

## **COVID-19 and Benzodiazepines**

Concerns have been raised about the acute use of benzodiazepines for behavioural control (e.g. delirium, rapid tranquilisation) in patients diagnosed with, or exhibiting symptoms of, COVID-19.

### **Respiratory depression**

Benzodiazepines do not cause respiratory depression in therapeutic doses. They do not commonly cause respiratory depression in isolated benzodiazepine ingestion. Respiratory compromise can be significant if benzodiazepines are co-ingested in significant quantities with alcohol or other drugs (1).

There is concern that benzodiazepines may cause respiratory depression in patients with existing respiratory compromise. The risk may reasonably be expected to be higher in patients with pre-existing respiratory problems (e.g. severe COPD). Data are somewhat conflicting; some studies have failed to find any clear association between use of benzodiazepines and increased hospital admissions or impaired blood gases (2) whilst others have found an increased risk of outpatient respiratory exacerbations in COPD (3).

### **Mortality risk in pneumonia**

Chronic benzodiazepine exposure is associated with an increased risk of developing and dying from pneumonia (4). There may be an increased susceptibility to infection via activation of GABA<sub>A</sub> receptors on immune cells (5) and sedation may increase the risk of aspiration, amongst other factors.

Patients who are taking antipsychotic medication may already be at increased risk of developing pneumonia, although the reasons for any association are not clear. Pneumonia is a common cause of death in people taking clozapine, possibly due to saliva aspiration (6). Frail elderly patients taking antipsychotics are also at increased risk (7).

### **COVID-19**

There are no data on the impact of chronic or acute use of benzodiazepines in patients with symptoms of COVID-19 infection. It is also not known whether having an existing or new mental health condition (including delirium), or taking other psychotropic medication, increases the risk of developing COVID-19 pneumonia.

### **Most of the known risks apply to chronic use of benzodiazepines**

Sedative drugs may be required to manage agitation or anxiety. In the context of acute mental health disturbance, including delirium, rapid control of agitated behaviour may be essential to maintain safety of the patient and others and in order to facilitate administration of necessary medical treatments.

Patients who are exhibiting respiratory symptoms should be offered non-benzodiazepine sedating drugs first, where possible. These may include antipsychotics (use first line unless

contraindicated) or other sedatives (promethazine, zopiclone). If this is not effective, benzodiazepines may be used. Choose short-acting drugs (lorazepam) and prescribe the lowest dose for the shortest period of time. Monitor respiratory function each hour until no concerns about physical health status and document on the National Early Warning Score (NEWS) chart.

### Recommendations

- Benzodiazepines can be used in patients with COVID-19 infection
- Where possible non-benzodiazepine drugs should be tried first
- If it is necessary to prescribe, the lowest dose should be used for the shortest possible time
- Monitoring of respiratory function after administration is recommended each hour until no concerns about physical health status and document on the NEWS chart.
- Clinicians must be familiar with the use of the reversal agent flumazenil. Note however that flumazenil should be used only where respiratory arrest/depression is known to be caused by benzodiazepines alone. Flumazenil is located in the emergency bags on inpatient units.

**Contacts:** For Further support and advice: **Inpatient and mental health services:** Ward Pharmacist or contact pharmacy department [pharmacy@candi.nhs.uk](mailto:pharmacy@candi.nhs.uk) Tel: 0207 561 4104/3

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