

Neuromalignant syndrome

Rare but potentially life threatening condition. It is an idiosyncratic reaction and occurs in a minority of the cases treated with antipsychotics. Prevalence is 0.2%. Can develop at any time but usually occurs on initiation or increase in the dose of antipsychotics. Cause is thought to be the inhibition of central dopamine receptors in hypothalamus (part of the brain which regulates temperature) which results in increase heat generation and decreased loss. NMS is more common in patients with dehydration, organic brain pathology and in young males. Mortality rate varies between 5-20% but if picked up early and managed appropriately it has a good prognosis.

Signs and symptoms

- Muscle rigidity, increased salivation, dyskinesia (difficulty in performing vol. movements), orbiculary crisis (uncontrollable upward movement of eyes) and dysphagia.
- Hyperthermia (can be as high as 108 degree F but rarely goes this high), fluctuating blood pressure, increased heart rate, rapid breathing and confusion.

Blood/urine tests

- Metabolic acidosis
- Increased CPK
- Increased transaminases
- Increased WBC count
- Hyponatremia, hyperkalemia and hypocalcaemia
- Myoglobinuria

Treatment and management

- Stop the offending drug
- Monitors vitals
- Serial CPK to note the trend
- Cooling blankets
- Medical opinion and transfer to ICU
- Oral bromocriptine/sub cutaneous apomorphine or dantrolene for muscular rigidity
- I/V hydration and correction of electrolyte abnormalities
- DIC prophylaxis/intubation and artificial ventilation if required
- Sedation with benzodiazepines

Complications

- Rhabdomyolysis
- Renal failure
- Respiratory failure/PE

Restarting antipsychotics

- Do not give antipsychotics for 2 weeks
- Use different antipsychotic, preferably atypical. Best not to use depots.
- Start with a low dose and gradually increase
- Benzodiazepines for agitation and ECT can be used to treat psychosis