**Anticholinergics**

*Lead as a 12-15 minute group discussion with active participation from the trainees. Used a white board to write to add visual learning component.*

**Objectives**

1. Identify anticholinergic medications.
2. Discuss common side effects of anticholinergic medications.
3. Understand the prescribing cascade as it relates to anticholinergics.

**Neurotransmitter:**

Acetylcholine working at the muscarinic receptors (M1-M5) of autonomic motor system, usually attributed to memory and learning. There are muscarinic sites all over body as evidenced by numerous side effects.

**Side Effects and Consequences:**

Young patients can tolerate vs on the edge of the cliff/point tip person.

- **Brain:** impairs memory, agitation, delirium, hallucinations
- **Eye:** dilates pupil, blurred vision, increases intraocular pressure (precipitate narrow angle glaucoma) → accidents and falls
- **Mouth:** decreases saliva production, dry mucous membranes → malnutrition, musical damage, misfit dentures, dental caries
- **Heart:** tachycardia → worsen angina
- **GI:** decreases motility and gastric acid production → fecal impaction
- **Renal:** decreases bladder activity → promotes urinary retention
- **Skin:** fever, decreases sweat production, cutaneous vasodilation → hyperthermia

**Common Offenders:**

- Antidepressants: TCAs and Paroxetine
- Antihistamines: Diphenhydramine
- Antipsychotics: Clozapine, Olanzapine and Quetiapine
- Skeletal Muscle Relaxants: Cyclobenzaprine
- **GI:** Hyoscyamine, Dicyclomine, Atropine, Scopolamine
- Urinary Incontinence: Oxybutynin, Tolerodine, Trospium
Prescribing Cascade:

In one study, 80% of those 60 yo and older that took anticholinergics had MCI compared to 35% of non-users, but were not at risk of developing dementia.

- MCI → Acetylcholinesterase Inhibitor → incr urination and diarrhea → Antispasmodic/anticholinergic agent added
- Incontinence → Anticholinergic agent added → MCI → Acetylcholinesterase Inhibitor
- Raise suspicion when you see a combination of these drugs on board

References