

Cognitive dysfunction refers to impaired memory and judgment due to brain cell death and functional decline, which interfere with social life and interpersonal relationships.

Cancer-related cognitive impairment or “chemo-brain” is referred to a decline in a variety of neuropsychological tasks after chemotherapy or following other anticancer treatments such as radiation therapy or surgery, in patients with non-central nervous system cancers.

Patients with chronic renal disease and chronic obstructive pulmonary disease (COPD) showed the increase the risk of cognitive impairment, establishing causality remain unclear. Pathological mechanisms such as hypoxia and structural brain changes are hypothesized to cause cognitive decline in COPD.

COVID-19 is associated with a high rate of delirium, and systemic and neurogenic inflammation to viruses. Delirium is caused by the downstream production of response-derived interleukins downstream of inflammation, which affect cognitive function. Data from the Brain Bank have revealed brain atrophy after COVID-19 infection even in outpatients, suggesting a link to cognitive dysfunction, and postmortem brain studies of COVID-19 have shown that changes similar to those seen in patients with Alzheimer's disease can be seen in the brains of COVID-19 patients.

Neurological and psychiatric symptoms such as fatigue, brain fog, depression, and anxiety are known to occur. Post-illness psychiatric symptoms in healthcare workers following COVID-19 infection need to be managed. Reducing post-illness symptoms in them is important to prevent leave, turnover, and medical disruption. While analgesics and other drugs are ineffective for sequelae, anti-viral agents are expected to be effective, their use is limited, and the use of herbal medicines by specialists is attracting attention.

In this symposium, newly different types of cognitive impairment will be presented, we will discuss the essence of cognitive impairment including COVID-19 related cognitive disorders, starting from delirium and encephalopathy, and continuing to long COVID, including the current pathophysiology and realistic responses in outpatient clinics for post-affective symptoms.