Amiodarone ایمی دارون عمیة ما بتتنفس و کبدها خربان مع ذلك هی فاندتها بتاع کلو	3K channel blockers→ prolongs phase 1, 2 & 3 of AP& increases refractory period ايمي دارون جميل	-Corneal microdeposit (photophobia), photosensitivity ,Thyroid disorders Pneumonitis or pulmonary fibrosis & hepatitis	-SVT, AF and VT when other safer agents are ineffective +WPWS. —daily orally or by injection —It is highly lipid- soluble & has very large volume of distribution & long t ½ of about 54 daysIt causes no myocardial depression.
Bretylium جمیل الو دخل حاد بالبطن (بطین)	3		IV in resistant ventricular arrhythmias after AMI like VF & VT.
Verapamil	4Ca- channels blockers→ phase 2→blocking influx of calcium through L- type	Headache, constipation, Hypotension, bradycardia contraindicated in heart failure and after AMI	ve (inotropic & -ve chronotropic) (acts on SA node & impairs conduction in AV node). It is useful mainly in SVT and AF فوق مع انه بحرف الفي
Adenosine	Other Anti- arrhythmic agents→slow s & inhibits AV nodal conduction.	bronchospasm (avoided in asthma), flushing and chest pain	It occurs naturally in the body. (ATP) -IV injection in SVT - t½ is 10 seconds & is rapidly metabolized by circulating adenosine deaminase
Digoxin	Other Antiarrhythmic agents→inhi biting ATPase (Na-pump) in cardiac cells: →(+ve inotropic→ increase cardiac output and decrease sympathetic tone →indirect -ve chronotropic	has a narrow therapeutic index. Manifestations of digoxin toxicity include: Cardiac effects: arrhythmias and heart block GI effects: nausea and vomiting. CNS effects: headache, confusion, nightmares, psychosis, coloured vision Treatment of digoxin toxicity: Stop + correct hypokalemia Correct arrhythmias using phenytoin or atropine Give digoxin antibody infusion	orally or IV> excreted unchanged in urine (85 %) with a t ½ of 36 hoursArrhythmias as AF & SVT Heart failure particularly when associated with arrhythmia like AF. Smaller doses of digoxin are used in: Elderly, renal disease, hypothyroidism, in the presence of hypokalemia

Drug	class	Main adverse effects	Used in
Diso-pyramide اهرمات اسطورة الأهرمات و الذئاب بتقل القلب)	1A(Na channel blockers)→phase 0→ increase AP duration بکندا في اهرمات و ملاریا	.Anti-muscarinic effects .hypotension	-Ventricular arrhythmias (after AMI) -SVT of Wolf Parkinson White syndrome
Quinidine ملاریا	1A	Its use has declined because of its SE. Hypotension and heart failure may occur. شغلها فوق تحت قليل	-Atrial fibrillation or flutter -Resistant SVT -Occasionally in ventricular tachycardia It blocks conduction
Pro-cainamide کندا	1A	.with prolonged (drug-)use induced SLE . <u>Hypotension</u>	- ventricular arrhythmias after AMI; IV then orally
. Lignocaine (Xylocaine) لين نعسانه و مشوشة و كسلانة فباخدها بابرة	1B→ decrease فين لين بالماكسيلا	hypotension, sleepiness, confusion and convulsions with high doses.	-ventricular arrhythmias after AMI IIV (infusion or injection) has high 1 st pass metabolism and low bioavailability.
Mexiletine بالمكسيلا	1B	tremor, ataxia, dysarthria & <u>hypotension</u>	- ventricular arrhythmias after AMI(orally)
Phenytoin Note:useful in digitalis induced arrythmia Phenytoin	1B فین		It is useful in digitalis-induced arrhythmias
Flecainide	1C	الخطة سي بس يخرب الكل و بستخدم فوق و تحت	VPC, ventricular tachycardia & in SVT when others are ineffective.
Propranolol, Esmolol	Class II (Beta- blockers)→ all phases		

Summary of drug therapy of main types of arrhythmias:

- APC: choice: a beta-blocker if symptomatic
- PVC: choice: Disopyramide, Lignocaine, Flecanide
- Atrial fibrillation: choice: Propranolol, amiodarone, digoxin
- SVT: choice: Beta-blocker, verapami, adenosine
- Ventricular tachycardia: choice: Lignocaine, amiodarone