

pharmacology



By:.

Team of pharmacology

Disease -Modifying Antirheumatic drugs

Lecture's objectives:

1. Define DMARDs, general features and clinical uses.
2. Differ between **Hydroxychloroquine, Methotrexate and Infiximab** in mechanism of action, pharmacokinetics and adverse effects.
3. Compare between NASIDs and DMARDs.

General Notes:

- ✓ Disease-modifying anti-rheumatic drugs (DMARDs) is a category of otherwise unrelated drugs defined by their use in rheumatoid arthritis to slow down disease progression.
 - ✓ Never start with large doses of DMARDs due to their danger side effects, SO we have to start with small doses and increase them gradually.
 - ✓ DMARDs decrease the pain by their **Anti-inflammatory effects**.
 - ✓ We use DMARDs to:
 - *Prevent further damage or deformity.
 - *When the disease doesn't respond to NASIDs.
 - *To stop the disease progressing.
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1. Hydroxychloroquine

- ❖ Have antioxidant activity. (**Trapping free radicals**)
- ❖ Antimalarial drug.
- ❖ Its main route = oral.
- ❖ It's not allowed to pregnant women. (**It can traverse the placenta**)
- ❖ The patient should make periodic visual acuity each 2-3 weeks to monitor any optical changes cause **blindness** could happen as a side effect.

Chick these videos:

What is visual acuity?

<http://www.youtube.com/watch?v=7EgXs7itlYc>

You Tube

How to Test Visual Acuity

<http://www.youtube.com/watch?v=u9qw4wh5xis>

2.Methotrexate

- ❖ **Cancer** chemotherapy drug.
- ❖ Immunosuppressant drug.
- ❖ Have quick response.
- ❖ Rote = injection once a week.
- ❖ When we use it as anti-cancer we use the whole therapeutic dose, however when we use it as antirheumatic we have to aware of the appropriate dose to avoid its side effects.
- ❖ Cytopenia: marked reduction in blood cells including WBCs and platelets which will decrease the immunity.
- ❖ It affects the hepatic cells and cause hepatic failure. (**Liver cirrhosis**)

3.Tumor Necrosis Factor α blocking agents (**TNF α**) (Infliximab)

- ❖ Block the action of tumor necrosis α .
- ❖ Chimeric drug and have to be given by slow infusion.
- ❖ Tumor necrosis α : are inflammatory mediators, which appear in inflammatory actions, and it activates another inflammatory mediators.
- ❖ Infliximab's adverse effect (**Pancytopenia**) is less risk than methotrexate.
- ❖ Infliximab is the only drug that **activates latent TB**.

Remember that:

