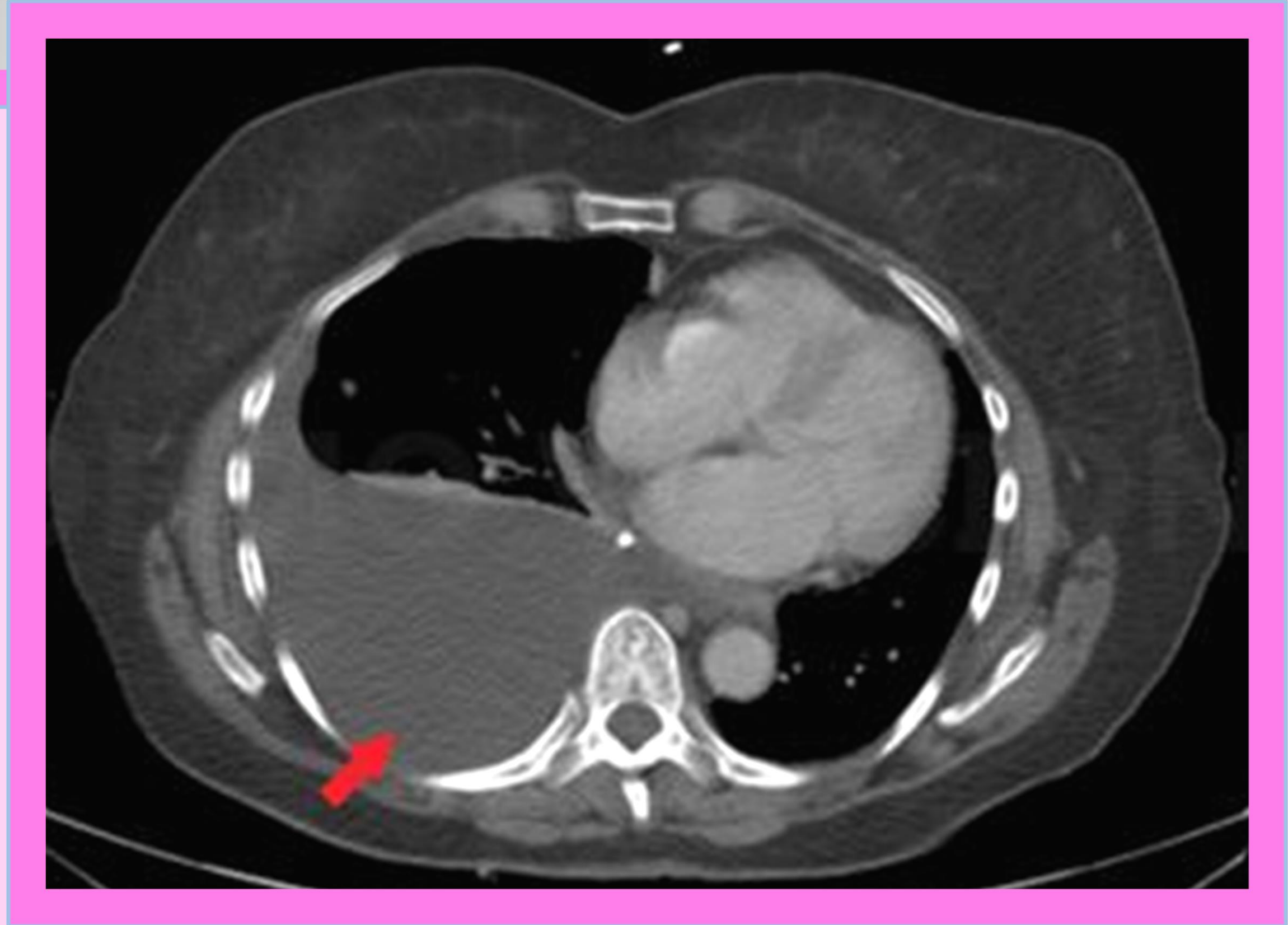


Chest X-ray:

In the right lung and in the middle lobe, areas of consolidation with a small pleural effusion are observed. A similar small area of consolidation is also seen in the lower left lobe, with fibrous-stranded peribronchial changes at the base.

CT Scan of the Lungs (Native Image):

Chronic fibrotic changes bilaterally at the base with ground-glass opacities suggestive of viral infection. Pleural effusion bilaterally, larger on the right side. Enlarged mediastinal lymph nodes.



Treatment:

- Neuroprotective Supplements - NurAid Capsules 3x2 daily for 3 months
- Improvement in MMSE score to 26
- Continued NurAid with a decreased dose of 3x1 for another 3 months.

These patients also require regular cognitive evaluations and monitoring, blood pressure control, diabetes management, electrolyte balance and some supportive interventions such as psychological support and cognitive rehabilitation exercises.

NurAid Treatment - Three herbal components in this supplement have blood thinning properties. The patient, who is on subcutaneous anticoagulant therapy due to a recent COVID-19 infection and continues to receive i.v anticoagulants three times weekly during hemodialysis, requires careful dose adjustment to reduce the risk of bleeding complications.

Results: The patient was treated for all his complications and discharged in good condition with prescribed neuroprotective supplements, which resulted with overall cognitive improvement seen in the next follow-ups.

Conclusion: The treatment with neuroprotective supplements such as NurAid can significantly improve brain function and help manage post-COVID cognitive dysfunction in chronic kidney disease patients, leading to improvement of overall outcomes.