

Also:

Nonami K

Shinoda H

Case Report Title	Age	Sex	Oral Dose (mg)
Case report: Ivabradine induced Torsades de Pointes	49	Female	10
Torsades de Pointes Induced by the Concomitant Use of Ivabradine and Azithromycin	68	Male	15
Ivabradine-Induced Torsade de Pointes in Patients with Heart Failure Reduced Ejection Fraction (Case 1)	48	Male	10

Ivabradine-Induced Torsade de Pointes in Patients with Heart Failure Reduced Ejection Fraction (Case 2)	51	Male	10
Ivabradine toxicity: A case report and review	19	Female	between 150 to 225
IVABRADINE-INDUCED TORSADES DE POINTES IN PATIENT WITH CONCURRENT USE OF HIGH DOSE METOPROLOL AND DIURETICS	53	Female	between 5 and 15
QT Prolongation Associated with Multiple Drug-Drug Interactions	63	Male	5

Acute on chronic ivabradine overdose: a case report	26	Female	250
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Case report of ivabradine intoxication	47	Male	280
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Ivabradine poisoning with suicide intention	27	Female	235
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Clinical characterization of men with long QT syndrome and torsades de pointes associated with hypogonadism	83	Male	
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Diltiazem/diuretics/ivabr adine QT interval prolongation and fatal torsades de pointes	62	Female	10
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], et al. A case of possible TdP secondary to drug-induced QT prolongation caused

I. A case of severe acute myocardial infarction suggesting proarrhythmic effect of

theoretical max concentration (μM)	40% bioavailability Plasma concentration (μM)
21.34	8.54
32.01	12.8

21.34	8.54
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21.34

8.54

480.15

128.04

32.01

12.8

10.67

4.27

533.5

213.4

597.52

238.96

501.65

200.66

21.34

8.54

l by ivabradine. The 128th Shikoku Regional Meeting of the Japanese
ivabradine. The 266th Kanto-Koshinetsu Regional Meeting of the Ja

Theoretical HERG IC50 / Concentration μM	40% Plasma concentration HERG IC50 / Concentration μM
0.14	0.35
0.094	0.0.2319

0.14	0.35
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0.14

0.35

0.0062

0.016

0.094

0.23

0.28

0.7

0.0056

0.014

0.005

0.013

0.006

0.015

0.14

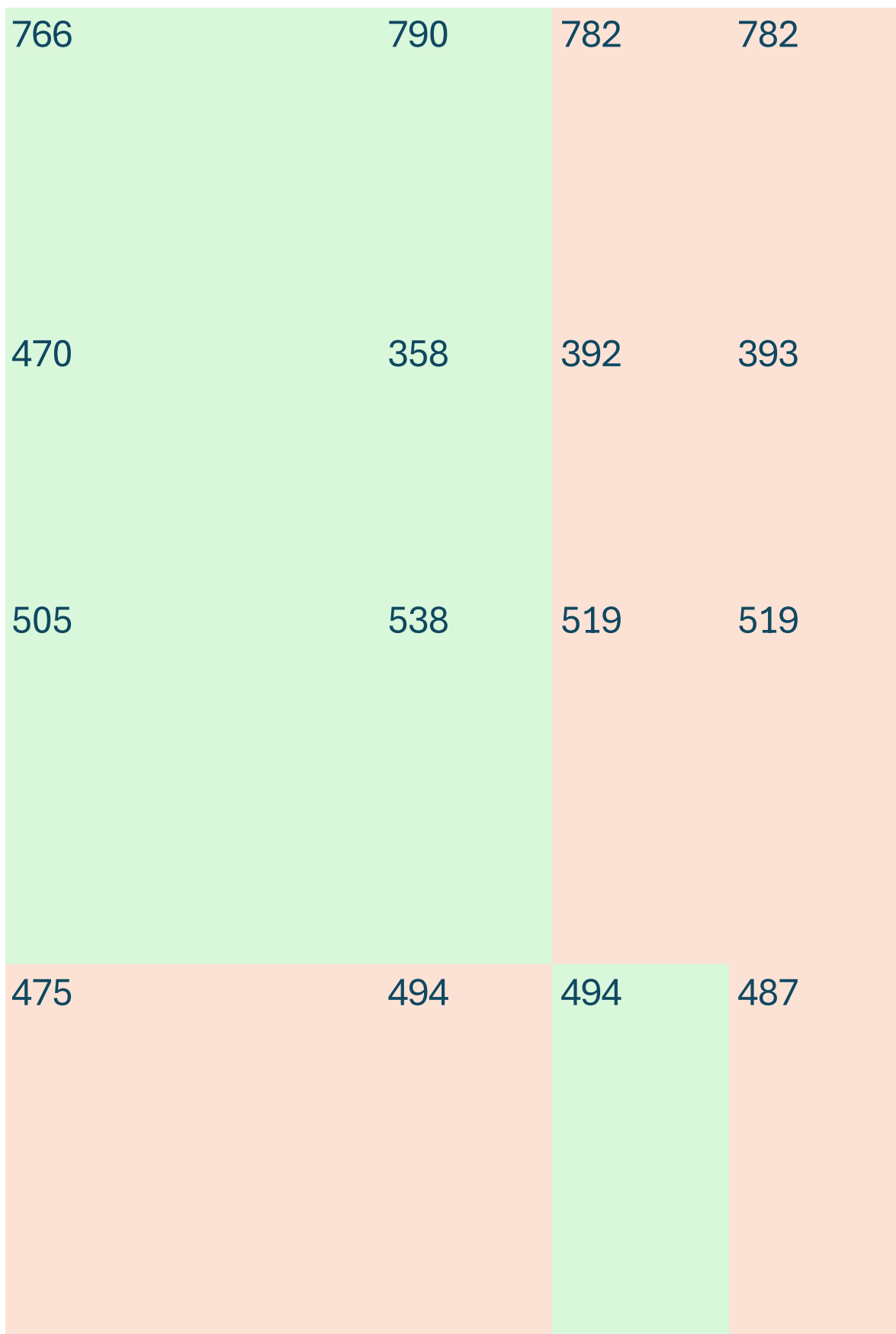
0.35

Society of Internal Medicine. 2023
apanese Circulation Society. 2022;17

stated in text

extrapolated from text

Uncorrected QT (ms)	QTc	QTB	QTF
550	984 *	597	810
269	532	549	524
704	692	692	696



452	437	437	437
510	466	425	425
635 ***	438	438	403
	492		



Heart Rate (bpm)	Torsades de Pointes?	Blood Pressure (mmHg)
192	N	100/70
250 **	Y	100/50
58	Y	87/63

64

Y

89/43

35

N

75/51

65

Y

65

Y

115/73

56	Y	115/ 73
50	Y	100/50
18	N	
	N	
ventricular tachycardia	Y	

Medical History

Medication History

Advanced heart failure

Ivabradine, loop diuretic

Long QT-interval known since 18 years old, bronchial hyperreactivity, paroxysmal sinus tachycardia

Ivabradine for paroxysmal sinus tachycardia, azithromycin for sinusitis

Chronic heavy alcoholism, dilated cardiomyopathy

Ivabradine, carvedilol, loop diuretics

ST-elevation myocardial infarction, cardiogenic shock, beta-blocker intolerance.

Ivabradine, carvedilol, loop diuretics

Inappropriate sinus tachycardia

Ivabradine overdose 20-30x 7.5mg

HFrEF, diabetes mellitus type 2, rectal carcinoma

Ivabradine, metoprolol, diuretics, intravenous furosemide

Type 2 diabetes mellitus and hypertension 7 years, carcinoma of larynx 3 years, ischemic heart disease 3 months, acute left ventricular failure LVEF 30%

Levofloxacin, cefoperazone, ondansetron, noradrenaline, dopamine, ivabradine, clopidogrel, atorvastatin, amiodarone, fluconazole

voluntary intoxication, Postural Orthostatic Tachycardia Syndrome	Activated charcoal, atropine, dopamine, isoproterenol, temporary pacing
Voluntary intoxication, no other medical history	Ivabradine, unknown dose of bromazepam
Voluntary intoxication, no other medical history	Ivabradine, temporary pacemaker, glucagon, atropine, isoproterenol
Prostate adenoma, dyslipidaemia, hypertension, renal insufficiency, hyperthyroidism, ischaemic cardiomyopathy	Dutasteride, ivabradine
Hypertension, diabetes, asthma, renal failure, hypokalaemia, acidosis, elevated serum creatinine	ivabradine, diltiazem, spironolactone/furosemide

Course of Treatment	Naranjo Score
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Ivabradine withheld, temporary pacing done, low dose beta blocker upon discharge	7
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Hospitalization, magnesium sulfate infusion, ivabradine discontinued, list of drugs to avoid provided	2
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Discontinuation of ivabradine, DC cardioversion, monitoring	5
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Discontinuation of 5
ivabradine, DC
cardioversion, monitoring

Hospitalization, activated 5
charcoal, atropine,
dopamine, isoproterenol,
temporary pacemaker

Ivabradine discontinued, 6
EKG monitoring

Hospitalization, 3
medication adjustments

Activated charcoal, 5
atropine, dopamine,
isoproterenol, temporary
pacing

Gastric wash 2

Temporary pacemaker, 5
glucagon, atropine,
isoproterenol

ivabradine withdrawal, 2
qtc of 492 persisted for 1
month with maintenance
on dutasteride

CPR, IV magnesium and 2
potassium, defibrillation
and amiodarone

WHO-UMC	Tisdale Score
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Probable/Likely	9
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Probable/Likely	11
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Probable/Likely	9
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Probable/Likely

10

Probable/Likely

11

Probable/Likely

11

Possible

12

Probable/Likely 11

Probable/Likely 10

Probable/Likely 12

Probable/Likely 10

Probable/Likely 10
