Choose a p-drug for 50 years old patient with abdominal pain and diarrhoea

* **Step 1: Diagnosis**
  + acute amoebic dysentery
* **Step 2: Therapeutic objectives**
  + treat the signs and symptoms, eradicate the disease and prevent transmission of the disease and further complications
* ***Step 3: Make an inventory of effective groups of drugs***
* Drugs with antiamoebic activity
  + Nitroimidazoles [*e.g* , metronidazole, tinidazole, secnidazole, satranidazole ornidazole]
  + Alkaloids [*e.g* , emetine, dehydroemetine]
  + Amide [*e.g* , diloxanide furoate]
  + 8-Hydroxyquinolines [*e.g* , iodochlorohydroxyquin, diiodohydroxyquin]
  + Antibiotics [*e.g,* tetracyclines, paromomycin]
* ***Step 4: Choose an effective group according to criteria***

|  |  |  |  |
| --- | --- | --- | --- |
| **Drug Group** | **Efficacy** | **Safety** | **Suitability** |
| Nitroimidazoles | +++ | +++ | +++ |
| Alkaloids | +++ | ++ | + |
| Amides | + | ++ | ++ |
| 8-hydroxyquinolones | + | ++ | ++ |
| Antibiotics | ++ | +++ | +++ |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Drug Group** | **Efficacy** | **Safety** | **Suitability** | **Cost** |
| Metronidazole | +++ | +++ | +++ | Rs.6.75 |
| Tinidazole | +++ | +++ | +++ | Rs.12.65 |
| Secnidazole | +++ | +++ | +++ | Rs.26.40 |
| Ornidazole | +++ | +++ | +++ | Rs.39 |
| Satronidazole | +++ | Better tolerability, absence of neurological & disulfiram like reactions | Preferred in patients with neurological symptoms | Rs.40 |

**P-Drug:**

* Tablet metronidazole 400 mg tds X 5 days

**WRITE THE P-TREATMENT FOR A 30 YEAR OLD PATIENT WITH ACUTE DIARRHOEA:**

**STEP 1: Diagnosis of the condition**: Acute diarrhoea due to Infective etiology (Escherichia coli)

**STEP 2: Specify the therapeutic objectives:**

* To maintain hydration
* Prevent the spread of entero-pathogen
* Prevent nutritional damage & maintain electrolyte balance

**STEP 3: Make an inventory of the drug groups effective in treating this condition:**

**DRUG GROUP SUSCEPTIBILITY RESISTANCE DURATION OF ACTION**

Co-trimoxazole ++++ ++ +++

Fluroquinolones ++++ ++ +++

Azithromycin +++ - +++

Cephalosporins ++++ - +++

**STEP 4: Choose an effective group according to criteria:**

**EFFICACY SAFETY SUITABILITY (INDICATION/**

**PHARMACODYNAMICS ADVERSE EFFECTS CONTRAINDICATION)**

CO-TRIMOXAZOLE: Glossitis, stomatitis INDICATION:

Half life: 11 hours Hypersensitivity UTI,URTI

Enters CSF,sputum SAFETY: Synergistic action CONTRAINDICATION:

Hypersensitivity

FLUROQUINOLONES: ADVERSE EFFECTS: INDICATION:

Half life: 3-5 hours C. difficle colitis Second line Anti-TB

SAFETY: UTI,Chanchroid

Rare potentially fatal CONTRAINDICATION:

Side effects children with cystic fibrosis

CEPHALOSPORINS: SAFETY: single dose effective INDICATION:

Half life: 8 hours ADV. EFFECTS: Chancroid,URTI

Hypersensitivity reactions CONTRAINDICATION:

Hypersensitivity

AZITHROMYCIN: ADV. EFFECTS: INDICATION:

Longer duration of action Cholestatic hepatitis Legionellosis

Extensive tissue distribution Epigastric distress URTI

High drug conc. Within cells SAFETY: CONTRAINDICATION:

Free of drug interactions Hypersensitivity

STEP 4: CHOOSE AN EFFECTIVE GROUP ACCORDING TO CRITERIA (SCORES)

DRUGS EFFICACY SAFETY SUITABILITY COST

Ceftriaxone +++ +++ + Rs.56

Cefixime +++ +++ +++ Rs.5

Cefpodoxime

Proxetil +++ +++ ++ Rs.16

SCORES

Efficacy ( 3 ) Safety ( 3 ) suitability ( 3 ) cost ( 1 )

Based on above criteria, we can say that CEFIXIME are better choice amongst other groups.

STEP 5: CEFIXIME can be chosen as P-drug for Acute diarrhoea.

Tablet Cefixime 200mg BD for 5 days.