



TERAPIE FARMACOLOGICHE

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**Iperattività centrale
nei neuroni
deafferentati**

**Strutture
sovraspinali**

**Dolore spontaneo
ed evocato**

Dolore spontaneo

Neurone
3° ordine

**Lesione nervosa assonale o non
assonale con scarica ectopica**

Neurone
2° ordine

**Sensibilizzazione
del secondo
neurone**

**Midollo
spinale**

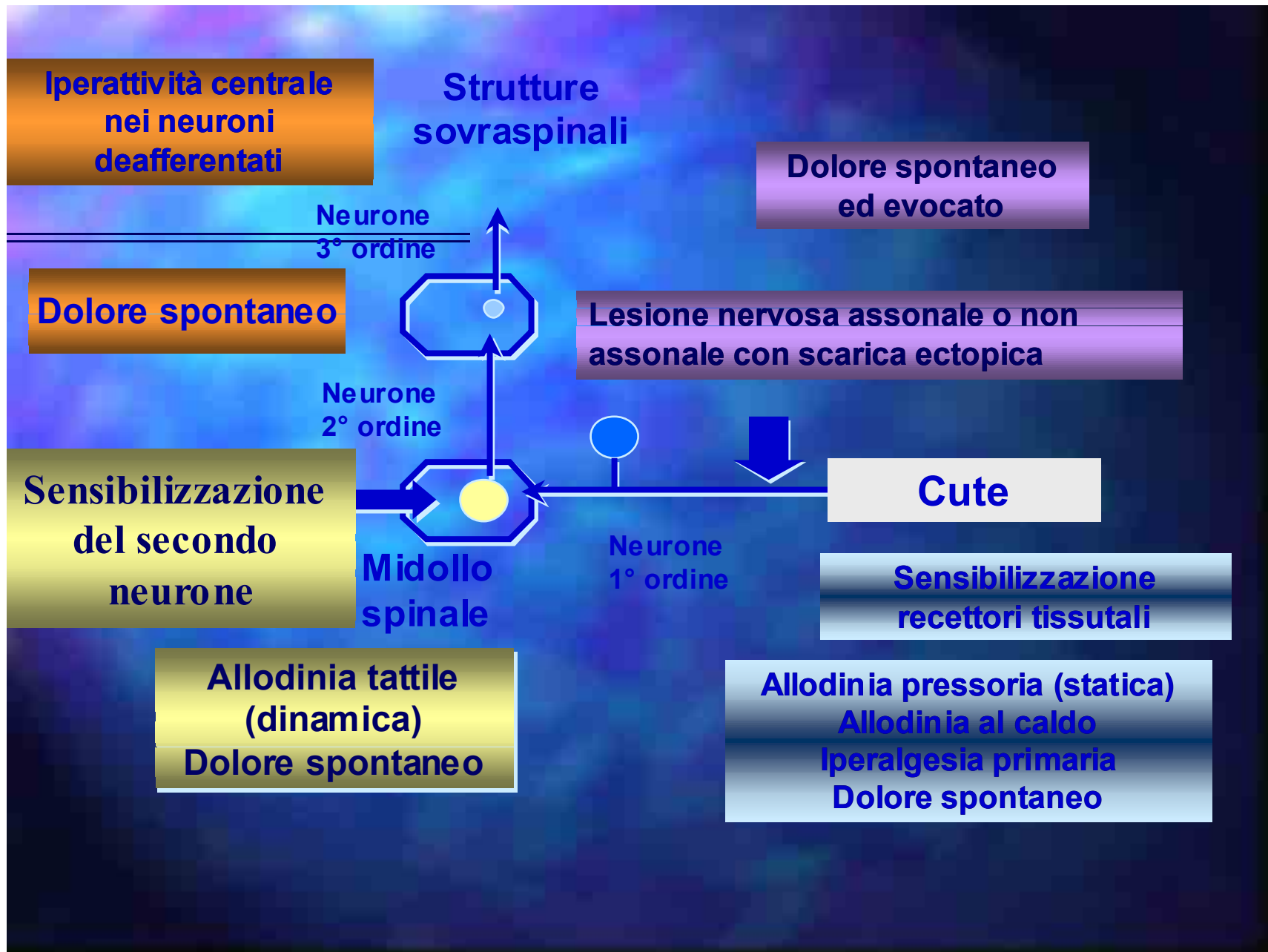
Neurone
1° ordine

Cute

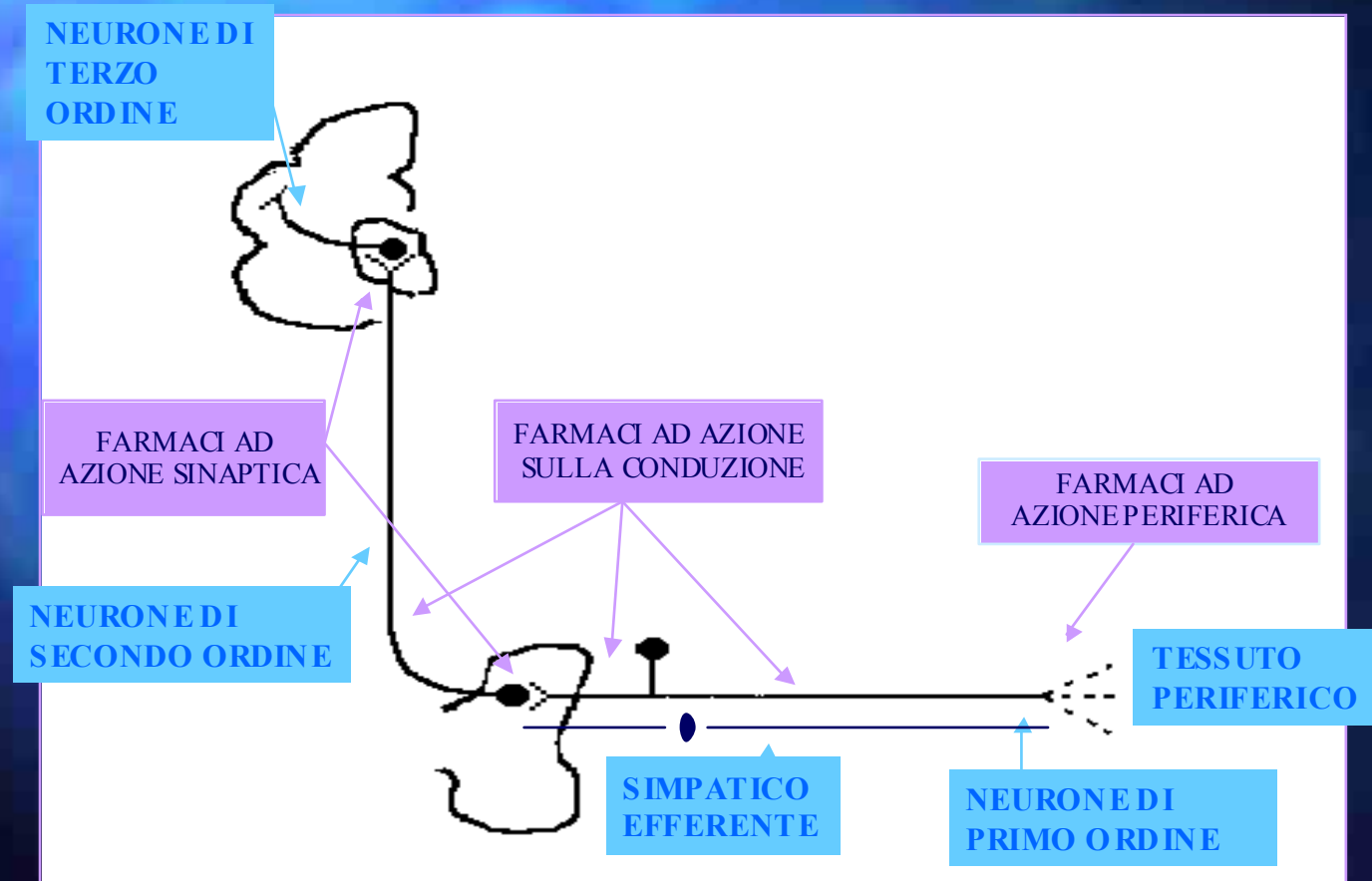
**Sensibilizzazione
recettori tissutali**

**Allodinia tattile
(dinamica)
Dolore spontaneo**

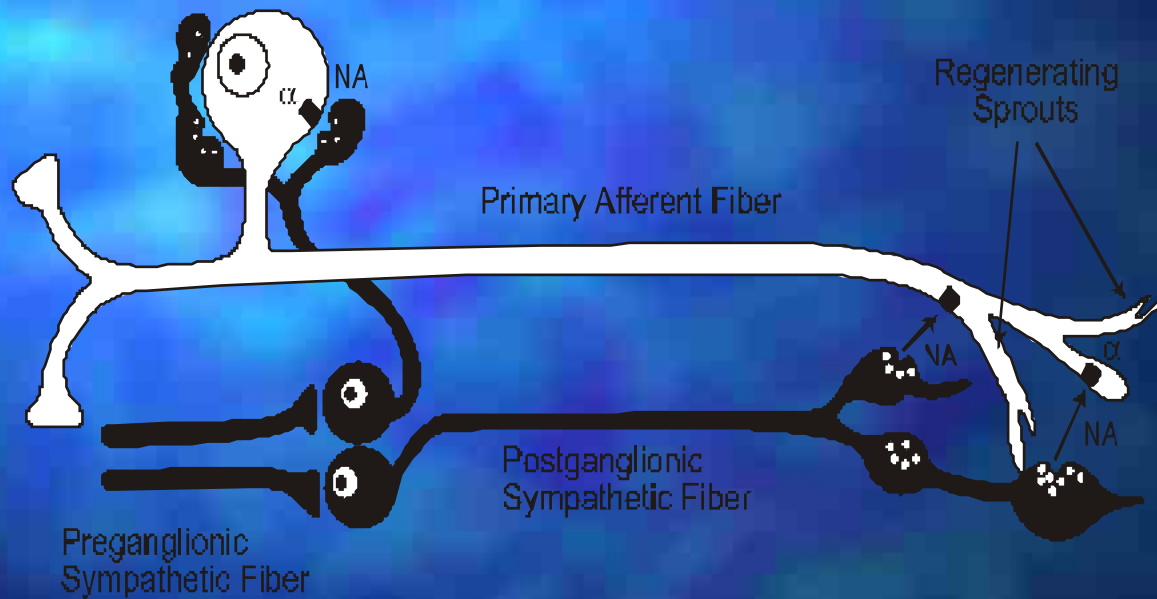
**Allodinia pressoria (statica)
Allodinia al caldo
Iperalgesia primaria
Dolore spontaneo**



POSSIBILI SEDI DI AZIONE DEI FARMACI LUNGO LE VIE NOCICETTIVE



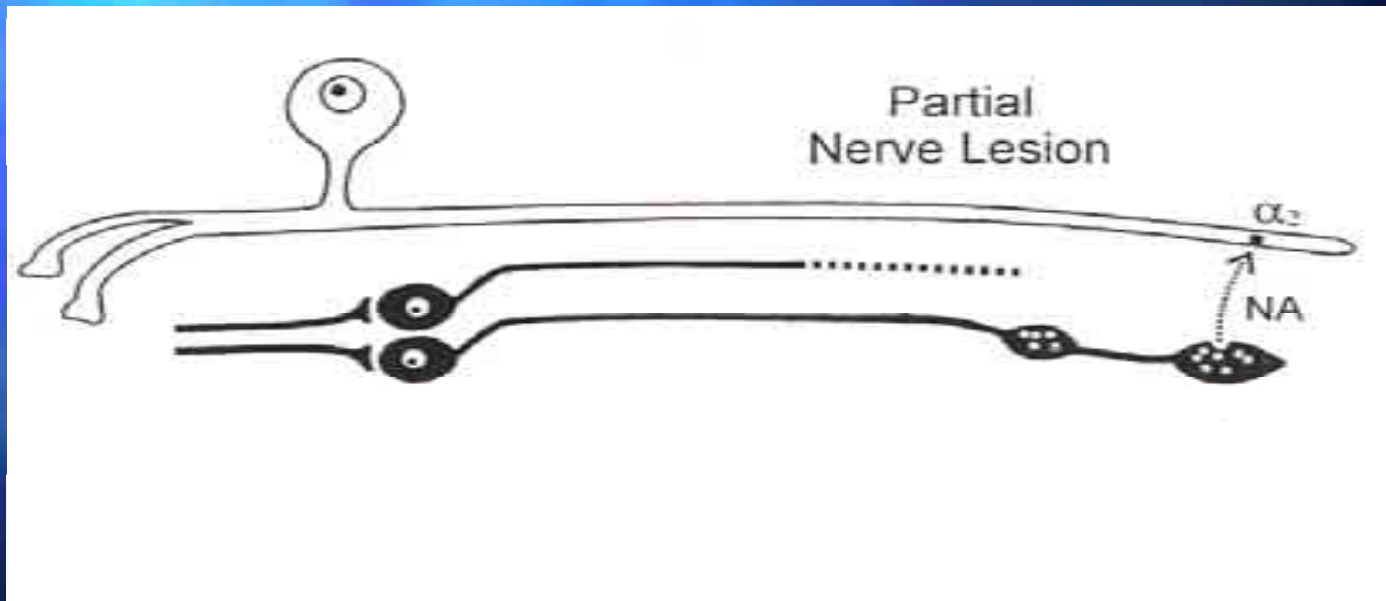
ADRENOSENSIBILITA' A SEGUITO DI SEZIONE DI NERVO



NA = noradrenaline.

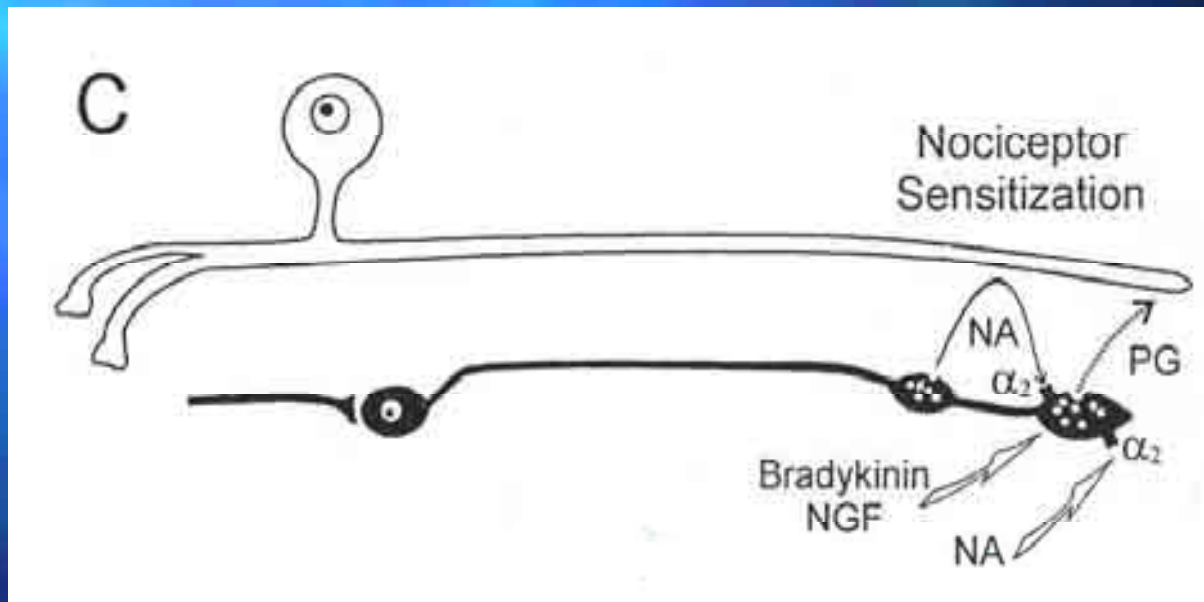
Jänig W, McLachlen EM. In: *Progress in Pain Research and Management*. Seattle: IASP Press 1996

ADRENOSENSIBILITA' DA LESIONE PARZIALE DI NERVO



Baron R, Levine JD, Fields HL. Causalgia and reflex sympathetic dystrophy: does the sympathetic nervous system contribute to the generation of pain? Muscle Nerve 22, 1999

RUOLO DEL SIMPATICO NELLA FLOGOSI



Baron R, Levine JD, Fields HL. Causalgia and reflex sympathetic dystrophy: does the sympathetic nervous system contribute to the generation of pain? Muscle Nerve 22, 1999

FARMACI AD AZIONE PERIFERICA

ANESTETICI LOCALI

ANTINFIAMMATORI

CAPSAICINA

GUANETIDINA

CLONIDINA

.....

ANESTETICI LOCALI



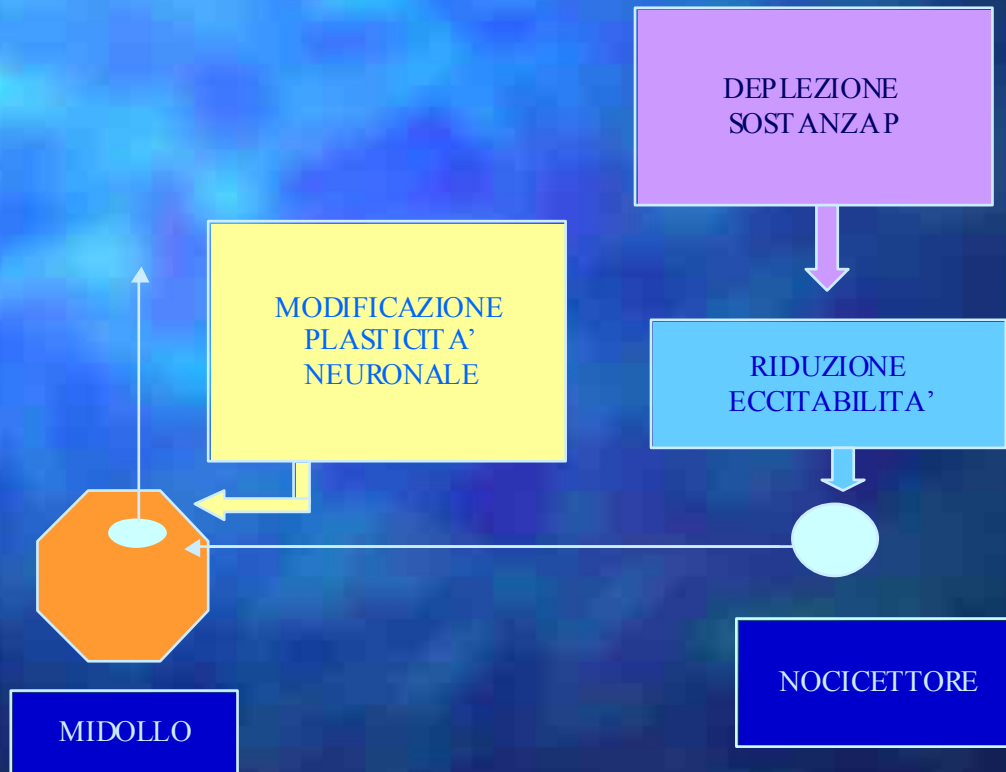
MODALITA' DI APPLICAZIONE

- Applicazione cutanea (crema o cerotto)
- Infiltrazione in prossimità della sede di lesione
- Somministrazione a boli tramite catetere posizionato in prossimità della lesione

ANTINFIAMMATORI



CAPSAICINA

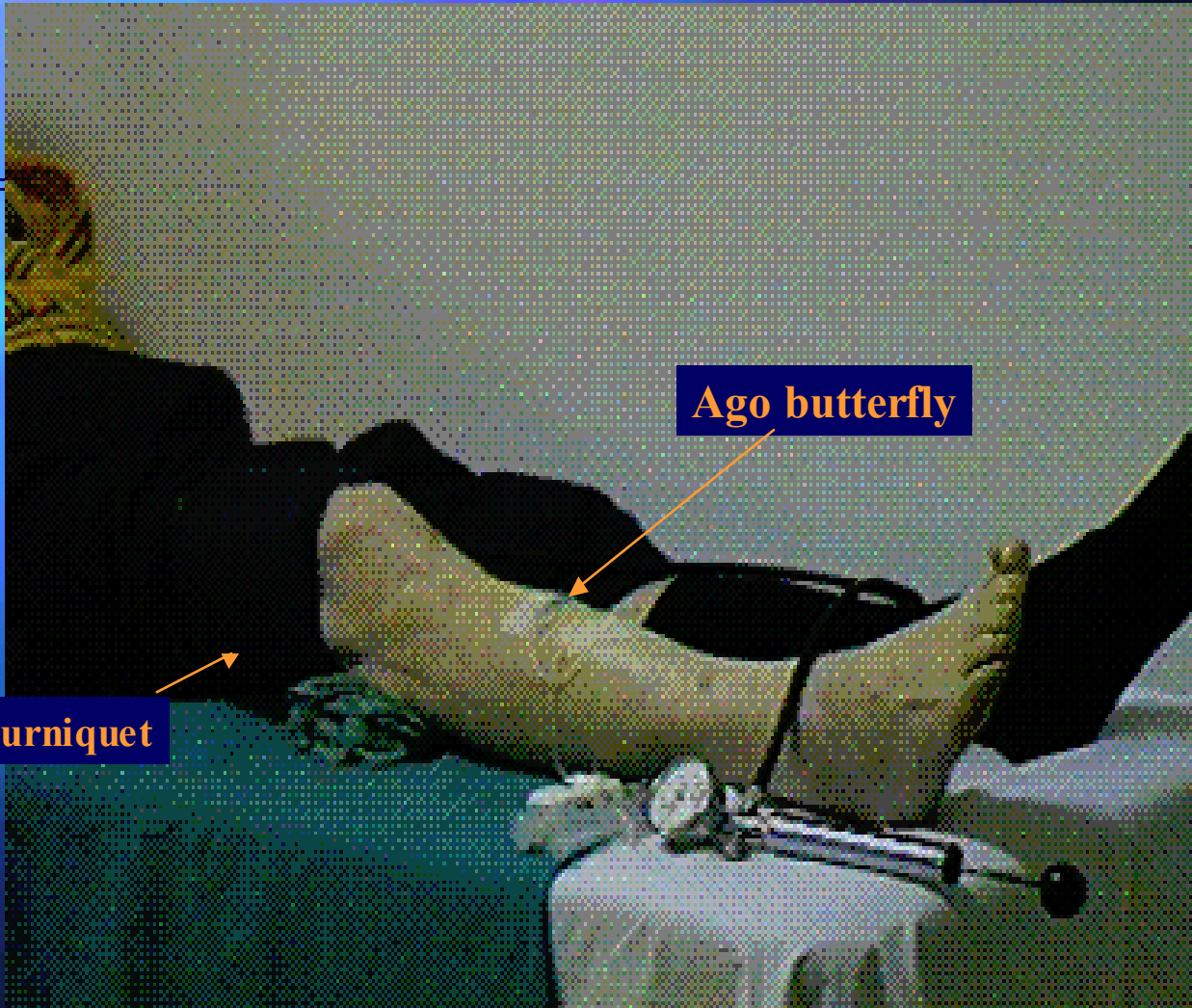


GUANETIDINA

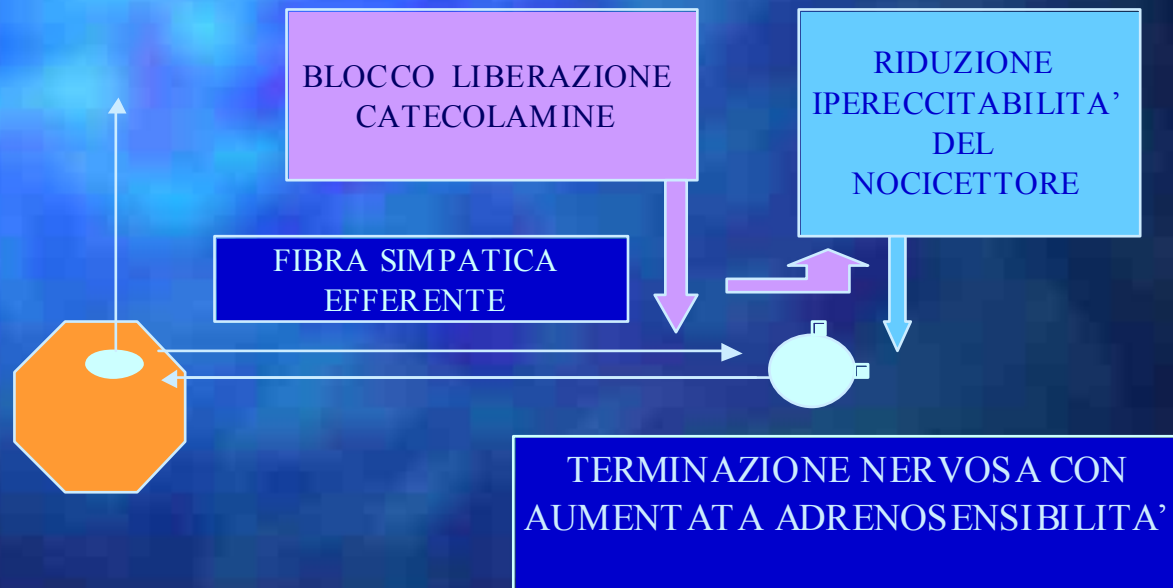


Tourniquet

Ago butterfly



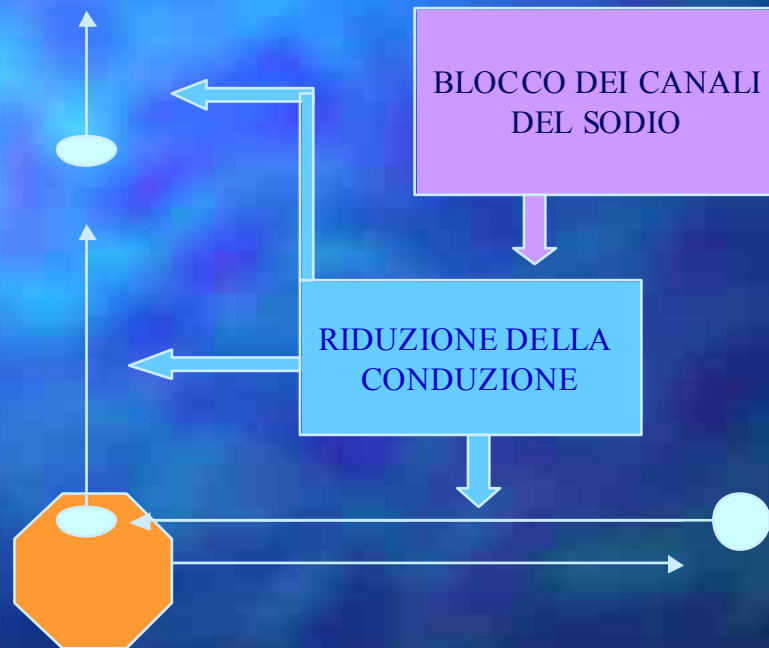
CLONIDINA



FARMACI CON EFFETTO SULLA CONDUZIONE NERVOSA

**ANESTETICI LOCALI / ANTIARITMICI
ANTIEPILETTICI**

ANESTETICI LOCALI

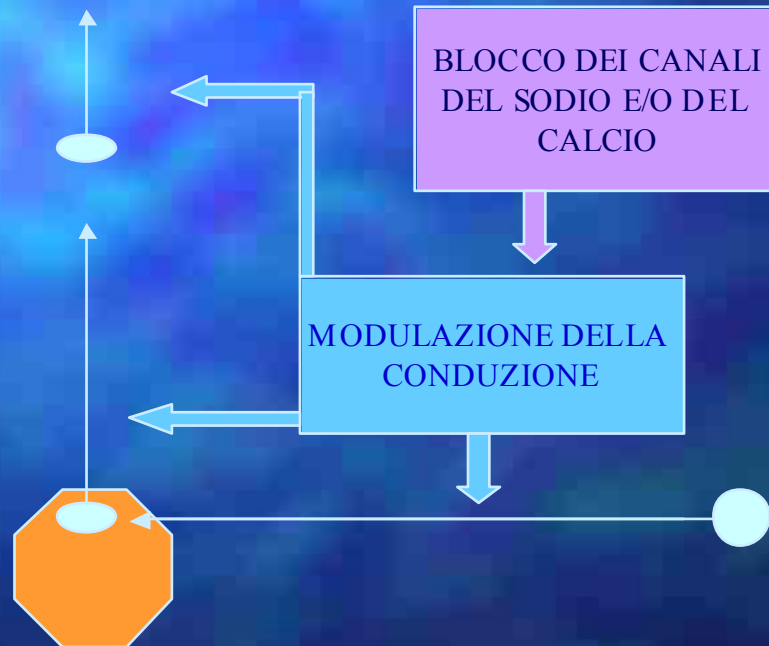


BLOCCHI ANESTETICI

- **Blocchi ripetuti, tramite catetere, del nervo periferico a monte della lesione o del plesso**
- **Blocchi dei gangli simpatici stellato e lombari**
- **Blocchi peridurali**

ANTIEPILETTICI

CARBAMAZEPINA E DERIVATI, FENITOINA, LAMOTRIGINA, TOPIRAMATO



FARMACI AD AZIONE SINAPTICA

ANTIDEPRESSIVI

ANTIEPILETTICI

ANTAGONISTI DEI RECETTORI NMDA

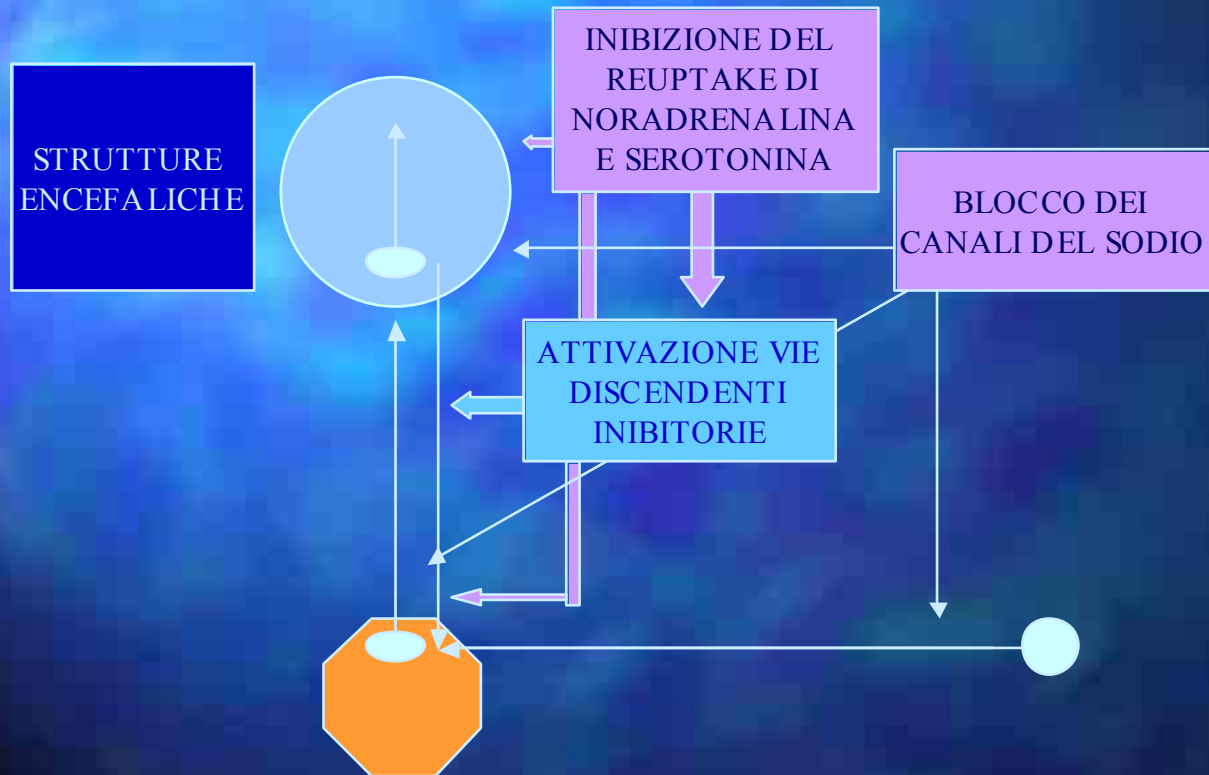
BACLOFEN

OPPIOIDI

CLONIDINA

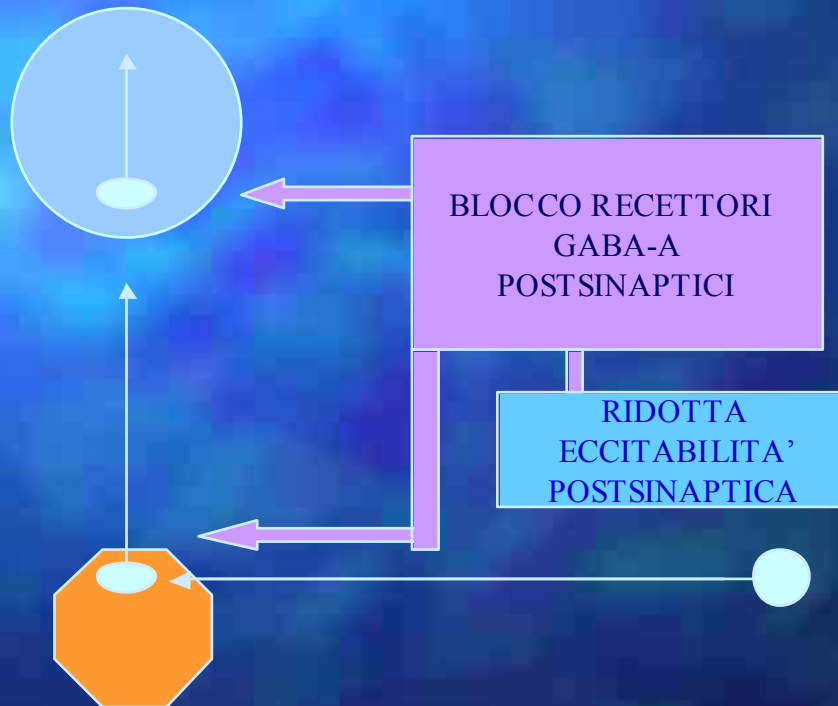
LEVODOPA

ANTIDEPRESSIVI



ANTIEPILETTICI

CLONAZEPAM



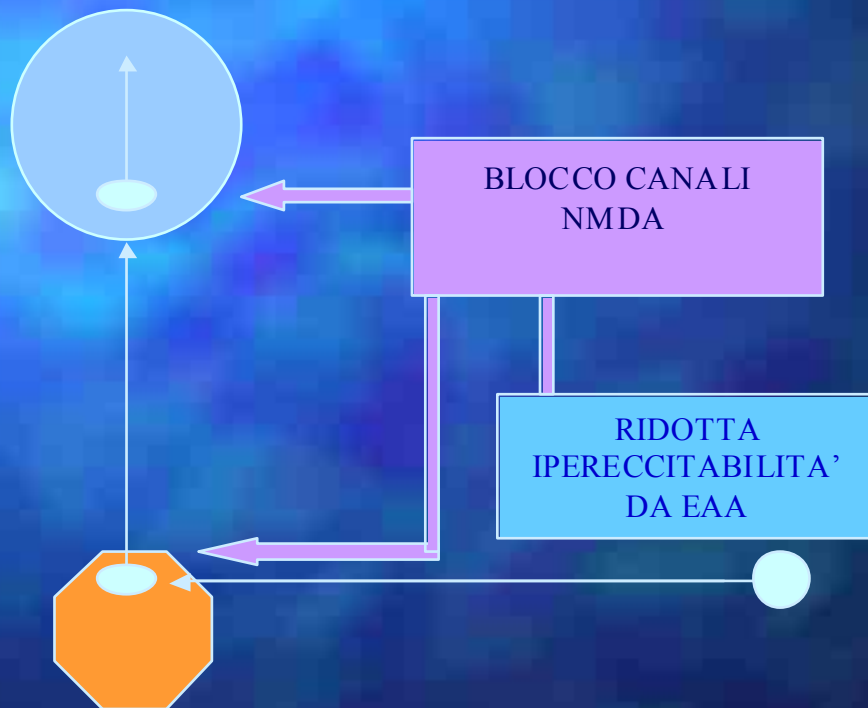
ANTIEPILETTICI

GABAPENTIN

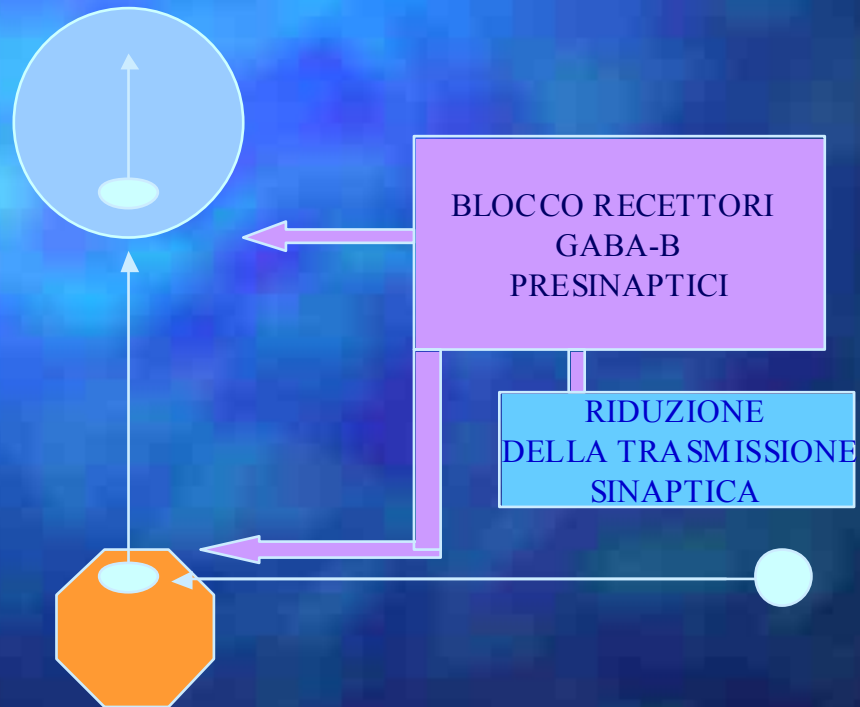


ANTAGONISTI DEI RECETTORI NMDA

KETAMINA, DESTROMETORFANO, MEMANTINA



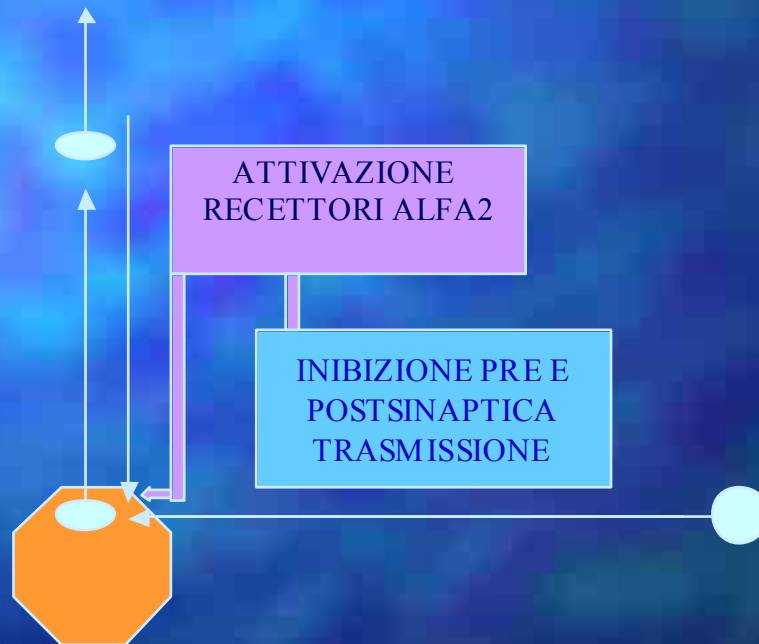
BACLOFEN



OPPIOIDI



CLONIDINA



Drug trial

- During the initial consultation visit, the physician should discuss with the patient the need to perform drug trials, as there is individual variability with regards to the dose and serum level that will result in either pain relief and side effects
- The patient should have realistic expectations
- The patient should be made an active participant in his treatment
- Initiate all medication with the lowest possible dosage, and then slowly titrate by increasing the daily dose by one additional tablet every 3-7 days until either significant pain relief or intolerable side-effects are described by the patient
- Titrate only one drug at a time
- We suggest to inform the patients that the term antidepressant or anticonvulsant does not mean that the pain is primarily due to depression or epilepsy.