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The dread of pain. The dread of being hospitalized. The dread of a limited future. That’s what angina means to your patient. But with INDERAL, the outlook can brighten.

**INDERAL: A logical first step.** When nitroglycerin and other conventional measures are inadequate, add INDERAL. It counters the anginal hemodynamics. Right at the start, INDERAL diminishes catecholamine-induced rise in heart rate and systolic blood pressure. Reduces myocardial oxygen demand. And brings $O_2$ supply and demand into more favorable balance.

**INDERAL: The logic of using it first.** Consider these well-documented benefits… Fewer angina attacks—sometimes even none. Less need for nitroglycerin—sometimes no need at all. And greater tolerance for exercise … greater freedom of action for your patient.

INDERAL®
(PROPRANOLOL HCl)

**IN ANGINA PROPHYLAXIS: A LOGICAL CHOICE**

INDERAL is contraindicated in patients with bronchial asthma, allergic rhinitis, congestive heart failure, sinus bradycardia, and greater than first degree heart block. Abrupt withdrawal should be avoided.

Please see brief summary of prescribing information on the following page.
BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE INSERT)
INDERAL® BRAND OF PROPRANOLOL HYDROCHLORIDE A beta-adrenergic blocking agent

CONTRAINDICATIONS
INDERAL is contraindicated in: 1) bronchial asthma, 2) allergic reactions (including those due to codeine), 3) sinus bradycardia and greater than first degree block, 4) cardiac arrhythmia, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS). Therapy with INDERAL should be discontinued in patients with severe hepatic, renal or pulmonary insufficiency. Propranolol (PROPRANOLOL HYDROCHLORIDE) should be used with caution in patients with impaired renal or hepatic function. INDERAL is contraindicated in patients with uncorrected thyrotoxicosis. INDERAL should be used with caution in patients who have been given propranolol for other indications.

WARNINGS
CARDIOVASCULAR DISEASE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential for exacerbation of heart failure. In patients with impaired cardiac function, the effects of INDERAL and digitalis are additive in depressing AV conduction. The effects of INDERAL and digitalis are additive in depressing AV conduction. The effects of INDERAL and digitalis are additive in depressing AV conduction. The effects of INDERAL and digitalis are additive in depressing AV conduction. The effects of INDERAL and digitalis are additive in depressing AV conduction.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina. In some cases, angina has been reported following discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina patients, the patient should be cautioned against interruption or discontinuation of INDERAL therapy. Frequency and intensity of anginal attacks may increase when INDERAL is abruptly discontinued. To prevent such an occurrence, dosage should be tapered gradually over a period of one to two weeks. If the patient experiences angina following INDERAL withdrawal, the dosage should be gradually increased to the former level until the angina disappears. The dosage should then be tapered slowly to the lowest possible level (see WARNINGS). Overdosage or exaggerated response may result when INDERAL is abruptly discontinued.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Special caution should be given to patients with potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and may cause a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and may cause a false impression of improvement.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol therapy, tachycardia was replaced by a severe bradycardia requiring a damped pacemaker in one case and resulting in an initial dose of 5 mg propranolol.

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect. Therefore, INDERAL should be started carefully when administered for antihypertensive or other indications.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to increased oxygen demand. For this reason, with the exception of pheochromocytomas, INDERAL should be withheld 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, if a patient with hypertension or angina is considered to be a risk for intraoperative hypotension, INDERAL may be cautiously administered during surgery. INDERAL should be discontinued if severe bradycardia occurs. INDERAL should be used with caution in patients with impaired hepatic or renal function, and in patients with asthma, chronic bronchitis, or emphysema. INDERAL should be used cautiously in patients with diabetes or other endocrine disorders.

DIABETES AND PATIENTS SUBJECT TO HYPOGLYCEMIA: Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of pancretic symptoms and symptoms due to increased cardiovascular outflow in patients with diabetes. Hypoglycemic attacks may be accompanied by a pre-cipitous elevation of blood pressure.

USE IN PREGNANCY: The use of INDERAL, in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and fetus be weighed against the expected therapeutic benefit. Em- bryotoxic effects have been seen in animal studies at doses above 10 times the maximum recommended human dose.

PRECAUTIONS
Patients receiving catecholamine-depleting drugs such as reserpine should be closely ob- served. INDERAL is administered. The ability of catecholamine-depleting drugs to inhibit the release of catecholamines from the adrenal medulla may be impaired by INDERAL. Therefore, in a patient with a history of hypertension or angina pectoris who is being treated with INDERAL, the response to such drugs may be augmented by INDERAL therapy. INDERAL should be used with caution in patients who have been given propranolol for other indications.

ADVERSE REACTIONS
Cardiovascular: Bradycardia, congestive heart failure, intensification of AV block, hypotension, pancreatitis of hands, arterioles sufficiency, involuntary of the refractory type, thymocytopenia, arrhythmias. 
Central Nervous System: Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability slightly blurred sensation, and decreased performance on neuropsychometric tests.
Gastrointestinal: Anorexia, vomiting, epigastric distension, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.
Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with achiness, pain, multiple, and sore throat, laryngospasm and respiratory distress.
Respiratory: Bronchospasm.
Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thymocytopenic purpura. Miscellaneous: Reversible, reversible alopecia, olfactory hallucinations; reactions involving the skin, liver, and nervous system; reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability slightly blurred sensation, and decreased performance on neuropsychometric tests.
DOSAGE AND ADMINISTRATION
The dosage range for INDERAL is different for each indication.

PEDIATRIC DOSAGE
As this time the data on the use of the drug in this age group are too limited to permit ade- quate directions for use.

OVERDOSE OR EXAGGERATED RESPONSE
IN THE EVENT OF OVERDOSE OR EXAGGERATED RESPONSE, the following mea- sures should be employed:
BRADYCARDIA—ADMINISTER ATROPINE (0.25 to 1.0 mg) IF THERE IS NO RESPONSE TO VAGAL BLOCKADE, ADMINISTER ISOPROPENOL (50 mcg/kg) IN A 20 to 30 SECOND INTERVAL UNTIL RESPONSE IS OBTAINED. Although individual patients may re- respond to any dosage level, the average optimum dosage appears to be 150 mcg per day. IN patients receiving INDERAL, the value and safety of dosage exceeding 300 mg per day have not been established.

If treatment to be discontinued, reduce dosage gradually over a period of several weeks.

Supplied:
TABLETS INDERAL (propranolol hydrochloride)
No. 461—Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 462—Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 463—Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 464—Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100.

Inhibitable:
No. 3285—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection. The pH is adjusted with hydrochloric acid. Supplied as 1 ml ampuls in boxes of 10.

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7482/381
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- Connective tissue biochemistry and metabolism related to arteriosclerosis.
- Epidemiologic, population, and genetic studies of arteriosclerosis, including studies of the interplay of risk factors (e.g., diabetes, hyperlipidemia, hypertension).
- Studies of arteriosclerosis and its precursors in the young.
- Animal models of arteriosclerosis.
- Research on detection and quantification of arterial lesions in vivo in humans and animals.
- Evaluation of effects on established lesions of prevention and treatment affecting, for example, plasma lipoproteins, thrombogenesis, and/or intimal injury.

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MINIPRESS Effectively by Reducing
dilation of which results in reduced peripheral resistance and blood pressure.
Controls Hypertension
Peripheral Resistance

- MINIPRESS Reduces Mean Arterial Pressure
- MINIPRESS Reduces Total Peripheral Resistance
- MINIPRESS Does Not Reduce Cardiac Index

...and Maintains These Effects Over the Long Term

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Relative hemodynamic changes at rest and during exercise after one year of prazosin therapy in 10 hypertensive patients. Adapted from Lund-Johansen

MINIPRESS®
(prazosin HCl)
Capsules 1 mg, 2 mg, 5 mg

Please see Brief Summary on last page.
MINIPRESS® (prazosin hydrochloride) CAPSULES For Oral Use

INDICATIONS: MINIPRESS® (prazosin hydrochloride) is indicated in the treatment of hypertension. As an antihypertensive drug, it is mild to moderate in activity. It can be used as the initial agent or it may be employed in a general treatment program in conjunction with a diuretic and/or other antihypertensive drugs as needed for proper patients response.

WARNINGS: MINIPRESS (prazosin hydrochloride) may cause syncope with sudden loss of consciousness. In most cases this is believed to be due to an excessive postural hypotensive effect, although occasionally the syncopal episode has been preceded by a bout of severe tachycardia with heart-rates of 120-160 beats per minute. Syncopal episodes have usually occurred within 30 to 90 minutes of the initial dose of the drug; occasionally they have been reported in association with rapid dosage increases or the introduction of another antihypertensive drug into the regimen of a patient taking high doses of MINIPRESS (prazosin hydrochloride). The incidence of syncopal episodes is approximately 1% in patients given an initial dose of 2 mg or more. Clinical trials conducted during the investigational phase of this drug suggest that syncopal episodes can be minimized by limiting the initial dose of the drug to 1 mg, by subsequently increasing the dosage slowly, and by introducing any additional antihypertensive drugs into the patient’s regimen with caution (see DOSAGE AND ADMINISTRATION).

Hypotension may develop in patients given MINIPRESS who are also receiving a beta-blocker such as propranolol.

If syncope occurs, the patient should be placed on the recumbent position and treated supportively as necessary. This adverse effect is self-limiting and in most cases does not recur after the initial period of therapy or during subsequent dose titration.

Patients should always be started on the 1 mg capsules of MINIPRESS (prazosin hydrochloride). The 2 and 3 mg capsules are not indicated for initial therapy.

More common than loss of consciousness are the symptoms often associated with lowering of the blood pressure, namely, dizziness and lightheadedness. The patient should be cautioned about these possible adverse effects and advised what measures to take should they develop. The patient should also be cautioned to avoid situations where injury could result should syncope occur during the initiation of MINIPRESS (prazosin hydrochloride) therapy.

Usage in Pregnancy: Although no teratogenic effects were seen in animal testing, the safety of MINIPRESS (prazosin hydrochloride) in pregnancy has not been established. MINIPRESS (prazosin hydrochloride) is not recommended in pregnant women unless the potential benefit outweighs potential risk to mother and fetus.

Usage in Children: No clinical experience is available with the use of MINIPRESS (prazosin hydrochloride) in children.

ADVERSE REACTIONS: The most common reactions associated with MINIPRESS (prazosin hydrochloride) therapy are dizziness 10.3%, headache 7.8%, drowsiness 7.6%, lack of energy 6.9%, weakness 6.5%, palpitations 5.3%, and nausea 4.9%. In most instances side effects have disappeared with continued therapy or have been tolerated with no decrease in dose of drug.

The following reactions have been associated with MINIPRESS (prazosin hydrochloride), some of them rarely. (In some instances exact causal relationships have not been established).

Gastrointestinal: vomiting, diarrhea, constipation, abdominal discomfort and/or pain.

Cardiovascular: edema, dyspnea, syncope, tachycardia.

Central Nervous System: nervousness, vertigo, depression, paresthesia.

Dermatologic: rash, pruritus.

Gynecotary: urinary frequency, incontinence, impotence.

EENT: blurred vision, reddened sclera, epistaxis, tinnitus, dry mouth, nasal congestion.

Other: diaphoresis.

Single reports of pigmented mottling and scuro retina, and a few reports of cataract development or disappearance have been reported. In more instances, the exact causal relationship has not been established because the baseline observations were frequently inadequate.

In more specific slit-lamp and fundoscopic studies, which included adequate baseline examinations, no drug-related abnormal ophthalmological findings have been reported.

DOSEAGE AND ADMINISTRATION: The dose of MINIPRESS (prazosin hydrochloride) should be adjusted according to the patient’s individual blood pressure response. The following is a guide to its administration.

Initial Dose: 1 mg two or three times a day. Use With Other Drugs: When adding a diuretic or other antihypertensive agent, the dose of MINIPRESS (prazosin hydrochloride) should be reduced to 1 mg or 2 mg three times a day and retitration then carried out.

HOW SUPPLIED: MINIPRESS (prazosin hydrochloride) is available in 1 mg (white #431), 2 mg (pink and white #437) capsules in bottles of 250, 1000, and unit dose institutional packages of 100(10 x 10’s); and 3 mg (blue and white #438) capsules in bottles of 250, 500 and unit dose institutional packages of 100(10 x 10’s). More detailed information available on request.

Reference:
INTERNATIONAL SYMPOSIUM ON SALT AND HYPERTENSION
Medical Research Center

Brookhaven National Laboratory
Upton, L.I., New York 11973 U.S.A.

May 7 and 8, 1981

A two-day Symposium will be held at the Brookhaven National Laboratory, covering various aspects of clinical and experimental salt hypertension. This first Lewis K. Dahl International Symposium will include speakers from Europe, Japan, and the United States.

A fee of $125.00, payable in advance, will be charged each participant. This fee includes living accommodations on the Brookhaven National Laboratory site, and the official symposium banquet. Registration must be limited to the first 130 applicants.

For application and further information, contact:

Dr. J. Iwal, Medical Department
Brookhaven National Laboratory
Associated Universities, Inc.
Upton, L.I., N.Y. 11973, U.S.A.
Tel: (516) 345-3818
TO PUT THE BEAT BACK WHERE IT BELONGS...
INDERAL ALONE: The ECG reads PAT...persistent sinus tachycardia...or persistent atrial extrasystoles. Consider INDERAL. For INDERAL aids resumption of normal sinus rhythm. By blocking cardiac beta-receptors from excessive catecholamine stimulation. By diminishing the rapid-firing rate of the SA node. And suppressing ectopic pacemakers.

INDERAL WITH: And when the ECG reads atrial flutter or fibrillation, but digitalis or quinidine fail to achieve the desired control—consider ADDING INDERAL. By slowing AV nodal conduction, INDERAL helps decrease the number of atrial impulses conducted to the ventricles, thus making possible the needed control. Adding INDERAL to either of these agents also permits lowering their dosages and diminishing their toxic effects. Perhaps more important, adding INDERAL to digitalis can obviate using quinidine—thereby avoiding quinidine's potential for enhancing digitalis toxicity.

INDERAL INSTEAD: Finally, in digitalis-induced arrhythmias that persist after the drug is discontinued and electrolyte imbalance is corrected—consider INDERAL INSTEAD. Except in the presence of congestive heart failure, INDERAL is often the drug of choice in abolishing such arrhythmias.

INDERAL is contraindicated in patients with bronchial asthma, allergic rhinitis during the pollen season, sinus bradycardia, greater than first degree heart block, and congestive heart failure (unless the failure is secondary to a tachyarrhythmia treatable with INDERAL).

Please turn page for Brief Summary of Prescribing Information.
THE MOST WIDELY PRESCRIBED BETA BLOCKER IN THE WORLD.

INDERAL (Propranolol HCl)
FOR SUPERVENTRICULAR ARRHYTHMIAS

BRIEF SUMMARY

(For full prescribing information, see package circular)
Inderal* brand of propranolol hydrochloride is a beta-adrenergic blocking agent.

BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE AWARE OF THE POSSIBLE INTERACTIONS OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THE DRUG.

CONTRAINDICATIONS: INDERAL, is contraindicated in: 1) bronchial asthma; 2) allergic mints during the pollen season; 3) sinus bradycardia and greater than first degree block; 4) cardio-gangrene shock; 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmic instable with INDERAL; 7) in patients on adrenergically augmenting psychotropics drugs (including MAO inhibitors), and 8) in patients with bradycardia who are on such drugs and who may have a significant cholinergic effect. These patients should be followed closely.  

WARNINGS: CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition of both beta and alpha receptors may contribute to circulatory collapse. The added catecholamine blocking action of INDERAL therapy may impair the ability of the heart to respond appropriately to stress. Sufficient time should be allowed for the drug to reach the site of action even when a slow circulation is present. If necessary, a second dose may be given after a period of observation. Avoid giving more than the total daily dose in divided doses. Continuous ECG monitoring is recommended in patients with severe cardiac disease (see WARNINGS).

In patients without a history of cardiac failure, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during INDERAL therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely. a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn, b) if tachycardia is being controlled, patients should be maintained on combined therapy and the patient closely monitored until threat of cardiac failure is over.

In patients with angina pectoris, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it is usually advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

In patients with thyrotoxicosis, possible deleterious effects from long term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the direct signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not destroy thyroid function entirely.

In patients with Wolf-Parkinson-White syndrome, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia resulting in sudden death. In one case this resulted after an initial dose of 50 mg propranolol. In patients during anesthesia with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect. Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia.

In patients undergoing major surgery, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of phaeochromocytoma, INDERAL should be withdrawn 3-4 days prior to surgery, at which time all clinical and pharmacologic effects are gone according to available evidence. However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta-receptor agonists, incomplete beta blockade may be prevented by administration of such agents, e.g., isoproterenol or levaterenol. However, such patients may be subject to profuse secretions, hypotension, dilatation in restricting and maintaining the heart beat has also been reported.

In patients prone to nonallergic bronchospasm (e.g., CHRONIC BRONCHITIS, EPHYSEMA), INDERAL should be administered with caution since it may impair the bronchodilating effect produced by endogenous and exogenous catecholamine stimulation of beta receptors.

In patients hypersensitive to INDERAL: Because of the beta-adrenergic blocking activity, INDERAL may prevent the appearance of pruritus, vomiting, epigastric distress, abdominal cramping, diarrhea and causing cardiac standstill. Sufficient time should be allowed for the drug to reach the site of action even when a slow circulation is present. If necessary, a second dose may be given after two minutes. Thereafter, additional drugs should not be given in less than four hours. Additional INDERAL should not be given if the desired alteration in rate and/or rhythm is achieved. Transference to oral therapy should be made as soon as possible. The iravansory administration of INDERAL has not been evaluated adequately in the management of hypoglycemic emergencies.

OVERDOSE OR EXAGGERATED RESPONSE: IN THE EVENT OF OVERDOSE OR EXAGGERATED RESPONSE THE FOLLOWING MEASURES SHOULD BE EMPLOYED:

BLOOD PRESSURE: 1) Administer intravenous fluids—Keep patient supine and administer fluids slowly; 2) Administration of 10 to 20 mg of atropine hydrochloride or 0.1 to 0.5 mg of isoproterenol hydrochloride intravenously immediately. 3) Administration of 25 to 50 mg of sodium or potassium bicarbonate intravenously. 4) Oxygen therapy. 5) SYNTHETIC SYMPathomIMHETIC AGENTS: WHENLY administered, and when respiratory function persists proportionately to the expected therapeutic benefit. Em.

USE IN PREGNANCY: The safe use of INDERAL in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Emergency effects have been seen in animal studies at doses about 10 times the maximum recom-

PRECAUTIONS: Patients receiving catecholamine depleting drugs such as reserpine should be closely observed. INDERAL is administered. The added catecholamine blocking action of this drug may produce an excessive reduction of the resting sympathtic nervous activity. Occasionally, the pharamcologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncope, attacks, or orthostatic hypotension. Administration with any new drug that produces bradycardia or hypotension should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS: Cardiovascular: bradycardia, congestive heart failure; intensification of AV block; hypotension; decompression of hands, and/or digitalis intoxication; disorientation; sensory; lightheadedness; and reflex tachycardia. Other effects include: gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis; respiratory: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress; systemic: urticaria, fever; central nervous system: headache, allergic: anaphylactic shock; hepatic: jaundice, elevated liver enzymes, neurological: reversible alopecia. Oculomucocutaneous reactions involving the skin, serious endocrine abnormalities, bleeding; cerebral: convulsions, bleeding; respiratory: bronchospasm, cough, stridor; CNS: dizziness, ataxia, tremor; musculoskeletal: arthralgia, myalgia, muscle weakness, fatigue; miscellaneous: headache, malaise, fever, weight gain, weight loss, rhinitis, flushing.

DOSAGE AND ADMINISTRATION: The dosage range for INDERAL is different for each indication.

INDICATIONS: 1) Arrhythmias: 10-30 mg three or four times daily, before meals and at bedtime. 2) Hyperthyroidism: 15-30 mg three or four times daily, before meals and at bedtime. 3) Pheochromocytoma—Preoperative: 60 mg daily in divided doses for three days prior to surgery, concurrently with an alphadrenergic blocking agent—Management of inopera-

PEDIATRIC DOSAGE: At this time the data on the use of the drug in this age group are too lim-

HOW SUPPLIED: INDERAL (propranolol hydrochloride) TABLETS: No. 461—Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100 No. 464—Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000. Also in unit dose package of 100 mg. INJECTABLE No. 3265— Each 5 mL contains 1 mg of propranolol hydrochloride in Water for Injection. The pH is adjusted with citric acid. Supplied as 1:1 ampuls in boxes of 10.

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New York, N. Y. 10017

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The Council for High Blood Pressure Research of the American Heart Association will be holding its Annual Fall Conference September 23, 24 and 25, 1981 in Cleveland, Ohio. Previous meetings have been held in October.

Please note this change on your calendar.
Treatment of mild hypertension can save lives

Even among patients with DBP in the low 90s, systematic therapy significantly reduced mortality:

- Of nearly 11,000 hypertensives identified by the Hypertension Detection and Follow-up Program, slightly more than 70% had mild hypertension (DBP 90-104 mm Hg).
- Half were given systematic and aggressive care in HDFP centers; half were referred to customary sources of medical care.
- After 5 years, HDFP found that effective treatment of mild hypertension may reduce premature deaths by 20%.
- As part of HDFP’s systematic treatment and follow-up program, the primary step-1 agent was chlorthalidone: Hygroton

BRIEF SUMMARY

Indications: Hypertension. adjunctive therapy in edema. Contraindications: Anuria. hypersensitivity to chlorthalidone or other sulfonamide-derived drugs. Warnings: Should be used with caution in severe renal disease, impaired hepatic function or progressive liver disease. May add to or potentiate the action of other antihypertensive drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma. There is a possibility of exacerbation or activation of systemic lupus erythematosus with thiazides, which are related to chlorthalidone. This has not been reported with chlorthalidone. Thiazides cross the placental barrier and appear in cord blood. Use in pregnant women requires that the anticipated benefits of the drug be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possible other adverse reactions which have occurred in the adult. In nursing mothers, thiazides cross the placental barrier and appear in breast milk. If use of the drug is essential, the patient should stop nursing.

Precautions: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals. All patients receiving chlorthalidone should be observed for clinical signs of fluid or electrolyte imbalance, namely, hypokalemia, hypochloremia, anuria, and hypocalcemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Hypokalemia may develop with chlorthalidone as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH. Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity. Any chloride deficit in generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather. Hyperuricemia may occur or be precipitated in certain patients. Insulin requirements in diabetic patients may be increased, decreased, or unchanged and latent diabetes mellitus may become manifest. Chlorthalidone and related drugs may increase the responsiveness to tubocurarine. The antihypertensive effects of the drug may be enhanced in the post-sympathectomy patient. Chlorthalidone and related drugs may decrease arterial responsiveness to norepinephrine. If progressive renal impairment becomes evident, as indicated by a rising urea nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy. Chlorthalidone and related agents may decrease serum PBI levels without signs of thyroid disturbance. Adverse Reactions: Anemia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intraperitoneal chlorathidone jaundice), pancreatitis, diaphoresis, urticaria, rash, urticaria, agranulocytosis, thrombocytopenia, aplastic anemia, purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis), Leff’s syndrome (toxic epidermal necrolysis). Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. Other adverse reactions include hyperkalemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, impotence. Whenever adverse reactions are moderate or severe, chlorthalidone dosage should be reduced or therapy withdrawn.

Usual Dose: One tablet daily.

How Supplied: Tablets—100 mg (white, scored), 50 mg (aqua) in bottles of 100, 1000 and 5000, 25 mg (peach) in bottles of 100 and 1000, unit-dose blister packs, boxes of 100 (10 x 10 strips).

References:

New evidence is in:

Hygroton®
(chlorthalidone USP)

Because there’s nothing mild about mild hypertension

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