Obstetric Applications Studied for Heart Failure Test

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NEW ORLEANS — Measurement of Btype natriuretic peptide levels in pregnancy shows promise for the management of preeclamptic patients, Vikas Bhalla, M.D., said during the annual scientific sessions of the American Heart

The plasma B-type natriuretic peptide (BNP) test is a rapid, relatively inexpensive

point-of-care test approved for diagnosis of heart failure in patients presenting with shortness of breath to the emergency department and other acute care settings. In this setting, BNP level correlates with wedge pressure, severity of heart failure, and prognosis.

Potential obstetric applications under study include use of the BNP test to identify women with preeclampsia before they become hypertensive and proteinuric, as well as to guide physicians in the particularly thorny problem of when to deliver affected patients, according to Dr. Bhalla of the University of California, San

BNP is synthesized in cardiac ventricular tissue, primarily in response to volume expansion and pressure overload. Preeclampsia, which complicates 5% of pregnancies and causes considerable maternal and neonatal morbidity, is characterized by markedly increased peripheral vascular resistance, which leads to

increasing blood pressure, in turn causing pressure overload in the already volumeoverloaded hemodynamic state of preg-

Dr. Bhalla reported on 119 women who underwent serial BNP testing in each trimester of normal pregnancy, 9 mildly preeclamptic patients, 25 women with severe preeclampsia, and 25 normal controls

Plasma BNP stayed in the range of 16-18 pg/mL throughout normal pregnancy, remaining in all cases below 20 pg/mL. Levels in mild preeclampsia were significantly higher, with a median value of 21.1 pg/mL. BNP levels were even higher in severe eclampsia, at a median

Statistical analysis showed the best cutoff point for the diagnosis of preeclampsia was a BNP of 40 pg/mL. It yielded a sensitivity of 73%, a specificity of 85%, a positive predictive value of 57%, an accuracy rate of 82%, and-most importantly-a negative predictive value of

The area under the curve described by the test results was 0.86. That's superior to the performance of tests widely used in obstetrics and gynecology, including the Pap smear and mammography. An area under the curve in excess of 0.9 is considered an excellent test, while 0.8-0.9 is considered very good and 0.7-0.8 is reasonably good, Dr. Bhalla said.

He and his coinvestigators are also accumulating data from a different patient series that suggest a rise in plasma BNP may precede development of the hypertension and proteinuria of preeclampsia.

Dr. Bhalla's coinvestigator Alan S. Maisel, M.D., commented that BNP may be of assistance in "one of the hardest things for ob.gyn. people to determine which women with preeclampsia have got to get delivered early and which

"We know that BNP probably reflects the endothelial dysfunction that goes along with preeclampsia. And when the BNP starts skyrocketing-in some of the patients we're following the levels get above 200 and 300-that, I believe, is going to lead physicians to start delivering patients earlier," said Dr. Maisel, professor of medicine at UCSD, and director of the coronary care unit and heart failure program at San Diego Veterans Affairs Medical Center.

"Also, when people present in their third trimester with shortness of breath and volume overload, a normal BNP level will tell you that the heart is functioning well, taking care of that volume and not experiencing too much stress. If there's any question about that issue, a simple BNP test will certainly help," added Dr. Maisel.

Obstetricians also are investigating the potential application of BNP as a general screen for underlying heart dysfunction.

"I'm talking to ob. people who are doing studies now and are thinking about using this test, especially in areas where people don't get the maternal health care they normally might get in some of our better hospitals," the cardiologist said. ■

References: 1. Scharf MB, Roh T, Vogel GW, Walsh JK. A multicenter, placebo-controlled study evaluating zolpidem in the treatment of chronic insomnia. J Clin Psychotry. 1994;55:192-199. 2. Roh T, Roehrs T, Vogel G. Zolpidem in the treatment of transient insomnia: a double-blind, randomized comparison with placebo. Seep. 1995;18:246-251. 3. Elie R, Rüther E, Farr I, Emilien G, Salinas E, for the Zaleplon Clinical Study Groups. Seep latency is shortened during 4 weeks of treatment with zaleplon, a novel nonberoodiazepine report of the properties of



BRIEF SUMMARY

INDICATIONS AND USAGE

CONTRAINDICATIONS

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Laboratory tests: There are no specific laboratory tests recommended.

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yy zolpidem, systematic evaluations of Ambien in combination with other CNS-s have been limited, careful consideration should be given to the gy of any CNS-active drug to be used with zolpidem. Any drug with sant effects could potentially enhance the CNS-depressant effects of

cocaine, cannabnoids, or amphetamines in two standard urine drug screens. Carcinogenesis: Musquenesis, impairment of ferfility Carcinogenesis: Zolpidem was administred to rats and mice for 2 years at diedray dosage of 3, 8, 8 and 50 mg/days, in mice, these doses are 26 to 502 diedray dosage of 3, 8, 8 and 50 mg/days, in mice, these doses are 26 to 502 basis, respectively. In rats these doses are 43 to 676 times or 6 to 115 times the maximum 10-mg human dose on an applica or mgim basis, respectively. No evi-dence of carcinogenic potential vaso observed in mice, Renal liposacromas were was observed in one mel not at the 18 mg/dayd often. Indexon critical office price and injosacroma for zolpidem were comparable to those seen in historical controls and the turn of findings are thought to be a sportaneous occurrence. Mutagenesis: Zolpidem did not have mutagenic activity in several tests includ-ing the Armete star, genotoscity in moses whynotions calls in whire, thormosoming in the Armete star, genotoscity in mose whynotions calls in whire, thormosoming hepathoryses in vitro, and the micronucleus test in mice. DNA synthesis in ext. hepathoryses in vitro, and the micronucleus test in mice.

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This drug should be used during pregnancy only if clearly needed. Nontreatagoine directs: Studies to assess the effects on oflidnen whose mothers took zoligiand during pregnancy have not been conducted. However, children boom of mothers taking sedativelynpoic drugs may be a some risk for with drawal symptoms from the drug during the postnatal period. In addition, neonal-tal flacadily has been propreted in inlates born of mothers who received sedatively hypotic drugs during pregnancy. Labor and delivery. Ambien has no established use in labor and delivery. Nursing mothers: Studies in latating mothers indicate that between Q044 and Q049 of the cold administered does a excreded into milk, but the effect of zolidem on the tifrant is unknown.

have not been established. Gertaric use A. I coal of 154 patients in U.S. controlled clinical trials and 697 patients in non-U.S. clinical trials who received rolipidem were 260 years of age. For a pool of U.S. patients receiving polipidem at doses of 510 mp or glabods, there were three adverse events occurring at an indicance of at least 3% for zolpi-dem and for which the zolpidem indicatence was at least twice the placebo inci-dence (is, they could be considered drug related).

Adverse Event	Zolpidem	Placebo
Dizziness	3%	0%
Drowsiness	5%	2%
Diarrhea	3%	1%

Controlled substance: Schedule IV.

Abuse and dependence: Studies of abuse potential in former drug abusers found that the effects of single doses of clopidem tartate 40 mg were similar, but not identical, to diacepam 20 mg, while zolpidem tartate 10 mg was difficult to distinguish from placeman produced withdrawel signs and appropriate formation of the similar potential to distinguish from placeman produced withdrawel signs and adoptional and muscle cramps, vomiting, swesting, tremors, and convulsions, The U.S. clinical trial speciment from 2 popular discontinuation. These reported symptoms range from mild dysphoria and insomina to a voliderand symptom test may include adoptional and muscle cramps, vomiting, swesting, tremors, and convulsions, The U.S. clinical trial speciment from 2 popular discontinuation, and convulsions, The U.S. clinical trial speciment from 2 popular discontinuation of 2 ms. and a popular discontinuation of 2 ms. and a popular size of the s

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