ISOtretinoin (eye-soe-tret-i-noyn)
Absorption: Absorption is unknown, (Tazac); ● [Calc, Sotret]
Classification: Therapeutic: antiacne agents
Pharmacologic: retinoids
Pregnancy Category: X

Indications
Management of severe nodular acne resistant to conventional therapy, including topical therapy and systemic antibiotics. Not to be used under any circumstances in pregnant patients.

Action
Control of vitamin A (retinoids) reduces sebaceous gland size and differentiation.

Therapeutic Effects: Diminution and resolution of severe acne. May also prevent abnormal keratinization.

Pharmacokinetics
Absorption: Rapidly absorbed following (23–25%) oral administration; absorption
when taken with a high-fat meal.
Distribution: Appears to be widely distributed; crosses the placenta.
Protein Binding: 99.9%.
Metabolism and Excretion: Metabolized by the liver and excreted in the urine and feces.
Half-life: 10–20 hr.

TIME/ACTION PROFILE (diminution of acne)
ROUTE ONSET PEAK DURATION
PO unknown up to 8 wk unknown

Contraindications/Precautions
Contraindicated in: Hypersensitivity to retinoids, glycerin, soybean oil, or parabens; OB, Lactation: Pregnancy and lactation; Women of childbearing age who may become or who intend to become pregnant; Patients planning to donate blood.

Use Cautiously in: Pre-existing hypertriglyceridemia; Diabetes mellitus; History of alcohol abuse, psychosis, depression, or suicide attempt; Obese patients; Inflammatory bowel disease; Pedi: Children <12 yr (safety not established).

Adverse Reactions/Side Effects
CNS: suicide attempt, behavior changes, depression, pseudotumor cerebri, psychosis, suicidal ideation.
EENT: conjunctivitis, epistaxis, blurred vision, contact lens intolerance, corneal opacities, dry eye, night vision.
CV: edema.
GI: cheilitis, dry mouth, nausea, vomiting, abdominal pain, anorexia, hepatitis, pancreatitis.
Mus: severe birth defects.

Interactions
Drug-Drug: Additive toxicity with vitamin A and other drugs having anticholinergic properties. Concurrent use with tetracycline or minocycline may increase the risk of pseudotumor cerebri. Concurrent use with alcohol may result in additive toxicity. Drying effects may be enhanced by concurrent use of benzoyl peroxide, sulfur, tretinoin, and other topical agents.

Drug-Food: Excessive ingestion of foods high in vitamin A may result in additive toxicity.

Route/Dosage
PO (Adults and Children ≥12 yr): 0.5–1 mg/kg/day (up to 2 mg/kg/day) in 2 divided doses for 15–20 wk. Once discontinued, if relapse occurs, therapy may be reinstated after an 8-wk rest period.

NURSING IMPLICATIONS
Assessment
● Verify that patient receiving isotretinoin is registered with the iPLEDGE program and is completing all required interactions with their health care provider.
● Assess skin prior to and periodically during therapy. Transient worsening of acne may occur at initiation of therapy. Note number and severity of cysts, degree of skin dryness, erythema, and itching.
● Assess for allergy to parabens; capsules contain parabens as a preservative.
Monitor patient for behavioral changes throughout therapy. May cause depression, psychosis, and suicide ideation. If behavioral changes occur, they usually resolve with discontinuation of therapy.

Access for rash periodically during therapy. May cause Stevens-Johnson syndrome or toxic epidermal necrolysis. Discontinue therapy if severe or if accompanied with fever, general malaise, fatigue, muscle or joint aches, blistered, sore lips, conjunctivitis, hepatitis and/or eosinophilia.

Lab Test Considerations: Obtain 2 negative sequential serum or urine pregnancy tests with a sensitivity of 25 mIU/mL before receiving initial prescription and monthly before each new Rx.

Monitor liver function (AST, ALT, and LDH) prior to therapy, after 1 mo of therapy, and periodically thereafter. Inform health care professional if these values become elevated and therapy may need to be discontinued.

Monitor blood gases (blanked), BUN, uric acid) under fasting conditions before therapy and monthly after 1 mo of therapy and periodically thereafter. Report values to your doctor.

Obtain baseline and periodic CBC, urinalysis, and SMA-12. May cause proteinuria, red and white blood cells in urine, and uric acid.

Potential Nursing Diagnoses
Risk for impaired skin integrity (Indications) (Side Effects)
Disturbed body image (Indications)

Implementation
Do not confuse isotretinoin with tretinoin.

Isotretinoin is approved for marketing only under the iPLEDGE program, a special restricted distribution program approved by the FDA.

Only patients who meet all requirements of the iPLEDGE program may receive isotretinoin.

Isotretinoin may only be prescribed by healthcare providers registered and activated with the iPLEDGE program.

Isotretinoin may only be dispensed by pharmacies registered with the iPLEDGE program.

PO: Administer with meals. Do not crush or open capsules.

Patient/Family Teaching
Explain the iPLEDGE program and its requirements to patient and parent.

Patients must read Medication Guide and sign consent form prior to initiation of therapy.

Explain to patient that a temporary worsening of acne may occur at beginning of therapy.

Instruct female patients to use 2 forms of contraception 1 mo before therapy, throughout therapy, and for at least 1 mo after discontinuation of drug. This drug is contraindicated during pregnancy and may cause birth defects. Patient must have 2 negative serum or urine pregnancy tests with a sensitivity of 25 mIU/mL before receiving initial prescription. First test is obtained by prescriber when decision is made to prescribe the medication. Second pregnancy test should be done during first 5 days of menstrual period immediately preceding beginning of therapy. For patients with amenorrhea, second test should be done 11 days after last act of unprotected sexual intercourse. Each month of therapy patient must have a negative result from a urine or serum pregnancy test. Pregnancy test must be repeated every month prior to female patient receiving prescription. Manufacturer will make available pregnancy test kit to female patients. Patient must discontinue medication and inform health care professional immediately if pregnancy is suspected. Recommended consent form prepared by manufacturer stresses fetal risk. Parents of minors should also read and sign a consent form. Yellow self-adhesive qualification stickers completed by prescriber must accompany prescription.

Advise patient and family to notify health care professional if rash or thoughts about suicide or dying, attempt 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 occur.

Advise patient to consult with health care professional before using other acne preparations while taking isotretinoin. Soaps, cosmetics, and shaving lotions may also worsen dry skin.
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- Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications.
- Instruct patient that dry skin and chapped lips will occur. Lubricant to lips may help chapping.
- Instruct patient that oral rinses, good oral hygiene, and sugarless gum or candy may help minimize dry mouth. Notify health care professional if dry mouth persists for more than 2 wk.
- Discuss possibility of excessively dry eyes with patients who wear contact lenses. Patient should contact health care professional about eye lubricant. Patient may need to switch to glasses during course of therapy and for up to 2 wk following discontinuation.
- Advise patient to avoid alcoholic beverages while taking isotretinoin, as this may further increase triglyceride levels.
- Caution patient to use sunscreen and protective clothing to prevent photosensitivity reactions. Health care professional should be consulted about sunscreen, as some sunscreens contain vitamin A.
- Instruct patient not to take vitamin A supplements and to avoid excessive ingestion of foods high in vitamin A (liver, dark liver oils, egg yolks, yellow-orange fruits and vegetables, dark green leafy vegetables, whole milk, vitamin A– fortified skim milk, butter, margarine) while taking isotretinoin; this may result in hypervitaminosis.
- Advise patient not to donate blood while receiving this medication. After discontinuing isotretinoin, wait at least 1 mo before donating blood to prevent the possibility of a pregnant patient receiving the blood.
- Instruct diabetic patients that difficulty controlling blood glucose may occur.
- Inform patient to report burning of eyes, visual changes, rash, abdominal pain, diarrhea, headache, nausea, and vomiting to health care professional.
- Inform patient of need for medical follow-up. Periodic lab tests may be required.

Evaluation/Desired Outcomes

- Decrease in the number and severity of cysts in severe acne. Therapy may take 4–5 mo before full effects are seen. Therapy is discontinued when the number of cysts is reduced by 70% or after 5 mo. Improvement may occur after discontinuation of therapy; therefore, a delay of at least 8 wk is recommended before a second course of therapy is considered.

Why was this drug prescribed for your patient?