PrecisView CNS

Phenomics HEALTH

Psych Test

Specimen No: PVCSAMP-003
Physician: Ima Test

DOB: 01/01/2000
Sex: MALE

Sample Collection: Jan. 01, 2021 08:00 EST
Sample Analysis: Jan. 04, 2021 08:00 EST

FOR PATIENTS, CONSULT YOUR HEALTHCARE PROVIDER PRIOR TO ANY MEDICATION OR DOSE CHANGES.

MEDICATION	DOSAGE FREQUENCY	REFERENCE RANGE LOWER LIMIT	REFERENCE RANGE UPPER LIMIT	CRITICAL VALUE	DDI*
IN THE MEDICAL RECORD:					
ACETAMINOPHEN Tylenol	325 mg PRN	Not Detected/PRN			⚠
GABAPENTIN Neurontin	300 mg DAILY	2000 ng/mL	20000 ng/mL		⚠
LORAZEPAM Ativan	10 mg QHS	Not Detected			⚠
OXYMORPHONE Opana	8 mg PRN	Detected			⚠
SERTRALINE Zoloft	50 mg QHS	10 ng/mL	150 ng/mL		⚠
ZOLPIDEM Ambien	5 mg QHS	Not Detected			⚠
NOT IN THE MEDICAL RECORD:					
ARIPIPRAZOLE Abilify	Not in medical record	150 ng/mL	500 ng/mL		⚠
FLUOXETINE Prozac	Not in medical record	120 ng/mL	500 ng/mL		⚠

This PrecisMed® test was developed and its performance characteristics determined by Phenomics Health Inc. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA as qualified to perform high-complexity testing. This test is used for clinical purposes, though results should not be intended for use as a sole means for a clinical diagnosis or patient management decisions. It should not be regarded as investigational or for research. Phenomics Health Inc. tests are not chiral specific and will not distinguish between enantiomeric forms of certain drugs. Use professional judgement when interpreting the results of the detected medications with consideration for the patient's known medications.

CLIA # 23D2194915

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Report Released: Jan. 26, 2023 12:45 EST
Analysis: Phenomics Health Inc.
Certified: N/A
Laboratory Director: Dr. Manoj Tyagi, Ph.D.

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MEDICATION	DOSAGE FREQUENCY	REFERENCE RANGE LOWER LIMIT	REFERENCE RANGE UPPER LIMIT	CRITICAL VALUE	DDI*
TRAMADOL Ultram	Not in medical record	615 ng/mL	1222 ng/mL	1300	▲

Reference Range:
Detected concentration inside

10.1 Within Range

999 Out of Range

***Drug-Drug Interaction (DDI):** See details on the following pages.

Major - The use of these medications together is contraindicated. Rare exceptions may exist.

Moderate- The use of these medications together may be contraindicated in a select group of patients. The patient should be monitored for possible manifestations of the interaction.

MEDICATIONS NOT IN ASSAY:

LITHIUM (300 MG)

Medical record transcription accuracy is the responsibility of the ordering physician

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Interaction Details

FLUOXETINE / ACETAMINOPHEN: **MODERATE**

Evidence Level Established

Description

The serum concentration of Acetaminophen can be increased when it is combined with Fluoxetine. Co-administration of fluoxetine with a CYP2D6 substrate may lead to increased serum concentrations of the CYP2D6 substrate since fluoxetine is a known CYP2D6 enzyme inhibitor.[A203270,L7664]

Management

References

Sager JE, Lutz JD, Foti RS, Davis C, Kunze KL, Isoherranen N: Fluoxetine- and norfluoxetine-mediated complex drug-drug interactions: in vitro to in vivo correlation of effects on CYP2D6, CYP2C19, and CYP3A4. Clin Pharmacol Ther. 2014 Jun;95(6):653-62. doi: 10.1038/clpt.2014.50. Epub 2014 Feb 25.

FLUOXETINE / GABAPENTIN: **MODERATE**

Evidence Level Established

Description

Gabapentin may increase the central nervous system depressant (CNS depressant) activities of Fluoxetine. Since fluoxetine is a central nervous system (CNS) acting drug, co-administration with other CNS acting drugs can result in additive adverse effects.[L7664]

Management

If co-administration with fluoxetine and a CNS acting drug is necessary, patients should be monitored for an increase in CNS adverse effects.[L7664]

References

FLUOXETINE / LORAZEPAM: **MODERATE**

Evidence Level Established

Description

The serum concentration of Lorazepam can be increased when it is combined with Fluoxetine. Co-administration of fluoxetine with a benzodiazepine can lead to increased serum concentrations of the benzodiazepine.[A177925,L7664] For example, fluoxetine can reduce the clearance of alprazolam, leading to increased serum concentrations and subsequent increases in psychomotor impairment.[A177925,L7664]

Management

References

Greenblatt DJ, Wright CE: Clinical pharmacokinetics of alprazolam. Therapeutic implications. Clin Pharmacokinet. 1993 Jun;24(6):453-71. doi: 10.2165/00003088-199324060-00003.

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FLUOXETINE / OXYMORPHONE: **MODERATE**

Evidence Level Established

Description

The serum concentration of Oxymorphone can be increased when it is combined with Fluoxetine. Co-administration of fluoxetine with a CYP2D6 substrate may lead to increased serum concentrations of the CYP2D6 substrate since fluoxetine is a known CYP2D6 enzyme inhibitor.[A203270,L7664]

Management

References

Sager JE, Lutz JD, Foti RS, Davis C, Kunze KL, Isoherranen N: Fluoxetine- and norfluoxetine-mediated complex drug-drug interactions: in vitro to in vivo correlation of effects on CYP2D6, CYP2C19, and CYP3A4. Clin Pharmacol Ther. 2014 Jun;95(6):653-62. doi: 10.1038/clpt.2014.50. Epub 2014 Feb 25.

FLUOXETINE / SERTRALINE: **MODERATE**

Evidence Level Established

Description

The serum concentration of Sertraline can be increased when it is combined with Fluoxetine. Co-administration of fluoxetine with a CYP2D6 substrate may lead to increased serum concentrations of the CYP2D6 substrate since fluoxetine is a known CYP2D6 enzyme inhibitor.[A203270,L7664]

Management

References

Sager JE, Lutz JD, Foti RS, Davis C, Kunze KL, Isoherranen N: Fluoxetine- and norfluoxetine-mediated complex drug-drug interactions: in vitro to in vivo correlation of effects on CYP2D6, CYP2C19, and CYP3A4. Clin Pharmacol Ther. 2014 Jun;95(6):653-62. doi: 10.1038/clpt.2014.50. Epub 2014 Feb 25.

FLUOXETINE / ZOLPIDEM: **MODERATE**

Evidence Level Established

Description

Fluoxetine may increase the central nervous system depressant (CNS depressant) activities of Zolpidem. Zolpidem is known to exert CNS depressant effects. Administering CNS depressants with zolpidem may lead to profound CNS depression due to additive effects [FDA label], [A175585]. In addition, “sleep-driving” and other complex behaviors may occur with zolpidem use while the patient is not fully awake. The risk of these behaviors increases with the use of other CNS depressants and alcohol [FDA label].

Management

Avoid co-administration with other CNS depressants. During concurrent use of a CNS depressant, dosage adjustments of zolpidem and the CNS depressant may be necessary due to the potential for additive effects. Do not use zolpidem with potent CNS depressants, such as hydrocodone. Some combinations may be contraindicated. Immediately evaluate any new onset behavioral changes when these agents are coadministered, and stop concurrent administration if complex behaviors are observed [FDA label], [L5584].

References

Shayegani R, Song K, Amuan ME, Jaramillo CA, Eapen BC, Pugh MJ: Patterns of zolpidem use among Iraq and Afghanistan veterans: A retrospective cohort analysis. PLoS One. 2018 Jan 23;13(1):e0190022. doi: 10.1371/journal.pone.0190022. eCollection 2018.

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FLUOXETINE / ARIPIPRAZOLE: **MODERATE**

Evidence Level Established

Description

The serum concentration of Aripiprazole can be increased when it is combined with Fluoxetine. Co-administration of fluoxetine with a CYP2D6 substrate may lead to increased serum concentrations of the CYP2D6 substrate since fluoxetine is a known CYP2D6 enzyme inhibitor.[A203270,L7664]

Management

References

Sager JE, Lutz JD, Foti RS, Davis C, Kunze KL, Isoherranen N: Fluoxetine- and norfluoxetine-mediated complex drug-drug interactions: in vitro to in vivo correlation of effects on CYP2D6, CYP2C19, and CYP3A4. Clin Pharmacol Ther. 2014 Jun;95(6):653-62. doi: 10.1038/clpt.2014.50. Epub 2014 Feb 25.

FLUOXETINE / TRAMADOL: **MODERATE**

Evidence Level Established

Description

The risk or severity of serotonin syndrome can be increased when Fluoxetine is combined with Tramadol. Tramadol has been implicated in the development of serotonin syndrome,[A173980,L9257] particularly in combination with other medications that can precipitate or contribute to serotonin syndrome, such as the subject drug. Symptoms of serotonin syndrome include altered mental status, neuromuscular abnormalities, and autonomic hypersensitivity.[A173980]

Management

If concomitant therapy with multiple serotonergic agents is necessary, the patient should be monitored carefully for the above signs and symptoms of serotonin syndrome, particularly during initiation of therapy and with any increases in dose. If serotonin syndrome is suspected, tramadol should be discontinued immediately.[L9257]

References

Beakley BD, Kaye AM, Kaye AD: Tramadol, Pharmacology, Side Effects, and Serotonin Syndrome: A Review. Pain Physician. 2015 Jul-Aug;18(4):395-400.

SERTRALINE / OXYMORPHONE: **MODERATE**

Evidence Level Established

Description

The risk or severity of serotonin syndrome can be increased when Oxymorphone is combined with Sertraline. Patients taking opioid along with SSRIs are at an increased risk of developing serotonin syndrome.[L3385] Certain opioids act as weak serotonin reuptake inhibitors, or inhibit the serotonin receptors, increasing the levels of serotonin.[A188285,A18288] These additive serotonergic effects can lead to migraine, automatic instability, and even fatal outcomes.[A31300,L10520]

Management

Monitor for symptoms of serotonin syndrome such as clonus, tremor, autonomic instability, hyperreflexia, and rigidity, as well as changes in mental status. If signs of serotonin syndrome are present or suspected, immediately discontinue both drugs and provide supportive treatment.

References

Gillman PK: Monoamine oxidase inhibitors, opioid analgesics and serotonin toxicity. Br J Anaesth. 2005 Oct;95(4):434-41. Epub 2005 Jul 28. :: Greenier E, Lukyanova V, Reede L: Serotonin syndrome: fentanyl and selective serotonin reuptake inhibitor interactions. AANA J. 2014 Oct;82(5):340-5. :: Barann M, Stamer UM, Lyutenska M, Stuber F, Bonisch H, Urban B: Effects of opioids on human serotonin transporters. Naunyn Schmiedebergs Arch Pharmacol. 2015 Jan;388(1):43-9. doi: 10.1007/s00210-014-1056-3. Epub 2014 Oct 22.

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SERTRALINE / ZOLPIDEM: **MODERATE**

Evidence Level Established

Description

Sertraline may increase the central nervous system depressant (CNS depressant) activities of Zolpidem. Zolpidem is known to exert CNS depressant effects. Administering CNS depressants with zolpidem may lead to profound CNS depression due to additive effects [FDA label], [A175585]. In addition, “sleep-driving” and other complex behaviors may occur with zolpidem use while the patient is not fully awake. The risk of these behaviors increases with the use of other CNS depressants and alcohol [FDA label].

Management

Avoid co-administration with other CNS depressants. During concurrent use of a CNS depressant, dosage adjustments of zolpidem and the CNS depressant may be necessary due to the potential for additive effects. Do not use zolpidem with potent CNS depressants, such as hydrocodone. Some combinations may be contraindicated. Immediately evaluate any new onset behavioral changes when these agents are coadministered, and stop concurrent administration if complex behaviors are observed [FDA label], [L5584].

References

Shayegani R, Song K, Amuan ME, Jaramillo CA, Eapen BC, Pugh MJ: Patterns of zolpidem use among Iraq and Afghanistan veterans: A retrospective cohort analysis. PLoS One. 2018 Jan 23;13(1):e0190022. doi: 10.1371/journal.pone.0190022. eCollection 2018.

SERTRALINE / TRAMADOL: **MODERATE**

Evidence Level Established

Description

The risk or severity of serotonin syndrome can be increased when Sertraline is combined with Tramadol. Tramadol has been implicated in the development of serotonin syndrome,[A173980,L9257] particularly in combination with other medications that can precipitate or contribute to serotonin syndrome, such as the subject drug. Symptoms of serotonin syndrome include altered mental status, neuromuscular abnormalities, and autonomic hypersensitivity.[A173980]

Management

If concomitant therapy with multiple serotonergic agents is necessary, the patient should be monitored carefully for the above signs and symptoms of serotonin syndrome, particularly during initiation of therapy and with any increases in dose. If serotonin syndrome is suspected, tramadol should be discontinued immediately.[L9257]

References

Beakley BD, Kaye AM, Kaye AD: Tramadol, Pharmacology, Side Effects, and Serotonin Syndrome: A Review. Pain Physician. 2015 Jul-Aug;18(4):395-400.

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LORAZEPAM / OXYMORPHONE: **MODERATE**

Evidence Level Established

Description

The risk or severity of adverse effects can be increased when Oxymorphone is combined with Lorazepam. The additive effects between benzodiazepines and opiates can lead to respiratory depression and possibly cause coma and death. Though this combination is used in various circumstances, including anesthesiology [A40199], [A40200], the risk of respiratory depression, coma and death is important to note. This interaction occurs due to the co-location of GABA and opiate receptors in the central nervous system, and cross-reactivity and common pathways of intracellular transduction for these agents. The FDA label for Ativan (lorazepam) [F2291] includes a black box warning describing this risk.

Management

Refer to individual product monographs for instructions. Some combinations may be contraindicated. Limit concomitant prescribing of these drugs for use in patients for whom alternative treatment options are insufficient to treat symptoms. Use the lowest possible dose of either drug. It is imperative to monitor patients for signs and symptoms of respiratory depression and/or sedation while these drugs are administered concomitantly.

References

Kapur BM, Hutson JR, Chibber T, Luk A, Selby P: Methadone: a review of drug-drug and pathophysiological interactions. Crit Rev Clin Lab Sci. 2011 Jul-Aug;48(4):171-95. doi: 10.3109/10408363.2011.620601. :: Megarbane B, Gueye P, Baud F: [Interactions between benzodiazepines and opioids]. Ann Med Interne (Paris). 2003 Nov;154 Spec No 2:S64-72. :: Jones JD, Mogali S, Comer SD: Polydrug abuse: a review of opioid and benzodiazepine combination use. Drug Alcohol Depend. 2012 Sep 1;125(1-2):8-18. doi: 10.1016/j.drugalcdep.2012.07.004. Epub 2012 Aug 2.

LORAZEPAM / ZOLPIDEM: **MODERATE**

Evidence Level Established

Description

Lorazepam may increase the central nervous system depressant (CNS depressant) activities of Zolpidem. Zolpidem is known to exert CNS depressant effects. Administering CNS depressants with zolpidem may lead to profound CNS depression due to additive effects [FDA label], [A175585]. In addition, “sleep-driving” and other complex behaviors may occur with zolpidem use while the patient is not fully awake. The risk of these behaviors increases with the use of other CNS depressants and alcohol [FDA label].

Management

Avoid co-administration with other CNS depressants. During concurrent use of a CNS depressant, dosage adjustments of zolpidem and the CNS depressant may be necessary due to the potential for additive effects. Do not use zolpidem with potent CNS depressants, such as hydrocodone. Some combinations may be contraindicated. Immediately evaluate any new onset behavioral changes when these agents are coadministered, and stop concurrent administration if complex behaviors are observed [FDA label], [L5584].

References

Shayegani R, Song K, Amuan ME, Jaramillo CA, Eapen BC, Pugh MJ: Patterns of zolpidem use among Iraq and Afghanistan veterans: A retrospective cohort analysis. PLoS One. 2018 Jan 23;13(1):e0190022. doi: 10.1371/journal.pone.0190022. eCollection 2018.

LORAZEPAM / TRAMADOL: **MODERATE**

Evidence Level Established

Description

The risk or severity of CNS depression can be increased when Lorazepam is combined with Tramadol. Due to additive pharmacodynamic effects, the concomitant use of tramadol with other CNS depressants, such as the subject drug, may result in profound CNS depression.[L9257] This combination of agents may increase the risk of sedation, respiratory depression, coma, and death. [L9257]

Management

Reserve the combined use of tramadol with other CNS depressants for use in patients for whom alternatives are inappropriate. Limit the dosages and duration of treatment with concomitant CNS depressants to the minimum required. Patients should be monitored closely for signs and symptoms of excessive CNS depression.

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TRAMADOL / GABAPENTIN: **MODERATE**

Evidence Level Established

Description

The risk or severity of CNS depression can be increased when Gabapentin is combined with Tramadol. Due to additive pharmacodynamic effects, the concomitant use of tramadol with other CNS depressants, such as the subject drug, may result in profound CNS depression.[L9257] This combination of agents may increase the risk of sedation, respiratory depression, coma, and death.[L9257]

Management

Reserve the combined use of tramadol with other CNS depressants for use in patients for whom alternatives are inappropriate. Limit the dosages and duration of treatment with concomitant CNS depressants to the minimum required. Patients should be monitored closely for signs and symptoms of excessive CNS depression.

References

TRAMADOL / OXYMORPHONE: **MODERATE**

Evidence Level Established

Description

The risk or severity of serotonin syndrome can be increased when Oxymorphone is combined with Tramadol. Tramadol has been implicated in the development of serotonin syndrome,[A173980,L9257] particularly in combination with other medications that can precipitate or contribute to serotonin syndrome, such as the subject drug. Symptoms of serotonin syndrome include altered mental status, neuromuscular abnormalities, and autonomic hypersensitivity.[A173980]

Management

If concomitant therapy with multiple serotonergic agents is necessary, the patient should be monitored carefully for the above signs and symptoms of serotonin syndrome, particularly during initiation of therapy and with any increases in dose. If serotonin syndrome is suspected, tramadol should be discontinued immediately.[L9257]

References

Beakley BD, Kaye AM, Kaye AD: Tramadol, Pharmacology, Side Effects, and Serotonin Syndrome: A Review. Pain Physician. 2015 Jul-Aug;18(4):395-400.

TRAMADOL / ZOLPIDEM: **MODERATE**

Evidence Level Established

Description

Tramadol may increase the central nervous system depressant (CNS depressant) activities of Zolpidem. Zolpidem is known to exert CNS depressant effects. Administering CNS depressants with zolpidem may lead to profound CNS depression due to additive effects [FDA label], [A175585]. In addition, “sleep-driving” and other complex behaviors may occur with zolpidem use while the patient is not fully awake. The risk of these behaviors increases with the use of other CNS depressants and alcohol [FDA label].

Management

Avoid co-administration with other CNS depressants. During concurrent use of a CNS depressant, dosage adjustments of zolpidem and the CNS depressant may be necessary due to the potential for additive effects. Do not use zolpidem with potent CNS depressants, such as hydrocodone. Some combinations may be contraindicated. Immediately evaluate any new onset behavioral changes when these agents are coadministered, and stop concurrent administration if complex behaviors are observed [FDA label], [L5584].

References

Shayegani R, Song K, Amuan ME, Jaramillo CA, Eapen BC, Pugh MJ: Patterns of zolpidem use among Iraq and Afghanistan veterans: A retrospective cohort analysis. PLoS One. 2018 Jan 23;13(1):e0190022. doi: 10.1371/journal.pone.0190022. eCollection 2018.

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TRAMADOL / ARIPIPRAZOLE: **MODERATE**

Evidence Level Established

Description

The risk or severity of serotonin syndrome can be increased when Aripiprazole is combined with Tramadol. Tramadol has been implicated in the development of serotonin syndrome, [A173980,L9257] particularly in combination with other medications that can precipitate or contribute to serotonin syndrome, such as the subject drug. Symptoms of serotonin syndrome include altered mental status, neuromuscular abnormalities, and autonomic hypersensitivity.[A173980]

Management

If concomitant therapy with multiple serotonergic agents is necessary, the patient should be monitored carefully for the above signs and symptoms of serotonin syndrome, particularly during initiation of therapy and with any increases in dose. If serotonin syndrome is suspected, tramadol should be discontinued immediately.[L9257]

References

Beakley BD, Kaye AM, Kaye AD: Tramadol, Pharmacology, Side Effects, and Serotonin Syndrome: A Review. Pain Physician. 2015 Jul-Aug;18(4):395-400.

OXYMORPHONE / ZOLPIDEM: **MODERATE**

Evidence Level Established

Description

Oxymorphone may increase the central nervous system depressant (CNS depressant) activities of Zolpidem. Zolpidem is known to exert CNS depressant effects. Administering CNS depressants with zolpidem may lead to profound CNS depression due to additive effects [FDA label], [A175585]. In addition, “sleep-driving” and other complex behaviors may occur with zolpidem use while the patient is not fully awake. The risk of these behaviors increases with the use of other CNS depressants and alcohol [FDA label].

Management

Avoid co-administration with other CNS depressants. During concurrent use of a CNS depressant, dosage adjustments of zolpidem and the CNS depressant may be necessary due to the potential for additive effects. Do not use zolpidem with potent CNS depressants, such as hydrocodone. Some combinations may be contraindicated. Immediately evaluate any new onset behavioral changes when these agents are coadministered, and stop concurrent administration if complex behaviors are observed [FDA label], [L5584].

References

Shayegani R, Song K, Amuan ME, Jaramillo CA, Eapen BC, Pugh MJ: Patterns of zolpidem use among Iraq and Afghanistan veterans: A retrospective cohort analysis. PLoS One. 2018 Jan 23;13(1):e0190022. doi: 10.1371/journal.pone.0190022. eCollection 2018.

OXYMORPHONE / ARIPIPRAZOLE: **MODERATE**

Evidence Level Established

Description

The risk or severity of adverse effects can be increased when Aripiprazole is combined with Oxymorphone. Concurrent administration of these agents can lead to various adverse events, including constipation, urinary retention, paralytic ileus, and sedation.[L10343] These symptoms result from the combined, additive adverse effects of both drugs.[A34378,A31486,A34380]

Management

Consider reducing the number/dose of anticholinergic agents and opioids used concomitantly to prevent additive effects. Closely monitor the patient and suspend the concomitant treatment if it is clinically warranted. Some combinations may be contraindicated. Consult individual product monographs for detailed dosing guidance/management.

References

Bell JS, Mezrani C, Blacker N, LeBlanc T, Frank O, Alderman CP, Rossi S, Rowett D, Shute R: Anticholinergic and sedative medicines - prescribing considerations for people with dementia. Aust Fam Physician. 2012 Jan-Feb;41(1-2):45-9. :: Lieberman JA 3rd: Managing anticholinergic side effects. Prim Care Companion J Clin Psychiatry. 2004;6(Suppl 2):20-3. :: Benyamin R, Trescot AM, Datta S, Buenaventura R, Adlaka R, Sehgal N, Glaser SE, Vallejo R: Opioid complications and side effects. Pain Physician. 2008 Mar;11(2 Suppl):S105-20.

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ARIPIPRAZOLE / ACETAMINOPHEN: **MODERATE**

Evidence Level Established

Description

The metabolism of Aripiprazole can be increased when combined with Acetaminophen. Aripiprazole is metabolized by CYP3A4 enzymes, therefore, concomitant administration of aripiprazole and its prodrugs with inducers of CYP3A4 of any strength is not recommended as the serum concentration of aripiprazole and prodrugs may be significantly decreased [F1189].

Management

Double the oral aripiprazole or aripiprazole prodrug dose and closely monitor the clinical response. Reduce the oral dose of aripiprazole to 10-15 mg/day if the inducer is discontinued. Avoid the use of CYP3A4 inducers for more than 14 days with extended-release injectable forms of aripiprazole or its prodrug.

References

Molden E, Lunde H, Lunder N, Refsum H: Pharmacokinetic variability of aripiprazole and the active metabolite dehydroaripiprazole in psychiatric patients. Ther Drug Monit. 2006 Dec;28(6):744-9. doi: 10.1097/01.ftd.0000249944.42859.bf. :: Azuma J, Hasunuma T, Kubo M, Miyatake M, Koue T, Higashi K, Fujiwara T, Kitahara S, Katano T, Hara S: The relationship between clinical pharmacokinetics of aripiprazole and CYP2D6 genetic polymorphism: effects of CYP enzyme inhibition by coadministration of paroxetine or fluvoxamine. Eur J Clin Pharmacol. 2012 Jan;68(1):29-37. doi: 10.1007/s00228-011-1094-4. Epub 2011 Jul 8.

ARIPIPRAZOLE / ZOLPIDEM: **MODERATE**

Evidence Level Established

Description

Aripiprazole may increase the central nervous system depressant (CNS depressant) activities of Zolpidem. Zolpidem is known to exert CNS depressant effects. Administering CNS depressants with zolpidem may lead to profound CNS depression due to additive effects [FDA label], [A175585]. In addition, “sleep-driving” and other complex behaviors may occur with zolpidem use while the patient is not fully awake. The risk of these behaviors increases with the use of other CNS depressants and alcohol [FDA label].

Management

Avoid co-administration with other CNS depressants. During concurrent use of a CNS depressant, dosage adjustments of zolpidem and the CNS depressant may be necessary due to the potential for additive effects. Do not use zolpidem with potent CNS depressants, such as hydrocodone. Some combinations may be contraindicated. Immediately evaluate any new onset behavioral changes when these agents are coadministered, and stop concurrent administration if complex behaviors are observed [FDA label], [L5584].

References

Shayegani R, Song K, Amuan ME, Jaramillo CA, Eapen BC, Pugh MJ: Patterns of zolpidem use among Iraq and Afghanistan veterans: A retrospective cohort analysis. PLoS One. 2018 Jan 23;13(1):e0190022. doi: 10.1371/journal.pone.0190022. eCollection 2018.

ACETAMINOPHEN / ZOLPIDEM: **MODERATE**

Evidence Level Established

Description

The metabolism of Zolpidem can be increased when combined with Acetaminophen. Zolpidem is a substrate of the CYP3A4 enzyme, and its metabolism may be increased when administered with inducers of this enzyme. This may result in decreased zolpidem effects. A single-dose clinical interaction study using zolpidem tartrate 10 mg and rifampin 600 mg in female subjects demonstrated significant decreases of the AUC (-73%), Cmax (-58%), and T1/2 (-36 %) of zolpidem, with marked reductions in the pharmacodynamic effects of zolpidem tartrate. Rifampin, a CYP3A4 inducer, markedly reduced the pharmacodynamic effects of zolpidem.

Management

Use this combination with caution. A lower dose of the CYP3A4 inducer may be required when these agents are coadministered. The use of potent CYP3A4 inducers (including rifampin) with zolpidem is not recommended.

References

Hesse LM, von Moltke LL, Greenblatt DJ: Clinically important drug interactions with zopiclone, zolpidem and zaleplon. CNS Drugs. 2003;17(7):513-32. doi: 10.2165/00023210-200317070-00004.

Psych Test

Specimen No: PVCSAMP-003
Physician: Ima Test

DOB: 01/01/2000
Sex: MALE

Sample Collection: Jan. 01, 2021 08:00 EST
Sample Analysis: Jan. 04, 2021 08:00 EST

ZOLPIDEM / GABAPENTIN: **MODERATE**

Evidence Level Established

Description

Gabapentin may increase the central nervous system depressant (CNS depressant) activities of Zolpidem. Zolpidem is known to exert CNS depressant effects. Administering CNS depressants with zolpidem may lead to profound CNS depression due to additive effects [FDA label], [A175585]. In addition, “sleep-driving” and other complex behaviors may occur with zolpidem use while the patient is not fully awake. The risk of these behaviors increases with the use of other CNS depressants and alcohol [FDA label].

Management

Avoid co-administration with other CNS depressants. During concurrent use of a CNS depressant, dosage adjustments of zolpidem and the CNS depressant may be necessary due to the potential for additive effects. Do not use zolpidem with potent CNS depressants, such as hydrocodone. Some combinations may be contraindicated. Immediately evaluate any new onset behavioral changes when these agents are coadministered, and stop concurrent administration if complex behaviors are observed [FDA label], [L5584].

References

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