Pharma

Dr. AM Fouda, Professor of Clinical Pharmacology

Summaries of Ali Al-Murtada

ملخصات

الدكتور عبد المتعال فودة

أعداد : الطالب علي المرتضى

Anti-depressant drugs

- 5% of People have depression
- Women > Men (2:1), Major disability

Causes :-

1- 4 genes

2- Biogenic amine and receptor theory

NA↓, Serotonin↓, DoPamin↓

زيادة في عدد: a-$5HT_2A$
b-$5HT_2C$

3- Neurotropic and Cytokines therapy

A- Brain derived neurotropic factor (BDNF) ↓

B- Hypothalamus - Pituitary axis dysregulation

C- Proinflammatory Cytokines :- IL-1, IL-6, TNFα

Types :- 1- Unipolar most common

2- Bipolar عكس مختلف

Symptoms :-

A- Emotional :- Serotonin ↓

1- Anhedonia :- lose interset and enjoyment
2- Apathy and loss of self-esteem
3- loss of motivation

B- Biological :- NA ↓

1- Sleep disturbance and loss appetite
2- loss libido
3- Chronic Pain

Drugs :- 1- Monoamine oxidase inhibitors (MAOIs) لا يستخدم
2- Tricyclic and tetracyclic anti-depressant (TCA)
3- Selective serotonin reuptake inhibitor (SSRIs)
4- Atypical (heterocyclic) antidepressant ← مختلفين

MAOIs → dopamine only

- MAO_A in Brain and GIT (liver), MAO_B Brain only
- Drugs :- phenelzine, tranylcypromine, Selegiline → also Parkinson

Mechanism :- ~~MAO~~ → NA ↑

Uses:

1- depression that unaffect by other drugs

2- Parkinsonism :- Selegiline (MAO$_B$ only) → Dopamin ↑

Selective

Adverse effect: أول أربعة بالبال:

1- Orthostatic hypotension (Postural) → أي علاج يغير بالدماغ بيوي hypo (α_1)

2- Sexual dysfunction

3- Serotonin Syndrom, if mix with TCR and SSRIs

4- CNS stimulation → irritability, insomina, tremor, hyperthermia

Convulsions

5- Chesse reaction (hypertensive crisis) occur when eating Tyramine-rich food eg:- yogurt, old chesse

NA أبن عم

Broke by MAO in liver

TCA

Drugs:- Imipramine, Clomiramine, Amitriptyline, Nortriptylines

Mechanism:- inhibite of NA and Serotonin by block transporter that responsible for it (inhibite amine pump)

Uses:- 1- depression

2- Chronic Pain Condition eg:- fibromyalgia أي بعدنا بيجي

3- Noctural enuresis in children (bed-wetting) use imipramine

Adverse effect أول أربعة مهمين

5- CNS Sedation (atropine-like action)

6- Atropine-like action

7- Cardiac arrhythmia] مهمات جدا

8- Hepatotoxicity :- cholestatic jaundice

TCA toxicity

Manifestations :

1- Atropine-like action
2- Metabolic acidosis
3- Cardiac arrhythmia : tachycardia, wide QRS, long QT

Treatment :

1- I.V $NaCO_3$: 1st line (هذا معلن كافي)
2- I.V lidocaine

* dialysis not effective

SSRIs مباوع

Drugs :- Fluoxetine, paroxetine, sertraline, citalopram, escitalopram

Uses :

1- Major depression
2- OCD الوسواس القهري
3- General anicxty disorder (GAD)

Adverse effect :- آثار جانبية

4- CNS :- Sedation or excitation gone with time

5- GIT irritation (Common) :- Prescribed with PPIs

6- Cardiac arrhythmia :- QT interval prolongation

* Sertraline (safe) :- treat depression after MI

* SSRIs :- stop gradually over 4 weeks

Atypical الأدوية الأخرى

A- NA and 5HT reuptake inhibitors also block $5HT_2A$ and $5HT_2C$

- Venlafaxine
- Duloxetine :- used more for autonomic neuropathy

B- Receptor blockers :-

- Trazodone :- Block $5HT_2A$ and $5HT_2C$ and more sedative
- Mirtazapine :- Block α_2 and $5HT_2C$, less GIT upset and sexual dysfunction than SSRIs