Myasthenia Gravis

a. What is Myasthenia Gravis?
It is an acquired autoimmune condition characterised by presence of IgG antibodies targeting the post synaptic receptor at NMJ.

b. Which areas does it commonly involves?
- Eyes causing diplopia, ptosis
- Bulbar weakness causing dysarthria and dysphasia.
- Neck and proximal muscle weakness.

c. How is it diagnosed?
- Clinical features:
  1. Weakness of voluntary muscle that is exacerbated by repetitive exercise (fatigue levels weakness)
  2. 15% confined to eyes
  3. Generalised form may progress to weakness of flexors and extensors of the neck and proximal muscle of trunk.
  4. Airway obstruction due to thymoma
  5. Respiratory failure
- EMG
- Tension test
- Serum auto antibodies to AChR

d. How is it treated?
- Pharmacology
  1. Drugs inhibiting the Cholinesterase enzyme e.g Pyridostigmine
  2. Immunosuppression e.g corticosteroids, azathioprine and cyclosporine
- Surgical thymectomy.
- Plasma exchange
- IVlg exchange.

e. What are the potential factors that correlate with the need of prolong ventilation following thymectomy?
- FVC < 2.9L
- History of chronic respiratory disease
- Grade III/IV of MG.
- Long history of disease > 6 yrs.
- Major body cavity surgery
- Pyridostigmine >750mg/day.
- Blood loss >1L.

f. What are drugs avoided in Myasthenia Gravis patients?
**Anaesthetic agents like NMBA**
**Sedatives like Diazepam**
**LA esp Ester linked like prilocaine.**
**Affects metabolism of drugs dependant on esterases for metabolism remifentanil, mivacurium, esmolol.**
**Antibiotics like aminoglycosides like gentamicin**
**CVS drugs like beta blockers, procainamide**
**Anticonvulsants like phenytoin and gabapentin**

g. What is the diagnosis in the following chest x ray of the patient?

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