ANTIHIPERTENSIVE

CLASIFICARE:

1. **SIMPATOLITICE**

- CENTRALE: AGONISTI ALFA 2 PRESINAPTICI SI AI RECEPTORILOR IMIDAZOLICI: **CLONIDINA**, GUANFACINA, GUANABENZ, MONOXIDINA, RILMENIDINA
- PERIFERICE: GUANETIDINA, RESERPINA
- ALFA-BLOCANTE
- BETA-BLOCANTE
- GANGLIOBLOCATE

1.1 CENTRALE: CLONIDINA

-TP DE 1/2 8-12 ORE;

CPR 0.1MG; 0.1-0.2MG/ZI→0.6MG/ZI IN 2 ADMINISTRARI

RR ADVERSE: USCACIUNEA GURII, SEDARE, DIRECT PROPORTIONALE CU DOZA

-INTRERUPERE RUSCA-RISC CRESCUT DE HTA MALIGNA

-DE EVITAT LA PACIENTII CU TULBURARI DEPRESIVE

1.1 CENTRALE

*__CLONIDINA__

-INDICATII: TOATE TIPURILE DEHTA, GLAUCOM

*__GUANABENZ, GUAIAFACINE__-SIMILARE CU CLONIDINA

*__RILMENIDINA-__SELECTIVA PENTRU RECEPTORII IMIDAZOLICI, NU PRODUCE SOMNOLETA, SEDARE

***METILDOPA**

-ANALOG AL L-DOPA→ALFA METAL DOPAMINE SI ALFA METAL NOREPINEFRINA→INLOCUIESTE NE IN VEZICULELE SINAPTICE→ELIBERATA SUB IMPULS NERVOS→FALS NEUROTRANSMITATOR

-EFECT MAXIM IN 4-6 ORE, DURATA 24 DE ORE

-**RR ADVERSE**: SEDARE, ALTERAREA CAPACITATII DE CONCENTRARE, VERTIJ, SEMEN EXTRAPIRAMIDALE, CRESTEREA SECRETIEI DE PROLACTINA, LACTATIE , ANMIE HEMOLITICA, TOXICITATE HEPATICA, SINDROM LUPUS LIKE

-CPR 250MG→250X2/ZI→MAX 3G/ZI

1.2: PERIFERICE

-GUANETIDINA: IT SUBSTITUTEIE NA IN VEZICULELE DE STOCAJ SI ESTE ELIBERATA CA FALS NEUROTRANSMITATOR

--HTA 10MGX3/ZI

-REZERPINA: CPR 0.25MG; INHIBA RECAPTAREA NA IN VEZICULELE DE STOCAJ

1.3 GAGLIOBLOCANTE-TRIMETARFAN

-BLOC. RR NICOTINICI POSTGANGLIONARY, ATAT S, CAT SI PS

--ADMINISTRAT SUB SUPRAVEGHERE, POTENTA CRESCUTA

-ADMINISTRAT IN TIMPUL INTERVENTIILOR CHIRURGICALE PENTRU A PRODUCE HTA, IV, IN PERFUZIE

1.4 ALFA BLOCANTE:

-NESELECTIVE: FENTOLAMINA, FENOXIBENZAMINA
-**SELECTIVE:** PRAZOSIN, DOXAZOSIN, TERAZOSIN-BLOC. RR ALFA 1 VASCULARI→TAHICARDIE REFLEXA
-SELECTIVE- EFICIENTE ASOCIAT ALTOR ANTI HYPERTENSIVE
-TA ESTE REDUSA MAI ALES IN ORTOSTATISM
PRAZOSIN: CPR 1;2 MG: 0.5MG/ZI 1 SAPTAMANA, CU CRESTERE USOARA PANA LA 3-30MG/ZI IN 2 ADMIN.
DOXAZOSIN: 1MG/ZI→4MG/ZI
TERAZOSIN: 5-20MG, IN 2 PRIZE ZILNICE

1.5 BETABLOCANTE:

CLASIFICARE

-BETA 1: METOPROLOLUM, BETAXOLOLUM, BISOPROLOLUM, NEBIVOLOLUM, ESOMOLOLUM, ATENOLOLUM

-BETA 1 SI 2: PROPRANOLOLUM, PINDOLOLUM, CARVEDILOLUM, LABETALOLUM, PINDOLOLUM, TIMOLOLUM

-BETA1, 2 SI ALFA: CARVEDILOLUM, LABETALOLUM

-CU EFECT CHINIDIN-LIKE, ANESTEZIC LOCAL: PROPRANOLOLUM, BISOPROLOLUM

INDICATII:

-HTA, ANGINA PECTORALA, ARITMII-PENTRU SCADEREA FRECVENTEI VENTRICULARE

1.5 BETABLOCANTE

**PROPRANOLOLUM-CPR* *10;40MG; FIOLE 1MG*
**METOPROLOLUM-CPR 25;50;100MG*
**CARVEDILOLUM CPR 6.25MG; 12.5; 25MG*
**BISOPROLUM CPR 2.5; 5; 10MG*

2. **VASODILATATOARE**

-DIRECTE/MUSCULOTROPE

-BCCA-BLOCANTE ALE CANALELOR DE CA

TABLE 11–3 Mechanisms of action of vasodilators.

Mechanism	Examples
Release of nitric oxide from drug or endothelium	Nitroprusside, hydralazine, nitrates,[1] histamine, acetylcholine
Reduction of calcium influx	Verapamil, diltiazem, nifedipine
Hyperpolarization of smooth muscle membrane through opening of potassium channels	Minoxidil, diazoxide
Activation of dopamine receptors	Fenoldopam

[1]See Chapter 12.

2.1 VASODILATOARE-DIRECTE (MUSCULOTROPE)

→ARTERIALE: HIDRALAZINA, MINOXIDIL, DIAZOXID

→ARTERIALE SI VENOASE: NITROPRUSIAT

HIDRALAZINA

-VASODILATATIE ARTERIOLARA→ SCAD RVP→HTA

-CRESC SECRETIA DE RENINA PRIN MECHANISM REFLEX→DEZAVANTAJ

-TAHICARDIE REFLEXA SI CRESTEREA DEBITULUI CARDIAC

-TP DE ½ 1.5-3 ORE

RR ADVERSE: TAHICARDIE, PALPITATII, CRIZE DE ANGINA PECTORALA, DEME

-CEFALEE-

-RAR, SINDROM LUPUS-LIKE, LA DOZE MARI

-12.5X2/ZI, INITIAL, ULTERIOR→50-200MG/I IN 2-4 ADMINISTRARI

-DE OBICEI ASOCIATA UNUI BETABLOCANT PENTRU A REDUCE TAHICARDIA REFLEXA

2.1 VASODILATOARE-MUSCULOTROPE

***NITROPRUSIATUL DE SODIU**

-ADMINISTRAT PARENTERAL IN URGENTELE HYPERTENSIVE, INSUFICIENTA CARDIACA

-VASODILATATOR ARTERIAL SI VENOS→ REDUCE RVP SI INTOARCEREA VENOASA

--EFECT RAPID, IN 1-10 MINUTE, IV PERFUZABIL,

2.1 **VASODILATOARE MUSCULOTROPE**

***DIAZOXID-FIOLE 50MG**

--VASODILATATIE ARTERIALA, SCADE ATAT PRESIUNEA SISTOLICA, CAT SI DIASTOLICA
-TAHICARDIE REFLEXA, CRESTE DEBITUL CARDIAC
-CRESTE RETENTIA DE RENINA
-RETENTIVE DE SODIU SI APA
-CRESTE GLUCOZA SERICA, PRIN SCADEREA ELIBERARII DE INSULINA SI SCADEREA UTILIZARII PERIFRICE A GLUCOZEI
-EFECT RAPID DUPA INJECTAREA IV, IN APROX. 5 MINUTE
FIOLE 50MG

2.2 **BCCA-BLOCHEAZA INFLUXUL DE CALCIU LA NIVELUL CANALELOR LENTE, VOLTAJ DEPENDENTE**

CLASIFICARE:

***DUPA STRUCTURA CHIMICA:**

→**DIHIDROPIRIDINE:** AMLODIPINA, FELODIPINA, ISRADIPINA, NICARDIPINA, NIFEDIPINA, NISOLDIPINA

→**BENZOTIAZEPINE:** DILTIAZEM

→**FENILALCHILAMINE**: VERAPAMIL

- **IN FUNCTIE DE EFECT:**
- -**ARTERIOLODILATATOARE PERIFERICE**: DIHIDROPIRIDINE, UTILIZATE PENTRU HTA
- -**CORONARODILATATOARE**: DILTIAZEM-ANTI ANGINOASE
- -**DEPRIMANTE CARDIACE**: VERAPAMIL-ARITMII

2.2 **BCCA-BLOCHEAZA INFLUXUL DE CALCIU LA NIVELUL CANALELOR LENTE, VOLTAJ DEPENDENTE**

- !!ORDINEA AFINITATII:
- NIFEDIPINA: ARTERE PERIFERICE>CORONARE>>MIOCARDUL CONNTRACTIL>> TESUTUL EXCITO-CONDUCTOR
- DILTIAZEM: CORONARE>ARTERE PERIFERICE>>MIOCARD CONTRACTIL>>TESUT EXCITOCONDUCTOR
- VERAPAMIL: TESUT EXCITOCONDUCTOR>MIOCARD CONTRACTILE>> VASE

***NIFEDIPINA**

-ABS. ORALA SAU SUBLINGUALA DE APROX. 90%

-EFECTE ADVERSE:
-HIPOTENSIUNE ORTOSTATICA
-CEFALEE
-AMETEALA
EDEME PERIFERICE
DEPRESIE, ANXIETATE
-GREATA

-

BASIC PHARMACOLOGY OF ANTIHYPERTENSIVE AGENTS

*__NIFEDIPINA__

INDICATII

-ANTIHIPERTENSIV

-ANTIANGINOS

--CPR 10MG; 1 CPR X3-4/DAY

-SUBLINGUAL 10MG, REPETAT LA 30 DE MINUTE, LA NEVOIE, IN CRIZE HIPERTENSIVE

BASIC PHARMACOLOGY OF ANTIHYPERTENSIVE AGENTS

3. **INHIBITORI AI SRAA**

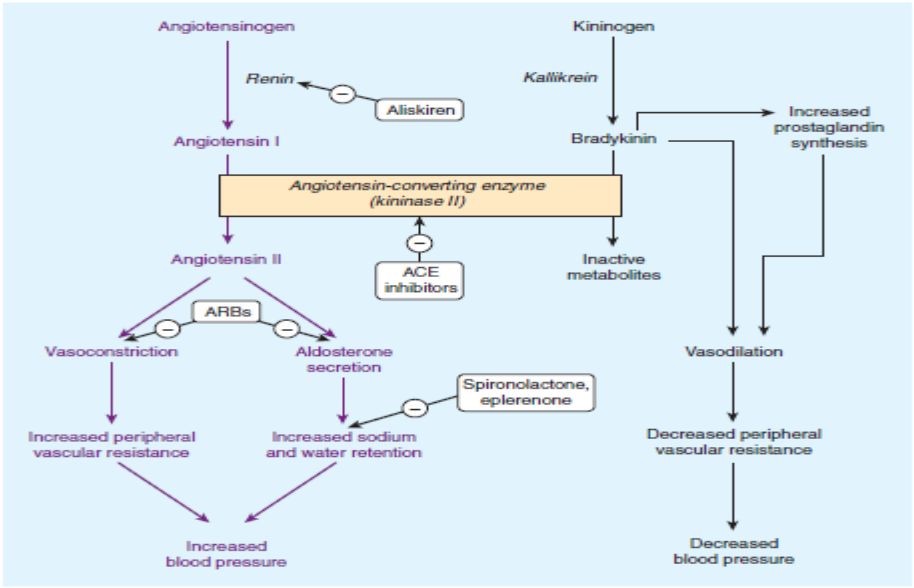

FIGURE 11–5 Sites of action of drugs that interfere with the renin-angiotensin-aldosterone system. ACE, angiotensin-converting enzyme; ARBs, angiotensin receptor blockers.

3. **INHIBITORI AI SRAA**

3.1 INHIBITORI AI ENZIMEI DE CONVERSIE A ANGIOTENSINEI-IECA

-ACTIVE: CAPTOPRIL, LISINOPRIL

-PRODROGURI: BENAZEPRIL, ENALAPRIL, FOSINOPRIL, MOEXIPRIL, PERINDOPRIL, RAMIPRIL, QUINAPRIL, TRANDOLAPRIL, ZOFENOPRIL

3.2 **BLOCANTE ALE RR PENTRU ANGIOTENSINA**: SARLAZINA, CANDESARTAN, LOSARTAN, IRBESARTAN

3. **INHIBITORI AI SRAA**

3.1 **IECA**

-↓ STIMULAREA RR AT-1 SI↓STIMULAREA SIMPATICO CU SCADEREA SECRETIEI DE CA→SCADEREA RVP--?HTA

-↓SECRETIA DE ALDOSTERONE SI RETENTIA DE SODIU SI APA

-↑SECRETIA RENINA

-ACE ACT NOT ONLY ON ENDOCRINE RENIN-ANGIOTENSIN-ALDOSTERONE SYSTEM, BUT ALSO ON PARACRINE SYSTEMS FROM VESSELS AND HEART→ REDUCE HYPERTROPHY OF ARTERIAL WALLS AND LEFT VENTRICLE

-INCREASE BRADIKININE SECRETION, DUE TO SIMILARITIES BETWEEN BRADIKININE AND KINASE II→STIMULATION OF ENDOGENOUS PG (PGE2 AND PGI2)→VASODILATION (FLUSH), ALLERGIES

3.1 **ANGIOTENSIN CONVERTING ENZYME INHIBITORS (ACE)**

EFECTE ADVERSE:

-GURA USCATA, OBSTRUCTIVE NAZALA-PRIN ELIBERAREA DE BRADIKININA

-ALTERAREA GUSTULUI

-ANGIOEDEM

-IRA-IN CAZUL STENOZEI BILATERALE DE A. RENALA SAU UNILATERALA LA CEI CU RINICHI UNIC

-HYPERKALIEMIE-

-HTA

-CONTRAINDICATE IN SARCINA-RISC DE HTA FETALA, ANURIA, IRA, MALFORMATII FETALE

BECAUSE OF THE RISK OF FETAL HYPOTENSION, ANURIA AND RENAL FAILURE, SOMETIMES

PREPARATE:

-CAPTOPRIL CPR 25; 50; 12.5 MG: 12.5-300MG/ZI

-ENALAPRIL CPR 5; 2.5; 10; 20 MG; FIOLE 2.5MG/ML; 5-40MG/ZI

(1-2 ADMINISTRATIONS)

-FOSINOPRIL 10;20MG:

-PERINDOPRIL 4; 8MG

-RAMIPRIL 2.5; 5; 10MG;

3.2 BLOCANTI AI RR PENTRU ANGIOTENSINA

-BLOC. RR AT-1 →BLOCHEAZA EFECTELE ANGIOTENSINEI

-AT-EFECTE ADEVERSE

EA: HTA, HIPERKALIEMIE, ALTERAREA FUNCTIEI RENALE

! CONTRAINDICATE IN SARCINA

CANDESARTAN (ATACAND): CPR 8;16; 32 MG

IRBESARTAN (APROVEL) CPR 150-300MG

TELMISARTAN=CPR 20; 40MG; 80MG

VALSARTAN: CPR 80MG