

CHAPTER – 1 HISTORY OF PHARMACY IN INDIA

In ancient India, the sources of drugs were of vegetable, animal, and mineral origin. They were prepared empirically by a few experienced persons. Knowledge of that medical system was usually kept secret within a family.

There were no scientific methods of standardization of drugs.

Muslim rule in India

The Indian system of medicine declined during the Muslim rule while the Arabic or the Unani Tibbi system flourished.

British rule in India

The Western or the so-called Allopathic system came into India with the British traders who later became the rulers. Under British rule, this system got state patronage. At that time it was meant for the ruling race only. Later it descended to the people and became popular by the close of the 19th Century.

Before 1940

Initially, ly all the drugs were imported from Europe. Later some drugs of this system began to be manufactured in this country.

1901: Establishment of the Bengal Chemical and Pharmaceutical Works, Calcutta by Acharya P.C. Ray.

1903: A small factory at Parel (Bombay) by Prof. T.K. Gujar.

1907: Alembic Chemical Works at Baroda by Prof. T.K. Gujar.

Drugs were mostly exported in crude form and imported in finished form. During World War I (1914 – 1920) the imports of drugs were cut off. Imports of drugs were resumed after the War. In the absence of any restrictions on quality of drugs imoported, manufacturer abroad took advantage of the situation. The consequences were as follows:

(i) foreign manufacturers dumped inferior quality medicines and adulterated drugs. (ii) Markets were full of all sorts of useless and deleterious drugs were sold by unqualified men.

Examples of maladies:

- Poisoning due to quinine.
- Putting of croton oil into eye instead of atropine solution.
- Selling of chalk powder tablets in place of quinine.
- Drug santonin was badly adulterated.
- Potent drugs like compounds of antimony and arsenic and preparations of digitalis were dispensed without any standard.

Few laws were there having indirect bearing on drugs, but were insufficient.

1878 Opium Act Dealt with cultivation of poppy and the manufacture, transport, export, import and sale of opium.

1889 Indian Merchandise Act Misbranding of goods in general 1894 Indian Tariff Act Levy of customs duty on goods including foods, drinks, drugs, chemicals, and medicines imported into India or

exported therefrom.

1898 Sea Customs Act Goods with 'false trade description' were prevented from being imported under this act.

1919 Poisons Act Regulated the import, possession, and sale of poisons. Indian Penal Code

Some sections of IPC have mentioned intentional adulteration as a punishable offense.

Some state-level laws had indirect references to drugs:

1884 Bengal Municipal Act

1901 City of Bombay District Municipal Act Concerned with food.

1909 Bengal Excise Act

1911 Punjab Municipal Act

1912 United Provinces (now Uttar Pradesh)

Prevention of Adulteration Act

1914 Punjab Excise Act

Refers to adulteration of foods and drugs.

1916 United Provinces Municipalities Act Inspection of shops and seizure of adulterated substances.

1919 Bengal Food Adulteration Act

1919 Bihar and Orissa Prevention of Adulteration

Act

1919 Madras Prevention of Adulteration Act Chiefly concerned with food adulteration

1922 Bihar and Orissa Municipal Act

1922 Central Provinces Municipalities Act

1925 Bombay Prevention of Adulteration Act

1929 Punjab Pure Food Act

The laws were too superficial and had an indirect link to drugs.

Drug Enquiry Committee

Government of India on 11th August 1930, appointed a committee under the chairmanship of Late Col. R.N. Chopra to see into the problems of Pharmacy in India and recommend the measures to be taken. This committee published its report in 1931. It was reported that there was no recognized specialized profession of Pharmacy. A set of people known as compounders were filling the gap.

Just after the publication of the report Prof. M.L. Schroff (Prof. Mahadeva Lal Schroff) initiated pharmaceutical education at the university level in the Banaras Hindu University. In 1935 United Province Pharmaceutical Association was established which later converted into the Indian Pharmaceutical Association.

The Indian Journal of Pharmacy was started by Prof. M.L. Schroff in 1939. All India Pharmaceutical Congress Association was established in 1940. The Pharmaceutical Conference held its sessions at different places to publicize Pharmacy as a whole.

1937: Government of India brought the 'Import of Drugs Bill'; later it was withdrawn.

1940: Govt. brought 'Drugs Bill' to regulate the import, manufacture, sale and distribution of drugs in British India. This Bill was finally adopted as 'Drugs Act of 1940'. 1941: The first Drugs Technical Advisory Board (D.T.A.B.) under this act was constituted. Central Drugs Laboratory was established in Calcutta

1945: 'Drugs Rule under the Drugs Act of 1940' was established.

The Drugs Act has been modified from time to time and at present the provisions of the Act cover Cosmetics and Ayurvedic, Unani and Homeopathic medicines in some respects. 1945: Govt. brought the Pharmacy Bill to standardize the Pharmacy Education in India 1946: The Indian Pharmacopoeial List was published under the chairmanship of late Col.R.N.

Chopra. It contains lists of drugs in use in India at that time which were not included in British Pharmacopoeia.

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1948: Pharmacy Act 1948 published.

1948: Indian Pharmacopoeial Committee was constituted under the chairmanship of late Dr. B.N. Ghosh.

1949: Pharmacy Council of India (P.C.I.) was established under Pharmacy Act 1948. 1954: Education Regulation have come in force in some states but other states lagged behind. 1954: Drugs and Magic Remedies (Objectionable Advertisements) Act 1954 was passed to stop misleading advertisements (e.g. Cure all pills)

1955: Medicinal and Toilet Preparations (Excise Duties) Act 1955 was introduced to enforce uniform duty for all states for alcohol products.

1955: First Edition of Indian Pharmacopoeia was published.

1985: Narcotic and Psychotropic Substances Act has been enacted to protect society from the dangers of addictive drugs.

Govt. of India controls the price of drugs in India by Drugs Price Order changed from time to time.

CODE OF ETHICS AS DRAFTED BY PHARMACY COUNCIL OF INDIA (P.C.I.) Ethics is defined as 'code of moral principles'. It emphasizes on the determination of right or wrong while doing one's duty.

Code of Pharmaceutical Ethics as formulated by Pharmacy Council of India which are meant to guide the pharmacist as to how he should conduct himself (or herself), in relation to himself (or herself), his / her patrons (owner of the pharmacy), general public, co-professionals etc. and patients.

Introduction:

Profession of Pharmacy is a noble profession as it is indirectly healing the persons to get well with the help of medical practitioners and other co-professionals. Government has restricted the practice of Pharmacy to only Profession Pharmacists i.e registered Pharmacist under the Pharmacy Act 1948. PCI framed the following ethics for Indian Pharmacists, which may be categorised under the following headings:

1. Pharmacist in relation to his job.
2. Pharmacist in relation to his trade.
3. Pharmacist in relation to medical profession.
4. Pharmacist in relation to his profession.

Pharmacist in relation to his job

A pharmacist should keep the following things in relation to his job.

(i) Pharmaceutical services

Pharmacy premises (medicine shops) should be registered. Emergency medicines and common medicines should be supplied to the patients without any delay.

(ii) Conduct of the Pharmacy

Error of accidental contamination in the preparation, dispensing and supply of medicines should be checked in a pharmacy.

(iii) Handling of Prescription

A pharmacist should receive a prescription without any comment on it that may cause anxiety to the patient. No part of the prescription should be changed without the consent of the prescriber. In case of changing the prescription should be referred back to the prescriber.

(iv) Handling of drugs

A prescription should always be dispensed correctly and carefully with standard quality

drug or excipients. Drugs that have abusive potential should not be supplied to any one.
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(v)Apprentice Pharmacist

Experienced pharmacists should provide all the facilities for practical training of the apprentice pharmacists. Until and unless the apprentice proves himself or herself certificate should not be granted to him / her.

Pharmacist in relation to his trade

Following are the provisions which pharmacist should keep in mind while dealing with his trade: (i)*Price structure*

The prices charged should be fair keeping with the quality, quantity and labour or skill required.

(ii)*Fair trade practice*

Fair practice should be adopted by a pharmacist in the trade without any attempt to capture other pharmacist's business.

If a customer brings a prescription (by mistake) which should be genuinely by some other pharmacy the pharmacist should refuse to accept the prescription.

Imitation of copying of the labels, trade marks and other signs or symbols of other pharmacy should not be done.

(iii)*Purchase of drugs*

Pharmacists should buy drugs from genuine and reputable sources.

(iv)*Advertising and Displays*

The sale of medicines or medical appliances or display of materials in undignified style on the premises, in the press or elsewhere are prohibited.

Pharmacist in relation to medical profession.

Following are the code of ethics of a pharmacist in relation to medical profession: (i)*Limitation of professional activity*

The professional activity of the medical practitioner as well as the pharmacists should be confined to their own field only.

Medical practitioners should not possess drugs stores and pharmacists should not diagnose diseases and prescribe remedies.

A pharmacist may, however, can deliver first aid to the victim in case of accident or emergency. (ii)*Cladestine arrangement*

A pharmacist should not enter into a secret arrangement or contract with a physician by offering him any commission or any advantages.

(iii)*Liasion with public.*

A pharmacist should always maintain proper link between physicians and people. He should advise the physicians on pharmaceutical matters and should educate the people regarding health and hygiene. The pharmacist should keep himself / herself up-to-date with pharmaceutical knowledge from various journals or publications.

Any information acquired by a pharmacist during his professional activities should not be disclosed to any third party until and unless required to do so by law.

Pharmacist in relation to his profession

Regarding to the profession the following code of ethics should be fulfilled.

(i) *Professional vigilance*

A pharmacist must abide by the pharmaceutical laws and he/she should see that other pharmacists are abiding it.

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(ii) *Law-abiding citizens*

The pharmacists should have a fair knowledge of the laws of the country pertaining to food, drug, pharmacy, health, sanitation etc.

(iii) *Relationship with Professional Organizations*

A pharmacist should be actively involved in professional organization, should advance the cause of such organizations.

(iv) *Decorum and Propriety*

A pharmacist should not indulge in doing anything that goes against the decorum and propriety of Pharmacy Profession.

(v) *Pharmacists Oath*

A young prospective pharmacist should feel no hesitation in assuming the following pharmacist's oath:

- *"I promise to do all I can to protect and improve the physical and moral well-being of society, holding the health and safety of my community above other considerations. I shall uphold the laws and standards governing my profession, avoiding all forms of misinterpretation, and I shall safeguard the distribution of medical and potent substances.*
- *Knowledge gained about patients, I shall hold in confidence and never divulge unless compelled to do so by law.*
- *I shall strive to perfect and enlarge my knowledge to contribute to the advancements of pharmacy and the public health.*
- *I furthermore promise to maintain my honour in all transactions and by my conduct never bring discredit to myself or to my profession nor to do anything to diminish the trust reposed in my professional brethren.*
- *May I prosper and live long in favour as I keep and hold to this, my Oath, but if violated these sacred promises, may the reverse be my lot."*

SCOPE AND POTENTIAL OF PHARMACY

Business
1. Drug Store
2. Whole sale
3. Repacking
4. Bulk drug distribution 5.
Cosmetic manufacturing

Cultivation of medicinal plants
5. Public testing laboratories 6.
Consultancy

D. PHARM

B.PHARM. M. PHARM.

Business

1. Pharmaceutical industry 2.
Bulk Drug Manufacturing 3.
Pharmacist job abroad 4.

PhD

Service

1. Hospital Pharmacy
2. Chemist in Drug Store /
Whole sale store

3. Medical representative 4. industry 4. Marketing
Packaging, store 1. FDA job 5. Teacher for Graduate level
maintenance in 2. Teacher diploma courses 3. courses
Pharmaceutical Industry 5. 6. Research and development
Secretary / PA to MD in Pharm. Production
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Pharma Tutor