OFFICIAL DRUG COMPENDIAS

1. National Formulary of India

For the compilation of National Formulary of India a committee known as National Formulary Committee was constituted in November 1956 who was assigned the work to compile this formulary. The opinions of medical associations, hospitals, teaching institutions and leading manufacturers in the country were invited and finalised by the committee. It was printed in India by the Manager, Government of India Press, Simla in 1960.

2. Pharmacopoeia of India (The Indian Pharmacopoeia)

In 1946 the Government of India published the pharmacopoeial list which served as a supplement to British Pharmacopoeia. This list included the drugs which were of substantial medicinal value and were later on included in the pharmacopoeia. After the publication of this list, the Government of India constituted a permanent Indian Pharmacopoeia Committee in 1948. This committee was assigned the work to prepare Indian Pharmacopoeia and to keep it uptodate. The first edition of Indian Pharmacopoeia was published in 1955 and a supplement of it was published in 1960.

The work of revision of the Indian Pharmacopoeia as well as the compilation of new edition was taken up simultaneously under the chairmanship of Dr. B.N. Ghosh, Professor of Pharmacology, R.G. Kar Medical College, Calcutta, who died in 1958. After Dr. B.N. Ghosh, Dr. B. Mukerji, Director, Central Drug Research Institute, Lucknow, was appointed as chairman of the Indian Pharmacopoeia Committee. The second edition of the Indian Pharmacopoeia was published in 1966 and a supplement of it was published in 1975.

On 30th June 1978, the Indian Pharmacopoeia Committee was reconstituted by the Government of India, Ministry of Health and Family Welfare, under the chairmanship of Dr. Nitya Nand, Director, Central Drug Research Institute, Lucknow. This committee was assigned the work for the preparation of the third edition of the Indian Pharmacopoeia. A working group was constituted by the committee to prepare monographs, appendices and general notes which were finalised by the Pharmacopoeia Committee. The same were published in the form of the Pharmacopoeia of India in 1985, in two volumes, volume I and volume II by the Controller of Publications, Delhi on behalf of

symptoms which may be serious enough to produce death. So the drugs which lead to addiction must be prescribed very cautiously.

13. Idiosyncrasy

All persons do not respond alike to the same drug due to varied individual susceptibility, some may produce abnormal reaction to a drug. When an abnormal or unusual reaction is produced by a drug it is known as idiosyncrasy, e.g., few mg of aspirin may produce gastric haemorrhage and small doses of quinine may produce ringing in the ear.

14. Hypersensitivity

Hypersensitivity is an allergic reaction to a drug and is different from either the expected pharmacological response or toxic reaction to the drug. This is due to frequent or indiscriminate use of drugs like antibiotics, vitamins and especially proteinous substances. Once a person is sensitised, a minute dose of the drug will produce allergic reactions. It is of two types (i) immediate type which is serious and requires prompt injection of adrenaline otherwise death may occur (ii) delayed type in which urticaria, skin rashes or contact dermatitis may occur.

15. Tolerance

When a drug administered in an ordinary dose fails to produce the normal therapeutic effect and requires large dose of the drug to produce the normal effect. The unusual resistance thus produced is known as tolerance, e.g., smokers can tolerate nicotine, alcoholics can tolerate large doses of alcohol, rabbits can tolerate large doses of atropine due to quick destruction of the drug by enzyme atropine estrase present in their blood.

TACHYPHYLAXIS

It is also known as acute tolerance. It is observed in certain drugs that when they are administered repeatedly at very short intervals the cell receptors get blocked up and pharmacological response to that particular drug is decreased. By increasing the dose this decreased response cannot be reversed. But if the administration of the drug is stopped for a long time and administered again after being discontinued then the initial effect of the drug can be reobserved. This condition is known as tachyphylaxis. Drugs like ephedrine, amphetamine, cocaine, and nitrites behave in this way.

Ipecacuanha Emetic Draught, Paediatric is an exception where several doses are prescribed in a multipledose container. Examples are male fern extract draught and paraldehyde draught.

DUSTING POWDERS

Dusting powders are meant for external application to the skin. They are usually mixtures of two or more than two ingredients in fine powder e.g. starch, kaolin, talc, zinc oxide, etc. They must be homogeneous and in a very fine state of subdivision to enhance effectiveness and minimise local irritation. For this purpose they may be passed through sieve No. 120. Dusting powders are applied to the skin for antiseptic, antipruritic, astringent, antiperspirant, absorbent, protective and lubricant purposes.

Dusting powders are dispensed in sifter-top containers or pressure aerosols. They may also be supplied in wide mouth containers and applied with powder puff, a soft brush or a sterile gauge pad but care must be taken to avoid mechanical irritation to the skin surface. Dusting powders should not be applied to open wounds or to raw surfaces. Examples are dicophane dusting powder, zinc and salicylic acid dusting powder, zinc, starch and talc dusting powder.

DENTIFRICES

Dentifrices are substances or preparations which are generally used in the help of tooth brush for cleaning the surfaces of the teeth. They are available in the form of fine powders and pastes.

EAR DROPS

Ear drops are the liquid preparations in which the drug or drugs are dissolved or suspended in a suitable vehicle like water, dilute alcohol, glycerin or propylene glycol and are intended for instillation into the ear with a dropper. They are generally used for cleansing the ear, drying weeping surfaces, softening the wax and for treating the mild infections.

Ear drops are dispensed in coloured, fluted bottles attached with a dropper or in suitable plastic containers. The containers should be labelled "For external use only". Examples are hydrogen peroxide ear drops, phenol ear drops, etc.

ELIXIRS

Elixirs are clear, pleasantly flavoured, sweetened hydroalcoholic liquid

producing products with different characteristics. Various gases used as aerosol propellants include:

(i) Compressed gases like carbon dioxide, nitrogen and nitrous oxide. Out of these only nitrogen is more useful in aerosols because it is inert.

(ii) Liquefied gases include fluorinated and fluorochlorinated hydrocarbons. Although a large number of compounds are available but dichlorodifluoromethane, trichloromonofluoromethane and dichlorotetrafluoroethane are widely used propellants in most pharmaceutical aerosols.

AEROSOL CONTAINERS

An aerosol container assembly consists of following parts:

1. Container
2. Valve

1. *Container.* The container used for packaging the pharmaceutical aerosols must possess at least the following qualities that (a) it should be capable of maintaining the required high pressure (b) the material from which it is manufactured must be compatible with the contents. The aerosol containers are generally made from tin plate, aluminium, glass, plastic-coated glass and plastics. In addition to all these materials, stainless steel is used in special cases to prevent attack by the contents.

2. *Valve.* The valve mechanism is the most important part of an aerosol assembly. Its main function is to regulate the flow of the product from the container and to control the type of spray. The valve includes not only the basic valve mechanism but it includes the closure in which it is mounted, the gasket, the dip tube and the actuator.

Various types of valves are used in aerosols which include (a) continuous spray valves and (b) metering valves. In continuous spray valves the medicament is continuously released from the container unless the pressure is released from the actuator. Such valves include spray valves used for spray aerosols e.g. room deodorants, anaesthetics, disinfectants, etc.; foam valves used for foam producing aerosols e.g. shaving creams, vaginal contraceptive foam aerosols, etc., stream valves used for solid stream aerosols, e.g. tooth pastes, ointments, creams, etc.

Metered valves are used for potent drugs where a measured quantity of drug is required to be administered during each single operation of