



PHARMACY FUN TRIVIA!

for Physicians and Nurse Practitioners

Try this trivia challenge based on a true patient case to learn more about the commonly prescribed antipsychotic, **aripiprazole**.

Q In which of the following scenarios would you consider ordering an aripiprazole level?
See the answer on Page 2!

- a) When the dose is high
- b) Routinely, to treat-to-target drug concentration
- c) Never, as reference ranges are not established
- d) When mood is suboptimal and there are concerns about adherence
- e) When mood is suboptimal and there are potential drug interactions

General information

Aripiprazole is a third generation antipsychotic (TGA). TGAs have a lower risk of metabolic, extrapyramidal, and anticholinergic effects compared to first and second generation antipsychotics

Approved indications

Schizophrenia, Bipolar disorder, Major depression (adjunctive treatment)

Oral dose range (available as 2 mg, 5mg, 10mg, 15 mg, 20 mg, 30 mg tablets)

- 5-30 mg daily (Schizophrenia)
- 10-30 mg daily (Bipolar)
- 2-15 mg daily (Major depression, treatment resistant, adjunctive treatment)

Utility of therapeutic drug monitoring (TDM)

TDM has a limited role and is not routinely ordered because the reference range is not well established to correlate to efficacy of treatment, but pharmacokinetics in healthy volunteers appear to be dose proportional with usual doses

Suggested drug level reference range (for Schizophrenia)

- 335-1115 nmol/L (BC Provincial toxicology centre)
- 223-780 nmol/L (Lexidrugs)

Check the next page to find out the answer!

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Q In which of the following scenarios would you consider ordering an aripiprazole level?

A Clinical scenarios when it might be reasonable to order a drug level:

✓ **d) Adherence**

If your patient's mood is suboptimal despite an appropriate dose and adequate duration, TDM may help assess adherence.

✓ **e) Drug interactions**

Aripiprazole levels will be decreased by CYP3A4 and CYP2D6 inducers. Clinically significant interactions may occur with concomitant strong inducers such as, phenytoin, phenobarbital, or carbamazepine (carbamazepine may reduce the total bioavailability by 70%). Consider a drug level if the mood is suboptimal despite an appropriate dose (and no adherence issue), AND there's a potential drug interaction which may reduce aripiprazole levels.

Practicalities of ordering aripiprazole levels

- It may be ordered through your local lab
- Results may take 1 week or longer
- Timing of the blood draw should be **just prior to the next oral dose** AND patient has been **on the same oral dose for at least 2 weeks** to ensure steady-state levels (the IM formulation has a much longer half-life and usually given monthly therefore not prior to having received at least 3 injections).

In summary

- Aripiprazole levels are not routinely ordered because the reference range is not well established to determine treatment efficacy
- However, it is reasonable to consider ordering a drug level with suboptimal mood and you are concerned about adherence or a drug-interaction affecting response
- Consider asking your local PCN PCCP to help assess adherence, drug-interactions, and dose titrations

References:

Rxfiles.ca, Lexidrug, *Clinical Handbook of Psychotropic Drugs* (25th edition), Castberg (2007), BC Drug and Poison Information Centre