Aripiprazole is chemically unrelated to any antipsychotic available. It possesses a unique pharmacological profile with potent partial agonist activity on D_2 and 5HT_2 receptors and modest antagonist activity for 5HT_2 and 5HT_1, alpha_1 adrenoreceptor and H_1 histaminergic receptors. In addition to its partial agonist activity at D_2 receptors, aripiprazole has high affinity for D_4 and moderate affinity for D_3 receptors. Aripiprazole has a major metabolite with similar affinity and activity at D_2 receptor as the parent compound. From various pharmacokinetic studies it has been seen that peak serum concentration occurred after 3-5 h following oral administration, with a bioavailability of 87%, it is metabolized in the liver with mean elimination t½ of 48-68 h, and steady state concentration achieved by day 14 with once daily dosing. Over 2-30 mg/day dosing range, aripiprazole exhibited linear kinetics at steady state.

**Dosage:** Aripiprazole is administered orally once daily. Its absorption is not altered by food. The effective dose range is 10-30 mg. The recommended starting and maintenance dose of 15 mg daily enables physicians to initiate therapy at an effective dose without the need for titration. It can be subsequently adjusted to optimize individual patient response.

**Adverse effects:** The most common adverse effects reported with aripiprazole are headache, insomnia, agitation, dyspepsia, nausea, vomiting, constipation, anxiety and tremors. It may also impairs cognitive functions and motor skills. Prolactin elevation (3% from the basal value) was seen with aripiprazole which is significantly lower than seen with haloperidol (120%) and risperidone (600%). It does not increase the QTc interval which is significantly increased with risperidone. Aripiprazole treatment also results in significant reduction in mean serum total cholesterol level as compared to other atypical antipsychotics which in turn significantly raises the serum total cholesterol levels. Also aripiprazole is associated with minimal increase in body weight that is much less in contrast to olanzapine.

**Contraindications and precaution:** Possible contraindications are: patients known to be hypersensitive to aripiprazole, recent history of myocardial infarction, unstable heart disease, pregnancy and lactation due to lack of enough experience with the drug. Therefore, aripiprazole should be used with caution in patients with known cardiovascular diseases, cerebrovascular disease or in conditions predisposing to hypotension. Also it should be used cautiously in patients with history of seizure or condition that lowers seizure threshold i.e. Alzheimer’s disease. It should be cautiously used in patients operating hazardous machinery. Special care should be taken in elderly patients having psychosis with dementia and one should be vigilant for orthostatic hypotension, swallowing difficulties or excessive somnolence.

**Drug interactions:** Cytochrome P450 enzymes CYP3A4 and CYP2D6 are responsible for aripiprazole metabolism. Theoretically the drugs which induce or inhibit these enzyme are responsible for increase or decrease in aripiprazole clearance, but from various studies till now it has been shown that aripiprazole has no drug interaction with carbamazepine, fluoxetine, quinidine, warfarin, omeprazole, ketoconazole, lithium or with dextromethorphan.

**Conclusion:** Aripiprazole is the latest atypical antipsychotic agent having novel pharmacotherapeutic profile. It has a special status of having partial agonist/agonist-antagonist activity at various dopamine and 5HT receptors that provides it a novel safety device. It is beneficial in improving positive as well as negative symptoms and may also have a role in mania. Due to its negligible adverse effects on QTc interval, glucose and lipid metabolism it may prove to be an unique agent for treatment of schizophrenia which will be further substantiated with its widespread use.

**Sources**


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