Antipsychotic-Induced Extrapyramidal Symptoms
Role of Anticholinergic Drugs in Treatment

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Summary

Acute extrapyramidal symptoms (EPS), specifically the motor syndromes of parkinsonism, acute akathisia and acute dystonia, are among the most common adverse effects of antipsychotic medication. They produce physical disability and subjective distress, interfere with psychosocial and occupational adjustment, confound the clinical assessment of psychiatric symptoms, and lead to poor compliance with medication.

Parkinsonism, akathisia and dystonia can also be chronic conditions in patients receiving long term antipsychotic treatment. However, the most common movement disorder seen in such patients is tardive dyskinesia. The presence of the
obvious movements of this condition can stigmatise patients. In the more severe cases, disability may be directly related to the particular movements, with interference with mobility, respiration, speech, eating, difficulty swallowing and possibly an increased risk of choking.

To tackle acute EPS, the clinician will need to consider modifying the dosage of conventional antipsychotics or switching to a new antipsychotic that has a lower liability for these problems. If adjunctive drug therapy is considered necessary, the choice will depend partly on the particular extrapyramidal syndrome exhibited by the patient and partly on the adverse effect profiles of the possible treatments.

Anticholinergic (i.e. antimuscarinic) agents are widely used in psychiatric practice to treat and prevent EPS. However, there are hazards with these drugs, including a risk of abuse and toxic confusional states, anticholinergic adverse effects (such as dry mouth, blurred vision, tachycardia, constipation, and urinary hesitation and retention) and cholinergic rebound phenomena on withdrawal. In the light of these problems, it has been recommended that anticholinergic agents are not routinely administered for the prophylaxis of EPS, unless there is a history of acute dystonia or known susceptibility to these antipsychotic-induced motor phenomena. Indeed, the evidence from published studies supports the value of anticholinergic drugs as treatment for EPS rather than for prophylaxis.

Despite the efficacy of anticholinergic drugs, not all EPS are equally responsive to this treatment. The tremor and rigidity of parkinsonism are reliably relieved by these agents. However, this syndrome is known to abate spontaneously over time. After 3 months, the majority of patients initially requiring treatment with anticholinergics can have this therapy withdrawn without a relapse of parkinsonian symptoms. Therefore, anticholinergics should be periodically withdrawn to test the need for their continued prescription.

Acute dystonic reactions are also effectively treated with anticholinergic drugs. In severe cases, intravenous or intramuscular administration can provide relief in minutes. The place of anticholinergics in the treatment of tardive dystonia is less clear, as only a proportion of patients will show any benefit.

Anticholinergics also have an uncertain reputation in both acute and chronic akathisia, being of limited efficacy. Acute akathisia may respond best to anticholinergics if it is accompanied by parkinsonism, in which case both syndromes may improve.

Anticholinergic drugs are not effective in alleviating tardive dyskinesia. The evidence suggests that these agents can sometimes worsen the movements, and when discontinued, a modest improvement may be seen in a proportion of patients exhibiting this condition. However, it has not been established that patients receiving antiparkinsonian medication in addition to antipsychotic medication are at a greater risk of developing tardive dyskinesia.

1. Antipsychotic Drugs and Extrapyramidal Symptoms

Following the introduction of antipsychotic drugs in the 1950s, it was soon noticed that treatment with these agents induced a range of abnormal, involuntary movements. These acute extrapyramidal symptoms (EPS) were classified into 3 movement disorders – akathisia, dystonia and parkinsonism. Chronic movement disorders with a later onset were also identified, namely tardive dyskinesia, tardive dystonia and chronic akathisia.