Assess Mental Health in Bariatric Surgery Patients

ADVERSE REACTIONS Clinical

BY DAMIAN MCNAMARA

Miami Bureau

ORLANDO — Psychiatric conditions are more common among patients who seek bariatric surgery than among the general population, according to preliminary results from a study reported by Melissa A. Kalarchian, Ph.D., at the annual meeting of the American Society for Bariatric Surgery.

Dr. Kalarchian and her colleagues screened bariatric surgery candidates with the Structured Clinical Interview for the DSM-IV to determine current and lifetime history of psychiatric disorders.

Preliminary results included 200 surgical candidates. Their average age was 46 years; 89% were white; 85% were female; and their average body mass index (kg/m^2) was 53. They eventually had the procedures performed at hospitals of the University of Pittsburgh Medical Center.

The surgical candidates had higher rates of lifetime psychopathology than those reported for individuals in the community in the baseline National Comorbidity Survey (NCS), said Dr. Kalarchian of the Western Psychiatric Institute and Clinic in Pittsburgh. (See graph.)

Anxiety disorders included generalized anxiety, posttraumatic stress disorder, and obsessive-compulsive disorder. A complete list of the anxiety disorders would also include agoraphobia, panic disorder, social phobia, and specific phobia.

Prevalence of major depressive disorder

(MDD) varied by gender. A total of 10% of female and 13% of male surgery candidates met criteria for MDD at study entry. In addition, 45% of female and 33% of male surgical candidates reported a lifetime history of MDD. In the NCS, 21% of women and 13% of men reported such a history.

The researchers also assessed binge eating. Among the surgical candidates in the study, 34% reported a lifetime history of binge eating and 18% reported current binge eating.

"It's really important to wait for prospective studies before saying binge eating is a contraindication to surgery," Dr. Kalarchian said. "Binge eating can be treated, and I don't think it would be grounds

"Binge eating is strongly associated with

to deny or delay surgery," she said.

depression and obesity," she added. "There is controversy about whether binge eating disorder is a distinct syndrome or a mark-

er of another psychiatric disorder." The findings of the study suggest a need to monitor patients for onset or recurrent psychiatric symptoms, she said. An inability to determine a cause-andeffect relationship between psychiatric

Lifetime History Of Psychopathology Comparison Bariatric surgery candidates 50% 30% 20% 10% Note: Based on a study of 200 patients.

morbidity and being severely obese in our culture was a limitation of the study, Dr. Kalarchian said. "Prospective studies really need to determine how psychosocial factors are related to surgical outcomes, and to identify those who are vulnerable

To encourage subjects in the study who had psychological problems to seek help, Dr. Kalarchian and her associates did not report the results to the surgical team. "The confidential nature might encourage patients to discuss their mental health issues," she said.

to poor outcomes."

A meeting attendee asked Dr. Kalarchian if she would inform surgeons if a patient had a major psychiatric concern. "It would be a rare instance where we would identify something we would need to inform the surgical team about, for example,

Although previous research indicated that bariatric surgery patients might have higher rates of psychopathology, the studies were limited methodologically, Dr. Kalarchian said.

Brief Summary of Prescribing Information (Nos. 1541, 1543, 1544, 3046, 7309, 7311) 03-5366-R24-Brf. Rev. July, 2004

 $\textbf{PREVACID}^{\circledR} \ (\textbf{lansoprazole}) \ \textbf{Delayed-Release} \ \textbf{Capsules}$

 $\textbf{PREVACID}^{\circledR} \ (\textbf{lansoprazole}) \ \textbf{For Delayed-Release Oral Suspension}$

PREVACID® SoluTab™ (lansoprazole) Delayed-Release Orally

DISTRIBUTION OF THE PREVACIO SOLUTAL Delayed-Release Orally Distributions and Prevacion are indicated by the prevacion are indicated to the prevacion are i

or. Short-Term Treatment (4 weeks) of Active Duodenal Ulcer H*. pylori* Eradication to Reduce the Risk of Duodenal Ulcer Recurrence

Short-Term Treatment (4 weeks) of Active Buodenal Ulcer
H. pylori Eradication to Reduce the Risk of Duodenal Ulcer Recurrence
Triple Therapy: PREVACID/amoxicillin/clarithromycin
Dual Therapy: PREVACID/amoxicillin/clarithromycin or in whom resistance to
clarithromycin is known or suspected.

Maintenance of Healed Duodenal Ulcers
Controlled studies do not extend beyond 12 months.

Short-Term Treatment (up to 8 weeks) of Active Benign Gastric Ulcer
Healing of NSAID-Associated Gastric Ulcer
Healing of NSAID-Associated Gastric Ulcer
In patients who continue NSAID use. Controlled studies did not extend beyond 8 weeks.
Risk Reduction of NSAID-Associated Gastric Ulcer
In patients with a history of a documented gastric ulcer who require the use of an NSAID.
Controlled studies did not extend beyond 12 weeks.
Gastroesophageal Reflux Disease (GERD)
Short-Term Treatment of Symptomatic GERD)
Short-Term Treatment of Symptomatic GERD
Short-T

CONTRAINDICATIONS PREVACID is contraindicated in patients with known hypersensitivity to any composition of PREVACID.

the formulation of PREVACID.

Amoxicillin is contraindicated in patients with a known hypersensitivity to any pericillin. Clarithromycin is contraindicated in patients with a known hypersensitivity to clarithromycin is contraindicated in patients with a known hypersensitivity to clarithromycin, and supplied in the macrolide antibiotics.

Concomitant administration of clarithromycin with cisapride, pimozide, astemizole, or terfenadine is contraindicated. There have been post-marketing reports of drug interactions when clarithromycin and/or erythromycin are co-administered with cisapride, primozide, astemizole, or terfenadine resulting in cardiac arrhythmias (QT prolongation, ventricular tachycardia, ventricular fibrillation, and torsades de pointes) most likely due to inhibition of metabolism of these drugs by erythromycin and clarithromycin. Fatalities have been reported.

WARNINGS
CLARITHROMYCIN SHOULD NOT BE USED IN PREGNANT WOMEN EXCEPT IN CLINICAL CIRCUMSTANCES WHERE NO ALTENNATIVE THERAPY IS APPROPRIATE. IF PREGNANCY OCCURS WHILE TAKING CLARITHROMYCIN, THE PATIENT SHOULD BE APPRISED OF THE POTENTIAL HAZARD TO THE FETUS. (SEE WARNINGS IN PRESCRIBING INFORMATION FOR CLARITHROMYCIN.)
Pseudomembranous colitis has been reported with nearly all antilizatorial agents, including clarithromycin and amoxicillin, and may range in severity from mild to life threatening. Therefore, it is important to consider this diagnosts in patients who present with diarrhee assequent to the administration of antibacterial agents.
Treatment with antibacterial agents afters the normal flora of the colon and may permit overgrowth of clastified. Studies indicate that a toxy produced by Costribuin difficile is a primary cause of "antibiotic-associated collis."
After the diagnosis of pseudomembranous collis has been established. therapentic

overgrowth of clostridia. Studies indicate that a toxin produced by Clostridium difficile is a primary cause of "artibiotic-associated coilits:
After the diagnosis of pseudomembranous coilits has been established, therapeutic measures should be initiated. Mild cases of pseudomembranous coilits usually respond to discontinuation of the drug alone. In moderate to severe cases, consideration should be given to management with fluids and electrolytes, protein supplementation, and treatment with an antibacterial drug clinically effective against. Clostridium difficile coilits. Serious and occasionally fatal hypersensitivity (anaphylactic) reactions have been reported in patients on penicillim therapy. These reactions are more apt to occur in individuals with a history of penicillin hypersensitivity and/or a history of sensitivity to multiple allergens. There have been well-documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a caphalosporin. Before initiating therapy with any penicillin, careful individuals with an antibaction and other allergens. If an allergic reaction occurs, amoxicillin should be discontinued and the appropriate therapy instituted. SERIOUS ANAPHY ACTIC REACTIONS REQUIRE IMMEDIATE EMERGENCY TEEATMENT WITH EPINEPHRINE. DXYGEN, INTRAVENOUS STEROIDS, AND AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERD AS INDICATED.

PRECAUTIONS General

PRECAUTIONS
General
Symptomatic response to therapy with lansoprazole does not preclude the presence of
gastric malignancy.
Information for Patients
PREVACID is available as a capsule, orally disintegrating tablet and oral suspension, and is
available in 15 mg and 30 mg strengths. Directions for use specific to the route and available
methods of administration for each of these dosage forms is presented below. PREVACID
should be taken before eating. PREVACID products SHOULD NOT BE CRUSHED OR
CHEWED.

Phenylketonurics: Contains Phenylalanine 2.5 mg per 15 mg Tablet and 5.1 mg per 30 mg Tablet.

to ing Tables. Administration Options 1. *PREVACID Delayed-Release Capsules* PREVACID Delayed-Release Capsules should be swallowed whole

Alternatively, for patients who have difficulty swallowing capsules, PREVACID Delayed-Release Capsules can be opened and administered as follows: psule. intact granules on one tablespoon of either applesauce, ENSURE[®] pudding, cheese, yogurt or strained pears.

Sprinkle intact granules into a small volume of either apple juice, orange juice or tomato juice (60 mL – approximately 2 ounces).

- swarrow immediately.
 To ensure complete delivery of the dose, the glass should be rinsed with two or more volumes of juice and the contents swallowed immediately.
 USE IN OTHER FOODS AND LIQUIDS HAS NOT BEEN STUDIED CLINICALLY AND IS THEREFORE NOT PRECOMMENDED.

uTab Delaved-Release Orally Disintegrating Tablets 2. THE WHOLD Sour ab engineer because or any distinguishing tables on the tongue and allow it to disintegrate, with or without water, until the particles can be swallowed. The tablet typically disintegrates in less than 1 minute.

disintegrates in less than 1 minute.

Alternatively, for children or other patients who have difficulty swallowing tablets, PREVACIO Solurab can be delivered in two different ways.

PREVACIO Solurab – Oral Syringe, PREVACID Solurab can be administered as follows:

Place a 15 mg tablet in oral syringe and draw up approximately 4 mL of water, or place a 30 mg tablet in oral syringe and draw up approximately 10 mL of water.

Shake gently call low for a quick dispersal.

After the tablet has dispersed, administer the contents within 15 minutes.

Felfill the syringe with approximately 2 mL (6 mL for the 30 mg tablet) of water, shake gently, and administer any remaining contents.

PREVACID SoluTab – Nasogastric Tube Administration (≥ 8 French)
For administration via a nasogastric tube, PREVACID SoluTab can be administered as

colows:

Place a 15 mg tablet in a syringe and draw up 4 mL of water, or place a 30 mg tablet in a

syringe and draw up 10 ml of water.

syringe and draw up 10 mL of water.

Shake gently to allow for a quick dispersal.

After the tablet has dispersed, inject through the nasogastric tube into the stomach within

The minutes.

Refill the syringe with approximately 5 mL of water, shake gently, and flush the nasogastric

upen packet. To prepare a dose, empty the packet contents into a container containing 2 tablespoons of **WATER**. DO NOT USE OTHER LIQUIDS OR FOODS.

• This product should not be given through enteral administration tubes.

Drug Interactions
Lansoprazole is metabolized through the cytochrome P₄₅₀ system, specifically through the CYP3A and CYP2C19 isozymes. Studies have shown that lansoprazole does not have cinically significant interactions with other drugs metabolized by the cytochrome P₄₅₀ system, such as warfarin, antipyrine, indomethacin, ibuprofen, phenytoin, propranolol are metabolized through various cytochrome P₄₅₀ isozymes including CYP1A2, CYP2C9, CYP2C19, CYP2C9, CYP2C19, CYP2C9, and CYP3A. When lansoprazole was administered concomitantly with theophylline (CYP1A2, CYP2C9, CYP2C19, CYP2C9, AMP en lansoprazole was administered concomitantly with theophylline (cyP1A2, CYP2C9, AMP), a minor increase (10%) in the clearance of theophylline clearance, this interaction is unlikely to be of clinical concern. Nonetheless, individual patients may require additional thration of their theophylline dosage when lansoprazole is started or stopped to ensure clinically effective blood levels.

In a study of healthy subjects neither the pharmacokinetics of warfarin enantiomers nor prothrombin time were affected following single or multiple 60 mg doses of lansoprazole. However, there have been reports of increased International Normalized Ratio (INR) and prothrombin time in patients receiving proton pump inhibitors, including lansoprazole, and warfarin concomitantly may need to be monitored for increases in INR and prothrombin time. Lansoprazole has also been shown to have no clinically significant interaction with amoxicillin. In a single-dose crossover study examining lansoprazole and man of membrazole 20 mg each

Lansoprazole has also been shown to have no clinically significant interaction with amoiscillin. In a single-dose crossover study examining lansopracile 30m and omerpazole 20m ge ach administered alone and concomitantly with sucraltate 1 gram, absorption of the proton pump inhibitors was delayed and their bioavailability was reduced by 17% and 16%, respectively, when administered concomitantly with sucraltate. Therefore, proton pump inhibitors should be taken at least 30 minutes prior to sucraltate. In clinical trials, antacids were administered concomitantly with PREVACID Delayed-Release Capsules; this did not interfere with its effect.

Lansoprazole causes a profound and long-lasting inhibition of gastric acid secretion; therefore, it is theoretically possible that lansoprazole may interfere with the absorption of drugs where gastric pH is an important determinant of bioavailability (e.g., keloconazole, ampicillin esters, iron salts, digoxin).

ampicillin esters, iron salts, digorin.

Carcinogenesis, Mutagenesis, Impairment of Fertility
In two 24-month carcinogenicity studies. Sprague-Dawley rats were treated orally with
doses of 5 to 150 mg/kg/day, about 1 to 40 times the exposure on a body surface (mg/m²)
basis, of a 50-kg person of average height (1.46 m² body surface area) given the
recommended human dose of 30 mg/day (22.2 mg/m²). Lansoprazole produced doserelated gastric enterochromaffin-like (ECL), cell hyperplasia and ECL cell carcinoids in both
male and flemale rats. It also increased the incidence of intestinal metaplasia of the gastric
epithelium in both sexes. In male rats, lansoprazole produced a dose-related increase of
testicular interstital cell adenoma. The incidence of these adenomas in rats receiving doses
of 15 to 150 mg/kg/day (4 to 40 times the recommended human dose based on body
surface area) exceeded the low background incidence (range = 1.4 to 17%) for this strain of
rat. Testicular interstitial cell adenoma also occurred in 1 of 30 rats treated with
50 mg/kg/day (13 times the recommended human dose based on body surface area) in a
1-year foxicity study.

1-year toxicity study.

1-year toxicity study,
1-10 unities the recommended human dose based on body surface area) in a
1-year toxicity study.
1-10 a 24-month carcinogenicity study, CD-1 mice were treated orally with doses of 15 to
600 mg/kg/day, 2 to 80 times the recommended human dose based on body surface area.
1-sosprazole produced a dose-related increased incidence of gastric EC. cell hyperplasia. It
also produced an increased incidence of liver tumors (hepatocellular adenoma plus
1-asoprazole humor incidences in male mice treated with 300 and 600 mg/kg/day, (40 to
80 times the recommended human dose based on body surface area) and female mice
1-reated with 150 to 600 mg/kg/day, (20 to 80 times the recommended human dose based on
1-year toxicity and 1-year toxicity of the station of mice. Lansprazole treatment produced adenoma of rete testis in male mice
1-year toxicity of the station of the station of the station of the station of mice. Lansprazole treatment produced adenoma of rete testis in male mice
1-year toxicity of the station o

body surface area).

Lansoprazole was not genotoxic in the Ames test, the *ex vivo* rat hepatocyte unscheduled DNA synthesis (UDS) test, the *in vivo* mouse micronucleus test or the rat bone marrow cell chromosomal aberration test. It was positive in *in vitro* human lymphocyte chromosomal

chromosomal aberration test. It was positive in *In vitro* human lymphocyte chromosomal aberration assay. Lansoprazole at oral doses up to 150 mg/kg/day (40 times the recommended human dose based on body surface area) was found to have no effect on fertility and reproductive performance of male and female rats.

Pregnancy Teatogenic Effects.

Pregnancy Category B

Lansopprazole teratology studies have been performed in pregnant rats at oral doses up to 150 mg/kg/day (40 times the recommended human dose based on body surface area) and pregnant rabbits at oral doses up to 30 mg/kg/day (16 times the recommended human dose based on ysurface area) and have revealed no evidence of impaired fertility or harm to the fetus due to lansone arole.

patients 1 to 11 years or age (1-cv) more 12 to 17 years of 18ee Capsules has been assessed in these The safety of PREVACID Delayed-Release Capsules has been assessed in these 87 adolescent patients with GERD, 6% (5/87) took PREVACID for 6 weeks, 93% (8/187) for 6-10 weeks, and 1% (1/87) for 10 weeks. The most frequently reported (at least 3%) teatment-related adverse events in these patients were headache (7%), abdominal pain (5%), nausea (3%) and dizziness (3%). Treatment-related dizziness, reported in this package insert as occurring in 1-1% of 3% addiziness concurrently with other events (such as migraine, dyspnea, and vomiting).

The in Woman

Use in Geriatric Patients
Ulcer healing rates in elderly patients are similar to those in a younger age group. The

eater rate in PRÉVACID-treated patiers
tate in PRÉVACID-treated patierns than placebo-treated patients
Incidence of Possibly or Probably
Treatment-Related Adverse Events in Short-Term, Placebo-Contre (N= 2768) (N= 1023) 2.1 1.2

Haudache was also seen at greater than 1% incidence but was more common on placebo. The incidence of diarrhea was similar between patients who received placebo and patients who received lansoprazole 15 mg and 30 mg, but higher in the patients who received lansoprazole 6 mg (2 %). 14.4% 4.2%, and 7.4%, respectively). The most commonly reported possibly or probably treatment-related adverse event during maintenance therapy was diarrhea.

In the risk reduction study of PREVACID for NSAID-associated gastric ulcers, the incidence of diarrhea for patients treated with PREVACID was \$5%, misoprastol 22%, and placebo 3%. Additional adverse experiences occurring in <1% of patients or subjects in domestic trials are shown below. Refer to Postmarketing for adverse reactions occurring since the drug was marketed.

Additional adverse experiences occurring in <1% of patients or subjects in domestic trials are shown below. Refer to Postmarketling for adverse reactions occurring since the drug was marketed.

Body as a Whole – abdomen enlarged, allergic reaction, asthenia, back pain, candidiasis, carcinoma, chest pain (not otherwise specified), chills, edema, fever, flu syndrome, halltosis, infection (not otherwise specified), malaise, neck pain, neck rigidity, pain, pelvic pair, Cardiovascular System – angina, arriythmia, hardyardia, cerebrovascular accident/cerebral infarction, hyperfension/hypotension, migrane, myocardial infarction, palptations, shock circulatory failure), syncope, tachyardia, vasodilation, Digastive System – ahonormal stools, anorexia, bezoar, cardiospasm, cholelithiasis, coilist, dry mombu, dyspepsia, drysphagia, entertis, eructation, esophageal stenosis, esophagael ulcer, esophagitis, fecal discoloration, flatulence, gastric nodules/fundic gland polyps, gastritis, gastroenteristis, gurn hemorrhage, hematemesis, incrasead appetite, incraesed salivation, melena, mouth ulceration, nausea and vomiting, nausea and vomiting, card sincerative stomas, and increased appetite, incraesed salivation, melena, mouth ulceration, nausea and vomiting, nausea and vomiting, and iarchage, and monitalissis, rectal disorder, rectal hemorrhage, stomatitis, tensemus, thirst, tongue disorder, ulcerative colitis, cord, and increased, dysuria, and proposition of the pro

menstrual disorder, penis disorder, polyuria, testis disorder, urethral pain, urinary frequency, urinary tract infection, urinary urgency, urination impaired, vaginitis.

Postmarketing
On-poing Safety Surveillance: Additional adverse experiences have been reported since lansoprazole has been marketed. The majority of these cases are foreign-sourced and a relationship to Inasoprazole has not been established. Because these events were reported voluntarily from a population of unknown size, estimates of frequency cannot be made. These events are listed below by COSTART body system. Pepatotoxicity, pancreatitis, owniting, *Hemic and Lymphatic System - agranulocytosis, aplastic aremia, hemolytic anemia, leukopenia, neutropenia, pancytopenia, hrombocytopenia, and thrombot thrombocytopenic purpura. Skin and Appendages – severe dermatologic reactions including retheran untilome. Stevens-obhisons syndrome, took epidemal necotysis (some fatal); Special Senses - speech disorder, Urogenial System - urinary retention.

Combination Therapy with Amorticillia and Carifformycin.
In clinical trials using combination therapy with PREVACID plus amoxicillin, or adverse reactions peculiar to these drug combinations were observed. Adverse reactions that have occurred have been limited to those that had been previously reported with PREVACID, amoxicillin or clarithromycin.

Triple Therapy: PREVACIO/Amoxicillin/clarithromycin or patients who received triple therapy for 14 days were diarrhea (7%), headache (6%), and taste perversion (5%). There were no tastistically significant differences in the frequency of reported adverse events towere events between the 10- and 14-day triple therapy regimens. No treatment-emergent adverse events the 10- and 14-day triple therapy regimens. No treatment-emergent adverse events the 10- and 14-day triple therapy regimens. No treatment-emergent adverse events tower observed as deported years per tracts with triple therapy than with any dual therapy regimens. Dual Therapy PREVACID Lid. plus Preserved Pr

Dual Therapy: PREVACID/amoxicillin
The most frequently reported adverse events for patients who received PREVACID ti.d. plus
movicillin t.i.d. dual therapy were diarrhae (8%) and headache (7%). No treatmentemergent adverse events were observed at significantly higher rates with PREVACID ti.d.
plus amoxicillin t.i.d. dual therapy than with PREVACID alone.
For more information on adverse reactions with amoxicillin or clarithromycin, refer to their
package inserts, ADVERSE REACTIONS sections.

Laboratory Values
The following changes in laboratory parameters for lansoprazole were reported as adverse

events:
Abnormal liver function tests, increased GGOT (AST), increased GGPT (ALT), increased GGTP, abnormal liver function tests, increased GGTP, increased globulins, increased GGTP, increased/decreased/abnormal WBC, abnormal AG ratio, abnormal ABC, billirubinemia, eosinophilla, hyperlipemia, increased/decreased electrolytes, increased/decreased/abnormal patients, increased/abnormal patients, increased/abnormal patients, increased/abnormal patients, and increased guartine wells. Unire abnormalities such as abuminuria, glycosuria, and hematuria were also reported. Additional isolated laboratory abnormalities were reported.

In the placebo controlled studies, when SGOT (AST) and SGPT (ALT) were evaluated, 0.4% (4/978) placebo patients and 0.4% (11/2677) lansoprazole patients had enzyme elevations greater than three times the upper limit of normal range at the final treatment visit. None of these lansoprazole patients reported jaundice at any time during the study. In clinical trials using combination therapy with PREVACID plus amoxicillin adarthromycin, and PREVACID plus amoxicillin, no increased laboratory abnormalities particular to these drug combinations were observed.

varucular to these drug combinations were observed. For more information on laboratory value changes with amoxicillin or clarithromycin, refer o their package inserts, **ADVERSE REACTIONS** section.

to their package inserts, Auvernoe new rooms assumed.

OVERDOSAGE

Oral doses up to 5000 mg/kg in rats (approximately 1300 times the recommended human dose based on body surface area) and mine (about 675.7 times the recommended human dose hased on body surface area) did not produce deaths or any clinical signs.

Lansoprazole is not removed from the circulation by hemodialysis. In one reported case of overdose, the patient consumed 600 mg of lansoprazole with no adverse reaction.

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