lorcaserin (lor-ca-ser-in)  

**Classification**  
Therapeutic: weight control agents  
Pharmacologic: serotonin 2C receptor agonists

**Pregnancy Category:** X

**Indications**  
In conjunction with a reduced-calorie diet and increased physical activity for chronic weight management in patients with a body mass index (BMI) of ≥30 kg/m² or ≥27 kg/m² with a weight-related comorbidity (hypertension, type 2 diabetes, dyslipidemia).

**Action**  
Acts as a serotonin 2C receptor agonist, increases satiety by activating 5–HT2C receptors located on anorexigenic neurons in the hypothalamus.  

**Therapeutic Effects:**  
Decreased appetite with subsequent weight loss and health benefits.

**Pharmacokinetics**  
**Absorption:** Well absorbed following oral administration.  
**Distribution:** Enters cerebrospinal fluid and central nervous system.  
**Metabolism and Excretion:** Extensively metabolized by the liver; metabolites are mostly excreted in urine (92.3%), minimal amounts in feces (2.2%).  
**Half-life:** 11 hr.

**TIME/ACTION PROFILE (weight loss)**  
ROUTE ONSET PEAK DURATION  
PO within 1 mo 6–9 mo unknown

**Contraindications/Precautions**  
**Contraindicated in:**  
- OB: Pregnancy (weight loss may result in fetal harm); lactation: Breast feeding is not recommended; pediatrics: Not recommended for children < 18 yr; severe renal impairment/end stage renal disease.  

**Use Cautiously in:**  
- History of priapism or risk of priapism (including sickle-cell anemia, multiple myeloma, leukemia, or penile deformity); history of suicidal thoughts/behavior; history of type 2 diabetes (weight loss may increase risk of hypoglycemia); concurrent use of drugs metabolized by the CYP2D6 enzyme system; moderate renal impairment; severe hepatic impairment; Geri: Use should be based on age-related renal impairment.  

**Exercise Extreme Caution in:**  
- Concomitant use of serotonergic or antidiopaminergic agents.  

**Adverse Reactions/Side Effects**  
**CNS:** NEUROLEPTIC MALIGNANT SYNDROME, SEROTONIN SYNDROME, cognitive impairment, depression, dizziness, fatigue, psychiatric disorders, suicidality.  
**CV:** VALVULOPATHY, bradycardia, hypertension, peripheral edema.  
**GI:** constipation, dry mouth, nausea.  
**GU:** priapism.  
**Endo:** hypoglycemia, prolactin.  
**Hemat:** pRBC count.

**Interactions**  
**Drug-Drug:**  
- Concurrent use with serotonergic or antidiopaminergic medications, including antipsychotics may increase risk of serotonin syndrome or neuroleptic malignant syndrome; use extreme caution.  
- Concurrent use with serotonergic/dopaminergic agents that are potent 5–HT2B agonists may increase risk of cardiac valvulopathy.  
- May increase blood levels and effects of other drugs metabolized by the CYP 2D6 system, including dextromethorphan; lorcaserin is an inhibitor of the CYP 2D6 system.

**Route/Dosage**  
PO (Adults): 10 mg twice daily; discontinue if 5% weight loss has not been observed at 12 wk.

**NURSING IMPLICATIONS**  
**Assessment**  
- Monitor patients for weight loss and adjust concurrent medications (antihypertensives, antidiabetics, lipid-lowering agents) as needed.  
- Assess for serotonin syndrome (mental changes [agitation, hallucinations, coma], autonomic instability [tachycardia, labile BP, hyperthermia], neuromuscular abnormalities [hyper-reflexia, incoordination], and/or GI symptoms [nausea, vomiting, diarrhea]), especially in patients taking other serotonergic drugs (SSRIs, SNRIs, tramadol).  
- Monitor for signs and symptoms of neuroleptic malignant syndrome (hyperthermia, muscle rigidity, autonomic instability with possible rapid fluctuation of vital signs, mental status changes) during therapy.

**Contraindications:**  
- Lorcaserin is discontinued.
Assess for signs and symptoms of valvular heart disease (dyspnea, dependent edema, CHF, new cardiac murmur) during therapy. If these develop, consider discontinuing lorcaserin.

Monitor closely for notable changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior or depression. Discontinue lorcaserin if these occur.

Monitor for symptoms related to hyperprolactinemia (menstrual abnormalities, galactorrhea, gynecomastia).

Lab Test Considerations: Monitor CBC periodically during therapy. May cause leukopenia, lymphopenia, neutropenia, anemia, and/or WBC, hematocrit, and hemoglobin.

May cause prolactin levels.

Monitor blood sugar closely in patients with diabetes.

Potential Nursing Diagnoses
Disturbed body image (Indications)
Imbalanced nutrition: more than body requirements (Indications)
Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation
PO: May be administered with or without food.

Patient/Family Teaching
- Instruct patient to take lorcaserin as directed and not to increase dose.
- May impair cognitive function. Caution patient to avoid driving or other activities that require alertness until response to medication is known.
- Advise patient and family to notify health care professional if thoughts about suicide or dying, attempts to commit suicide; new or worse depression; new or worse anxiety; feeling very agitated or restless; panic attacks; trouble sleeping; new or worse irritability; acting aggressive, being angry or violent; acting on dangerous impulses; an extreme increase in activity and talking; other unusual changes in behavior or mood or if symptoms of serotonin syndrome, neuroleptic malignant syndrome, or valvular heart disease occur.
- Instruct patient to notify health care professional if all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications, especially St. John’s Wort.
- Advise patients with diabetes to monitor blood sugar closely during therapy.
- Informed patient that pregancy may occur. If an erection lasts longer than 4 hrs, whether painful or not, immediately discontinue lorcaserin and seek emergency attention.
- Advise patient to notify health care professional if pregnancy is planned or suspected or if breast feeding.

Evaluation/Desired Outcomes
- Decrease in weight and BMI. If 5% of baseline body weight is not lost by Week 12, discontinue lorcaserin, as it is unlikely patient will achieve and sustain clinically meaningful weight loss with continued treatment.

Why was this drug prescribed for your patient?