Chapter

1

Systematic Approach to Drug Information Queries

Drug information means clinically relevant information about use and effects of drugs useful for consumers, healthcare professionals and for safety of public community. To obtain knowledge about drug information is fundamental professional responsibility of pharmacist. It is a well known fact that 'knowledge is power'. The main objectives of this chapter are:

- To educate pharmacy students to serve as effective providers of drug information.
- To promote patient care through proper use of medicines.
- To provide knowledge about important drug information resources which includes:
  - Textbooks/reference books
  - Medical journals/pharmaceutical journals
  - Print media, newsletters, internet, etc.

Resources can be classified as:

- **Primary resources** of information include journals, clinical drug trials, etc. These provide current information but evaluating primary literature is difficult.
- **Secondary resources** of information include indexing and abstracting systems and reviews of primary reports like Martindale, international pharmaceutical abstracts, chemical abstracts, etc.
- **Tertiary resources** of information include summaries of the primary and secondary published literature like reference books, textbooks, pharmacopoeia, national and hospital formulary, Martindale, Merck index, electronic media, etc.

Drug information resource/search strategy: Tertiary resource → Secondary resource → Primary resource

Always search drugs by the generic name and not by the trade name because generic name is universal while the trade name is specific to countries.

Classification of drug-related queries:

- Regarding administration of medicine
- Regarding adverse drug reactions (ADR) or side effects of drugs
- Regarding drug interactions and compatibility of drugs
- Regarding drugs in pregnancy and breastfeeding
- Regarding drugs in renal and liver diseases
- Regarding product availability and alternative medicines

Response of a query should be provided: Timely, current, accurate, well-referenced and logical.

Medication factors to consider for response:

- Chief complaint and age, height, weight, gender, pregnancy/lactation, etc. of patient.
- Diagnosis, problems, history, etc. of patient.
- Allergies, family and social history.
- Physical and laboratory findings.
- Adverse drug reactions (ADR), drug interactions and availability.

EXPERIMENT 1

(Case Study 1)

Presentation

Mr XFX, a 50-year-old male with past medical history of hypertension.
Current medication: Lisinopril 10 mg, daily
Presenting complaint: Has developed a dry cough

Drug Information Query

Is dry cough a side effect of ACE inhibitor?

Suggestion

Response: Yes, along with the lisinopril dry cough is a adverse effect of all ACE inhibitors in few patients.

In such patients, ACE inhibitors should be replaced with another anti-hypertensive agent like AT-antagonist (telmisartan, etc.), calcium channel blockers (amlodepil, etc.), beta-blockers (Atenolol, etc.) as per the co-morbid conditions.

Result

Resources Used: Primary/Secondary/Tertiary Resources

Details about the resources (Martindale, international pharmaceutical abstracts, chemical abstracts, journals, textbooks, reference books like IP, BP, USP, NF, Merck index, electronic media, etc.)

EXPERIMENT 2

(Case Study 2)

Presentation

Mr XYZ, a 55-year-old male is suffering with productive cough.
Current medication: Cough syrup containing terbutaline.
Presenting complaint: Has developed palpitation.

Drug Information Query

Is palpitation a side effect of terbutaline?

Suggestion

Response: Yes. All beta-agonists like terbutaline used for bronchodilatation causes mild or moderate tachycardia which results in palpitation. In such cases, terbutaline could be replaced with other remedies like anti-histaminic like cetirizine, theophylline, etc.

Result

Resources Used: Primary/Secondary/Tertiary Resourses

Details about the resources (Martindale, international pharmaceutical abstracts, chemical abstracts, journals, textbooks, reference books like IP, BP, USP, NF, Merck index, electronic media, etc.)

VIVA VOCE/SYNOPSIS

Q1. Give examples of secondary resources.
Q2. Write various resources of drug information.
Q3. What are different drug-related queries?
Q4. Enlist the resources of primary drug information.
Q5. Differentiate between secondary and tertiary resources.

MULTIPLE CHOICE QUESTIONS

Q1. Journals are the example of:
(1) Primary resources (2) Secondary resources (3) Tertiary resources (4) None of these
Q2. Review of primary report in Martindale and pharmaceutical abstract belongs to:
(1) Primary resources (2) Secondary resources (3) Tertiary resources (4) All of these
Q3. Drug information search strategy is from:
(1) Primary resources → Secondary resources → Tertiary resources
(2) Tertiary resources → Secondary resources → Primary resources
(3) Both (1) and (2)
(4) All of the above
Q4. It is easy to search drug by its:
(1) Generic name (2) Brand name (3) Trade name (4) All of these
Q5. Reference books belong to:
(1) Primary resources (2) Secondary resources (3) Tertiary resources (4) All of these

ANSWERS

Q1. (1) **Q2.** (2) **Q3.** (2) **Q4.** (1) **Q5.** (3)