

Rational Drug Use In Reproductive Medicine

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What is Rational Drug Use?

The 1985 World Health Organization (WHO) in Nairobi is considered as a starting point for rational drug use studies. The rational use of drugs requires that:

- patients receive medication appropriate to their clinical needs,
- in doses that meet their own individual requirements,
- for an adequate period of time,
- at the lowest cost to them and their community.

Conference of Experts on the Rational Use of Drugs, World Health Organization, Nairobi, Kenya, WHO/CONRAD/WP/RI, (25-29.12.1985).

Rational Drug Use Steps

- making the correct diagnosis,
- determining the prognosis,
- establishing treatment goals,
- reviewing treatment options,
- selection of appropriate treatment,
- in case of drug therapy, the prescription must be written properly and the patient should be followed up appropriately

PRINCIPLES OF Rational Drug Use

If the

- efficacy
- security
- cost

criteria are taken into consideration, drugs can be chosen rationally

Responsible Parties in Rational Drug Use

- Physician
- Pharmacist
- Nurse
- Other medical staff
- Patient / patient relatives
- Producer
- Regulatory Authority
- Other (Media, Academy, etc.)

Examples of Irrational Drug Use-1

- Inappropriate administration of drugs (route of administration, duration, dose ..)
- Unnecessary and excessive use of drugs
- The use of too many medicines per patient (poly-pharmacy)
- Intake of oral medicines with drinks other than water
- Use of drugs beyond their expiry dates
- Inappropriate self-medication

Examples of Irrational Drug Use-2

- over-use of injections when oral formulations would be more appropriate
- Use of unnecessary and inappropriate vitamins
- Insensible intake of food supplements and herbal products
- Disregarding drug-drug interactions and nutrient-drug interactions
- Unnecessary antibiotic use

Effects of Irrational Drug Use

- Decreased patient compliance to treatment,
- Adverse drug reactions as a result of drug interactions,
- Development of drug resistance ,
- Disease recurrence or prolongation,
- Increased incidence of side effects,
- Increased treatment costs

What are common patterns of irrational drug use?-1

- Failure to identify the patient's problem,
- Failure to make the correct diagnosis ,
- Inappropriate selection of drugs,
- Incorrect prescription of drugs,
- Inadequate adjustment of drug doses and intervals

What are common patterns of irrational drug use?-2

- Wrong or incomplete marking AND labeling of drug boxes,
- Lack of proper communication with the patient,
- Failure to correctly inform patients about their disease, the treatment process, proper use of drugs and their side effects
- Lack of patient compliance

Rational Drug Use in Reproductive Medicine

- The patient is always at the center of the treatment.
- The correct use of medication during the treatment process affects treatment success.
- Patients undergo a treatment process which they have not experienced before for about 20 days duration.
- Patient distress is largely due to fear of not being able to apply the necessary medication appropriately

What should be done to avoid incorrect use of medication during the treatment process?

The

- timing and
- dose of the medication

should be explained to the patient in detail.

- The important points on how to use the medication should be given in written form to the patient.
- Patients should be adequately informed about any changes made during the treatment by the doctor and nurse.

Are there any side effects of reproductive medicine?

Medicines currently are ;

- more pure,
- more precisely dosed and
- easier to apply.

This has enabled a more reliable and user friendly treatment.

Side effects are;

- self-limited and temporary and
- subside spontaneously.

Are there any side effects of reproductive medicine?

- Nowadays, controlled ovarian hyperstimulation protocols are used in order to increase the patient's chances.
- However, it is very important to monitor the patient for possible side effects of drugs.
- The most common side effects are allergic sensitivity, pain, infection and OHSS (Ovarian Hyperstimulation Syndrome).
- Ovarian cancers due to ovulation induction, endometrial stromal sarcoma and breast cancers have also been reported (Dikencik 2001).

When Determining the Drug Dose

- Ovarian reserve determined by USG
- Basal FSH,
- E2
- Body mass index
- Past ovarian surgery
- The presence of cyst or mass in ovaries
- Response to previous treatments should be reviewed

The following changes can be made to increase success rates:

- Changing the dose of gonadotropin or FSH-LH ratio
- Using the short protocol
- Interruption of the GnRH analogue when gonadotropins are started
- Using or not using a lower dose GnRH analog
- Combined treatment

Recommendations for proper drug use

- Drugs should be used in the right way, at the right time intervals, at the correct dose and for the specified period of time.
- It should not be stopped by the patients when they feel good.
- If no benefit is obtained from the medication, the patient must inform his/her doctor.
- Patients should make sure they remember to take their medication at the right time and arrange reminders if necessary.
- Patients should not forget that medicine prescribed for other people may be harmful for them.

Questions which should be asked to the physician and/or pharmacist before starting medication

- How do I prepare the medicine? (dilution, shake...)
- How do I use the medicine?
- At what times / time will I use the medication?
- For how many days will I need to take my medication?
- Do I have food and drinks to avoid while using the medicine?
- What should I do if I encounter an undesirable effect during my treatment?
- How do I keep my medication (under what conditions)?

Where should the drugs be kept?

- The medicines should be stored as specified in the instructions for use.
- Unless otherwise specified, it is recommended to store drugs in cool and dry places which are not exposed to direct sunlight.
- Some drugs should be kept in the refrigerator at +4 °C. Drugs that should be stored in the refrigerator should never be stored in the freezer and should not be frozen.

Is it appropriate to accept left-over drugs from other patients?

- Since the conditions of storage are not known after the drugs are released from the hospital and pharmacy environment,
 - effectiveness may decrease,
 - stability may deteriorate,
 - toxic effects can occur.

Therefore, it is not appropriate to use drugs again to protect public health.

12 BASIC RESPONSE RECOMMENDED BY WHO FOR THE PROMOTION OF Rational Drug Use-1

- The organization to coordinate and monitor the effects of drug use policies
- Use of Clinical Diagnosis and Treatment Guidelines to support educational supervision and decision-making processes
- Create a list of basic drugs based on first-line treatments
- Establishing medication and treatment boards in regions and hospitals
- To provide problem-based pharmacotherapy training in the pre-graduation curriculum
- In-service continuous medical training as a requirement

WHO Policy Perspectives on Medicines; September 2002

12 BASIC RESPONSE RECOMMENDED BY WHO FOR THE PROMOTION OF Rational Drug Use-2

- Development of monitoring, audit and feedback systems within the institutional framework
- Use independent sources of information on drugs
- Training of the public about drugs
- Avoiding unethical financial initiatives
- Implementing appropriate and mandatory regulations
- Providing adequate government spending to ensure the availability of drugs and staff

OUR COUNTRY

- Studies on rational drug use within the Ministry of Health have been continuing for about 20 years.
- On 12 October 2010, Minister Oluru
- Rational Drug Use Unit was established.
- March 19, 2012 in Turkey Pharmaceuticals and Medical Devices Agency Position in Rational Drug Use, Drug Supply Management and Promotion Agency has been established.

REPRESENTATIVES AND COOPERATION

- In order to provide coordination in provinces, Provincial Representative for Rational Use of Drugs in Provincial Health Directorates is located in 81 provinces.
- In line with Hospital Service Quality Standards, Rational Drug Use Teams have been established in order to make planning and activities in hospitals.

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