Digoxin

[IDIG] Lanoxin® 0.5mg/2mL/Amp ATC Code: C01AA05

中文名: 隆我心注射劑 «GSK»

適應症: 心臟衰竭、心房撲動、心房纖維顫動、陣發性心室性心搏過速。

[ODIG] Lanoxin® 0.25mg/Tab ATC Code : C01AA05

中文名: 隆我心錠 «GSK»

適應症: 心臟衰弱症。

藥理分類: Cardiac Glycoside; Antiarrhythmic Agent, Miscellaneous.

用法用量: Administration:

• Tablet, orally; administer consistently with relationship to meals; avoid concurrent administration (ie, administer digoxin 1 hour before or 2 hours after) with meals high in fiber or pectin and with drugs that decrease oral absorption of digoxin.

• IV: May be administered undiluted or diluted. Inject slowly over ≥5 minutes.

Loading doses:

- administered in divided doses, with approximately 50% of the total loading dose given as the first dose;
- additional fractions (generally 25%) of the loading dose are administered at <u>4- to 8-hour intervals IV</u> or <u>6- to 8-hour intervals ORALLY</u> with careful assessment of clinical response before each additional doses.

Rapid Digitalization:

Usual digitalizing and maintenance dosages (normal renal function, based on lean body weight)

Age	Digitalizing Dose (mcg/kg)		Maintenance Dosage
	Oral	IV	(mcg/kg/day)
Premature neonates	20-30	15-25	20-30% of ORAL/ IV loading dose
Full-Term neonates	25-35	20-30	25-35% of ORAL/ IV loading dose
1-24 mths	35-60	30-50	
2-5 yrs	30-40	25-35	
5-10 yrs	20-35	15-30	
> 10 yrs	10-15	8-12	
Adults	10-15	8-12	100-375 mcg daily

Slow Digitalization:

Steady-state serum concentrations will be achieved in approximately 5 half-lives of the drug for the individual patient; depending on the patient's renal function, this may take 1-3 weeks.

-Adults:

An appropriate daily maintenance dosage is ad-ministered.

-Children < 10 yrs:

Administer 25-35% of the total calculated dose for rapid digitalization daily.

Indications and dosage regimens:

Atrial fibrillation or atrial flutter, rate control (alternative agent): Total digitalizing dose (TDD):

Initial:

IV: 0.25 to 0.5 mg over several minutes, with repeat doses of 0.25 mg every 6 hours to a maximum of 1.5 mg over 24 hours.

Or

IV: A total of 8 to 12 mcg/kg (use lean body weight) (not to exceed 0.75 to 1.5 mg) administered by giving 50% of TDD over 5 minutes and the remaining 50% as 2 doses of 25% of TDD at 4- to 8-hour intervals after the initial dose.

Maintenance dose: Oral: 0.125 to 0.25 mg once daily.

Heart failure with reduced ejection fraction (HFrEF):

Maintenance dose (loading dose not recommended):

- Oral: 0.125 to 0.25 mg once daily.
- If patient is >70 years of age, has impaired renal function, or has a low lean body mass, low doses (eg, 0.125 mg daily or every other day) should be used initially.

Supraventricular tachycardia (eg, atrioventricular nodal reentrant tachycardia), rate control:

Total digitalizing dose:

Initial:

Oral:

- 0.5 mg loading dose
- with additional 0.125 to 0.25 mg doses administered at 6- to 8-hour intervals until evidence of adequate effect (maximum total dose over 24 hours: 8 to 12 mcg/kg [use lean body weight], not to exceed 0.75 to 1.5 mg).

IV:

- 0.25 to 0.5 mg bolus;
- may repeat 0.25 mg administered at 6- to 8-hour intervals until evidence of adequate effect (maximum total dose over 24 hours: 8 to 12 mcg/kg [use lean body weight], not to exceed 0.75 to 1.5 mg).

Maintenance dose: Oral: 0.125 to 0.25 mg once daily.

Dosage adjustment in Kidney Impairment: Adult Atrial fibrillation/flutter, supraventricular tachycardia:

IV, Oral:

Loading dose: Note: Use with caution and only when rapid ventricular rate control is necessary.

CrCl >15 mL/minute: No dosage adjustment necessary. CrCl ≤15 mL/minute: Administer 50% of usual dose

Maintenance dose:

CrCl ≥60 mL/minute: No dosage adjustment necessary.

CrCl 45 to <60 mL/minute: 0.0625 to 0.125 mg once daily.

CrCl 30 to <45 mL/minute: 0.0625 mg once daily.

CrCl <30 mL/minute: 0.0625 mg every 48 hours or consider alternative agent.

Heart failure:

Digoxin Dosing Suggestions When Used for Heart Failure ^{a,b}			
Ideal body weight (kg)	CrCl (mL/minute)	Digoxin dose	
45 to 50	>60	0.125 mg once daily	
	15 to 60	0.0625 mg once daily ^c	
>50 to 60	>110	0.25 mg once daily	
	>45 to 110	0.125 mg once daily	
	15 to 45	0.0625 mg once daily ^c	
>60 to 70	>110	0.25 mg once daily	
	>35 to 110	0.125 mg once daily	
	15 to 35	0.0625 mg once daily ^c	
>70 to 80	>80 to 110	0.25 mg once daily	
	>20 to 80	0.125 mg once daily	
	15 to 20	0.0625 mg once daily ^c	
>80	>70	0.25 mg once daily	
	15 to 70	0.125 mg once daily	

^a Derived from a contemporary digoxin dosing nomogram using CrCl and ideal body weight or height for determining the initial maintenance dose in patients with heart failure to achieve a target digoxin concentration of 0.7 ng/mL (Bauman 2006, DiDomenico 2014).

不良反應: 脈搏不規則、腹瀉、食慾不振、噁心、嘔吐、頭痛、視力模糊或黃視(出現毒性前的先兆之一)等。

交互作用:

- Itraconazole, rabeprazole, azithromycin, erythromycin, clarithromycin, simvastatin, tetracycline, telmisartan, thiazide diuretics, Paxlovid®: ↑ digoxin levels and digoxin toxicity (nausea, vomiting, arrhythmias).
- Dronedarone: ↑ digoxin levels and ↑ conduction effects of dronedarone.
- Amiodarone: digoxin toxicity (nausea, vomiting, cardiac arrhythmias) and potentiated effects of amiodarone.
- Rifampin, st john's wort, phenytoin; sucralfate; metoclopramide: ↓ digoxin efficacy.
- Verapamil, diltiazem:
 † digoxin levels and risk of digitalis toxicity;
 † risk of complete heart block.
- Calcium: serious risk of arrhythmia and cardiovascular collapse.
- Potassium phosphate: †risk of severe and potentially fatal hyperkalemia.

注意事項: 1. 本劑禁用於 Wolff-Parkinson-White syndrome、心室性心跳過快、毛地黃中毒引起之心律不整及嚴重心肌炎患者。

2. 本劑之有效劑量與毒性劑量間之範圍狹窄,應密切監測患者之血中濃度與毒性反應。有效治療濃度範圍 0.8-2.0 ng/mL。

懷 孕 期: 孕婦不禁用 digoxin,但孕婦所需劑量較難預測。有些人懷孕時需要增加 digoxin 的劑量。如同其他藥物,孕婦使用 digoxin 應先衡量治 療對孕婦之益 處是否大於對胎兒可能造成的風險。

授 乳 期: 1. digoxin 會分泌於乳汁中,但量極少,使用期間不必停止哺乳(仿單)。

^b No loading dose necessary.

^c May administer as 0.125 mg every other day.

- 2. Digoxin is present in breast milk. The amount of digoxin available to the infant via breast milk is not likely to be clinically significant.
- 3. The World Health Organization considers digoxin to be compatible with breastfeeding (WHO 2002).

相容輸注液: D5W 、 Dextrose 5% in NaCl 0.45% with KCl 20mEq 、 NS 、 1/2NS 、 Lactated Ringer's 。