Alcohol and Alcoholism

Role of Nursing Management

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Introduction

ALCOHOL is a major health problem; alcohol has been used for centuries to relieve discomfort, anxiety and tension. It is a modern health problem everywhere, in every society, and in developed and developing countries. A large number of alcoholics are found in U.S.A., U.K., Ireland and India. Alcohol has divided alcoholism into different patterns of drinking: Alpha, Beta, Gamma, Delta, and Epsilon Alcoholism. One type is called Gamma Alcoholism, which is thought to be common in the United States.

It is very difficult to draw lines of demarcation between drinking as a social habit, as a cultural habit and as a medical and psychological problem. A person is dependent on alcohol when it becomes very difficult or even impossible for him/her to stop taking alcohol without help, after having taken it regularly for many years; the dependence may be physical or psychological or both. Alcohol, being a depressant, gives only an apparent sense of subjective stimulation by depressing the higher centres. Alcohol "Inhibits the Inhibitors".

As the alcohol content of blood increases, the depressant action starts affecting the higher centres leading to lack of motor-co-ordination, inarticulate speech, poverty of thought, lack of reasoning and poor judgement leading to mental confusion. Social drinking, or an occasional bout of overdrinking to relieve the tensions of life, are not deleterious but when drinking becomes excessive and persistent it is a sign of a personality disturbance. Such a person manifests constant preoccupation with alcohol, loses the power of controlled drinking, leading him/her to drink surreptitiously which produces a sense of guilt and anti-social personality traits.

Alcoholism is generally found in acute drinkers (dependent) between 45 to 50 or above who are complicated drinkers (morning and evening). Along with heart disease, respiratory disease, liver disease, cancer, etc. alcoholism is the third largest health care problem in India today. Alcoholism is a condition that can be controlled but not cured.

Table 1
Differences Between Intoxication and Major withdrawal in Alcoholic Patients

Factor	Intoxication	Major Withdrawal
Frequency	Common	Less common
Onset	Immediately after drinking.	24 to 70 hours after cessation of drinking.
Duration	Hours	days.
Sign and symptoms	Slurred speech, Staggering gait, stupor	Tremor, hallucination, delirium and seizures.
Blood level of alcohol	Elevated	Not elevated
Response to alcohol	Aggravates the symptoms	Decreases the symptoms
Mortality	Rare	10 percent with severe delirium tremens

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Table 2
Alcohol Content of Some Beverages

Alcohol	Percent	Calories Per Oz by Volume
Beer	5 - 6%	11
Spirit		
Gin, Brandy, Rum, Whisky	33 - 44%	66 - 90
Wine		
Champagne, Burgundy, Claret	10 - 13%	20 - 30
Fortified Wines		
Sherry, part	17 - 23%	34 - 48
Arrack (Country liquor)	40 - 45%	66 - 90
Toddy	2 - 3%	10

Investigation

* Blood for Haemoglobin (Hb) - 1ml
* Blood for Random Blood Sugar (RBS) - 2 ml
* Blood for Erythrocyte Sedimentation Rate (ESR) - 2ml
* Blood for Routine examination - 4ml
* Blood for Liver function test (L F T) - 6ml to 8ml.
* Blood for Serum glutomate Oxalacetate transaminase (S.G.O.T) - 6 ml.
* Blood for Serum glutomate pyruvate Transquminase (S.G.P.T) - 6 ml.
* Blood for Serological tests for syphilis (STS) - 4ml to 8ml.
* Blood for Human immunodeficiency virus (HIV) - 6 ml.
* Blood for Gamma - Glutomyl transpeptidose and corpuscular volume.
* Oral glucose tolerance test (OGTT)
* Liver Biopsy
* Sometime special investigation like cerebro-spinal fluid (C.S.F.).
* Routine urine examination.
* X-Ray chest.
* X-Ray skull.
* Electro-Cardiogram (ECG)
* Electro-Encephalogram (EEG)
* Computerized Axial Tomography

Table 3
Blood Level of Alcohol (BLA)

No. of Drinks	and Mg/dl	Approximate effects
1-2	50	The level produced by 60 ml of whisky in two hours. Euphoria and minor motor disturbance
3	60	Nystigmus, impairment of judgement, more error on simple tests.
4	80	(90 ml whisky) Impaired driving ability, first electro-encephalographic changes.
5	100-150	Gross motor in coordination.
7	200-250	Staggering and double vision, Amnesia of the experience. If this level is rapidly reached nausea and vomiting can occur.
15	250-300	Depressed conscious level, loss of consciousness, but still the drinker can be aroused; and then coma.
22 - 25	350 450	Breathing stops, fatal; this can result in death.

CAT: In chronic alcoholics C.T. Scanning should be done, as this is a very important investigation in a patient with a Neurological deficit. Decrease in brain tissue has been demonstrated through the C.T. Scan.

Treatment and Nursing Management

Treatment of alcohol problems results in a number of difficulties - none innately involved with alcoholism, usually the result of the attitudes of the caretakers. Acute intoxication is an excellent illustration. No one can deny that acute intoxication is a physiological disturbance in a response to too much of alcohol. In no other part of medicine is the patient denied treatment for his illness, except for alcoholic intoxication. Many a good treatment centre and therapeutic team have turned the acutely intoxicated patients away without examination or help. These institutions would agree that intoxication from any cause is an illness, but their operational response is discriminatory and destructive.

1. The management of alcohol dependence is essentially a matter for experts and often requires specific Nursing care, management and treatment for

the severely intoxicated patient: (a) Provide respiratory support if necessary. (b) Examine the patient for any injuries and organic disease which can be masked by alcoholic intoxication. The important point in treatment is to prevent the patient from himself. He should, therefore, be laid upon the ground or prevented from falling out of bed, and objects which he/she might knock over should be removed. The clothing should be loosened. (c) Place patient in semi-prone position with mouth down to avoid aspiration of US, vomit and pharyngeal secretions. (d) To start intravenous drip, 5 per cent Dextrose/Dextrose normal saline/normal Sodium Chloride solution, about 3-6 litres, per day, with two ampoules, 20 ml of multi-vitamins and electrolytes are effective intravenously, to maintain body fluid and correction of electrolyte balance and correction of dehydration. (e) To treat symptoms and complications that may be present such as Tuberculosis, Atypical Pneumonia, Sub-arachnoid Haemorrhage; Pancreatitis, liver disease, etc. Specific treatment measures must be introduced and specific Nursing care should be taken. For example, pulmonary infections are more common in alcoholic individuals due to an impaired defence system and tendency toward gastric aspiration. Look for any symptoms of head injuries specific; Nursing care should be given to the injured patient. A careful observation should be made and if any bleeding is found dressing should be done to the injured parts to prevent further bleeding.

2. Investigation and Radiological examination should be done. For example, one should take blood alcohol tests as directed and other investigation.

3. If the patient is drowsy allow him or her to "sleep off". The state of alcoholic intoxication usually resolves within several hours. (a) Keep the patient under observation, Record temperature, pulse, respiration and blood pressure frequently (half hourly). (b) Undress the patient and cover him or her with a warm blanket. The patient should be kept warm. (c) Carefully observe for symptoms of respiratory depression, protect the airway; a piece of wood, a cork, handkerchief or the handle of a spoon wrapped in lint should, when possible, be placed between the teeth in order to prevent tongue bite. When this is being done. Care must be taken that teeth are not dislodged and swallowed or aspirated into the air passage.

4. Assess respiratory, hepatic and cardiovascular status of patient: guard against Pneumonia, liver disease, cardiac failure and other complications. (a) Hypoglycemia may accompany alcoholic withdrawal, because alcohol depletes liver glucogen stores and impairs gluconeogenesis. Also, alcoholic patients suffer from malnutrition (b) Administer intravenous or oral Dextrose if liver glucogen is depleted, or other Carbohydrates to stabilize blood sugar and to counteract tremulousness.

5. Give supplemental Vitamin Therapy and a high protein diet as these patients are usually Vitamin deficient.

6. Sedate the patient with a sufficient dosage of medication to produce adequate sedation. To reduce agitation, prevent exhaustion and promote sleep. (a) A variety of drugs and combinations of drugs are used: Chloralhydrate Diazepam (Valium) Hydroxyzine (Vistaril). (b) The dosage is adjusted according to the patient's symptoms (agitation, anxiety) and blood pressure response. (c) Administer phenytoin (Dilantin) or other anti-convulsant drugs as prescribed by the doctor to prevent or control alcoholic epileptic convulsions.

7. Approach the patient in a non-judgemental manner, without condemnation or reproach. (a) Expect him to use mechanism of denial and defensiveness. Adopt to firm, consistent, accepting and reasonable attitude. The Nurse must speak in a calm and quiet manner. If the client appears drunk, he or she is probably drunk even though he or she denies alcohol intake.

8. Determine from the family or another reliable source whether the patient has had any past mental illness, hospitalizations, injuries or any other serious illness, has used alcohol or drugs or has experienced any intra-psychic conflicts.

9. If the toxic state in acute alcoholic intoxication is not too profound, the patient may be treated with following drugs.

* *Chlorodiazepoxide (Librium)* 10 to 25 mg four times a day for one to six days.

* *Chloropramazine (Thorazine)* or other Phenothiazines may be used in doses of 10 to 25 mg daily for one to four days.

* Injection Diazepam 10 mg or Chloralthydrate in doses of one to two grains at bed time or barbiturates for sleep.

* Injection Berin 100 mg daily for seven days.

* Tablet Berin 100 mg twice a day for 15 days.

* Injection B-Complex for one week.

* Tablet or capsule B-Complex forte twice a day for 15 days or injection Neurobin 2 cc daily for five days or tablet Polybeon two to four times a day for two weeks.

* Tablet Liv-52 one twice a day for one month.

* Injection Decadron 4 to 8 mg intramuscular.

If any complications are present, such as Tuberculosis, Atypical Pneumonia, Subarachnoid Haemorrhage, Pancreatitis, liver disease, specific Nursing measures and treatment measures must be introduced and specific medical Nursing care should be given.

Physiological Treatment

Two physiological forms of treatment are worthy of mention: aversion - therepy and Disulfiram (Antabuse) therapy.

Aversion Therapy: Apomorphin is the most commonly used agent for aversion treatment of alcoholism. It is a powerful emetic and each injection induces nausea and vomiting. This method involves punishing a well established behaviour and inducing a motivational conflict between desire for alcohol and a fear of extremely unpleasant consequences. Hence, the drinker is allowed to drink his favourite drink and the injection is then given. Sometime the aversion is gradually diminished and a booster course may be necessary at intervals of six months or a year, depending on the patient. This form of treatment is only applicable to a subject of alcoholism.

Disulbiram (Antabuse Treatment)

Antabuse competitively inhibits the enzyme aldehyde dehydrogenase so that even a single drink usually causes a toxic reaction due to acetaldehyde accumulation in the blood. Administration of the drug should not begin until twenty hours have elapsed since the patient's last drink. The patient must be in good health, highly motivated, and co-operative. Antabuse interferes with the metabolism of alcohol causing an increase in the level of blood acetaldehyde. This causes an unpleasant reaction which makes it difficult to continue drinking. The patient on Antabuse, on taking a small quantity of alcohol, has distressing symptoms including feeling of heat in the face and chest, sweating, dyspnoea, headache, tachyardia, drowsiness, falling blood pressure, nausea and vomiting. There may be dizziness, blurred vision, palpitation, air hunger and coldness of the extremities and severe hypo-tension. The patient develops circulatory collapse. Antabuse is given 800 mg the first day, 600 mg the second day, 400 mg the third day, and 200 mg the fourth and fifth days. The drug is taken each morning or at another suitable time daily under Nursing supervision. A test of the reaction to alcohol is carried out on the six or seventh day in order to demonstrate to the patient what will happen to him if he attempts to drink. The test dose of alcohol is the equivalent of alcohol level as given in the form of Whisky, Rum, Wine, Arrack, Beer or other drinks to which the patient is addicted. The patient may also have a response to alcohol ingested in such substances as vinegars or even to inhaled alcohol vapours from after-shave lotions. The symptoms or syndrome once elicited typically last some 30 to 60 minutes, but can persist longer. After this a maintenance dosage, usually 100 mg to 200 mg daily, is given under careful supervision. The patient who is taking disulfiram daily can not drink alcohol without a severe physiological reaction, not only for that day but for 3 to 7 days following injection of the last dose of Disulfiram daily, so that the "Insurance Policy" against impulsive drinking is kept fully in effect for the period.

Mode of Action

The drug interferes with the oxidation of acealdehyde formed during the metabolism of alcohol. This raises the blood level of acetaldehyde which acts directly on the cardio-vascular system. In addition, Disulfiram also inhibits Dopamine Beta Oxidose and thus interferes with synthesis of non-adrenaline. The drug is slowly and incompletely absorbed from the gut and is metabolised slowly.

The best results occur when the patient has a positive motivation, that is, when Disulfiram is helping the patient to maintain abstinence and, most importantly, has a regular ongoing positive relationship with the Nurse. The Nurse must give the daily motivation to the patient. In the early days of Disulfiram use, a "Challenge" dose of alcohol was given to the patient after the patient had been taking Disulfiram for several days. The concept was to have the patient experience a severe reaction when alcohol was taken. Also, alcohol would be associated with exceeding unpleasant sensation. For this "Challenge" dose technique, on the previous day the Nurse must explain the technique of "Challenge Test" and also encourage the patient and his or her family members. The patient should be kept empty stomach (starvation) for four to six hours. The Nurse must prepare the patient. Before starting the "Challenge Test" all emergency drugs must be kept ready, such as An Emergency Trolley containing following life-saving drugs: Injection Dopamine, Injection Mephantine, Injection Coramine, Injection Adrenaline, Injection Hydrocortisone Sodium, Injection Dexamethasone, Injection Perinorm and Avil, Injection Vitamin-C, two ampoules of intravenous 25 per cent Dextorse, one or two bottles of 5 per cent Dextrose, one bottle of normal saline, etc., and other things like ounce glass or measurement glass, disposable syringes and needles, saline swab, drip set, scalp vein set, plaster roll, stethescope, sphygmomanoameter, Oxygen cylinder, drip stand, kidney tray and other life saving medications.

Table 4
Nurse's Observation Charts

Name: *XY* 1.P.No.: *4256* Ward No.: *2* Bed No.: *5*
Age: *29* Sex: *M* Occupation: *A* Income: *1,000*
Religion: *Hindu*.

Date	Time	Quantity of Use	Treatment	Nurse's Remarks
4.5.93	Starting 9 A.M.	15CC (Whisky)	500ml 5% Dextrose - started by IV left arm	BP: 130/90 mmhg T: Normal P: 86/min R: 24/min
4.5.93	Over or Ending 11.30 AM			No Complaints

Staff Signature .....

B.P: Blood Pressure T: Temperature
P: Pulse R: Respiration

Psychological Treatment

Psychotherapy is useful when it focuses on the reasons for the alcoholic's desire to be intoxicated such as higher tolerance for frustration, reduction of anxiety, and so on. The drinking itself can be in the past, present/or and future. Consequences must be given firm emphasis. Involving an interested family member, friend or spouse who can join the therapy is beneficial to the psychotherapeutic process.

1. Behaviour Therapy (BT): Behaviour Therapy teaches the alcoholic other ways to reduce anxiety; relaxation training, assertiveness training, self-control skill and new strategies to master the environment are emphasized. A number of operant condition programmes have been described which condition alcoholics to modify their drinking behaviour or stop. The reinforcers have included monetary rewards, an opportunity to live in an enriched patient environment, and access to pleasurable social interaction.

2. Individual Therapy: Alcholics generally do not respond favourably to intensive psychotherapy on a one-to-one basis. Their anxiety is often increased by the threat of closeness to the therapist. They tend to find talking about their difficulties, which involves self-examination and introspection intolerably painful. Another difficulty is that many therapists are reluctant to treat them due to excessive demands placed on the therapist, the patients' devious-

ness and their tendency toward acting-out behaviour. Such therapy characteristically focuses on intro-psychic cenflicts and inhibitions on the meaning of emotions, attitudes, and behaviour and on the influence of the past and the present.

3. Group Therapy: The group therapy involves the application of psycho-therapeutic technique and the simultaneous treatment of a group of the alcoholic patients. Almost every system of psychotherapy has been applied to groups and the latter have shown a corresponding diversity in size and degree of heterogeneity, group approaches have been applied widely in hospitals and out-patient clinics, and in the treatment for problem drinkers. Regular meetings and many therapeutic group sessions, consisting of eight to ten alcohol addicted patients, are scheduled for about 90 minutes, with one or more members of staff. The aim is to enable patients to observe their own problems : (1) the desire to bring psychotherapy to a larger number of patients than could be reached on an individual basis, (2) an assumption that greater benefit would be attainable through group interaction than from individual therapies, and (3) an increasing recognition of the socio-dynamic nature of human maladjustment. Many alcoholics seem to be able to communicate with each other. They have their own special language and in groups they interact with and influence each other strongly.

4. Family Therapy: As it becomes more and more apparent that alcoholism is not an illness which involves only one individual, family therapy is increasingly being used as a form of psycho-therapy for the alcoholic. The same patterns of interaction are repeated in the family which he/she established in the adult life. The interaction of the alcoholic and his spouse are of particular importance. Therefore, many therapists include therapy of the spouse as an essential part of the treatment of the patient.

Rehabilitation

"Rehabilitation is the process of assisting the individual to realise his particular goals, physically, mentally, socially and economically". The Rehabilitation Nurse is responsible for developing a patient care plan directed towards defined patient goals and for co-ordinating the actions of other team members towards these goals. The goals include the restoration and maintenance of optimal physical and psychosocial health. The Nurse is in an excellent position to involve the spouse and family member in the process of rehabilitation. The alcoholic behaviour patterns have a direct impact on spouse and family. Conversely, the spouse and family are likely either to exacerbate and play into the perpetuation of the alcoholic behaviour or to contribute significantly to change, for effective rehabilitation. Therefore, effective management of the alcoholic and effective involvement in treatment are likely to be directly related to the degree of effective family involvement.

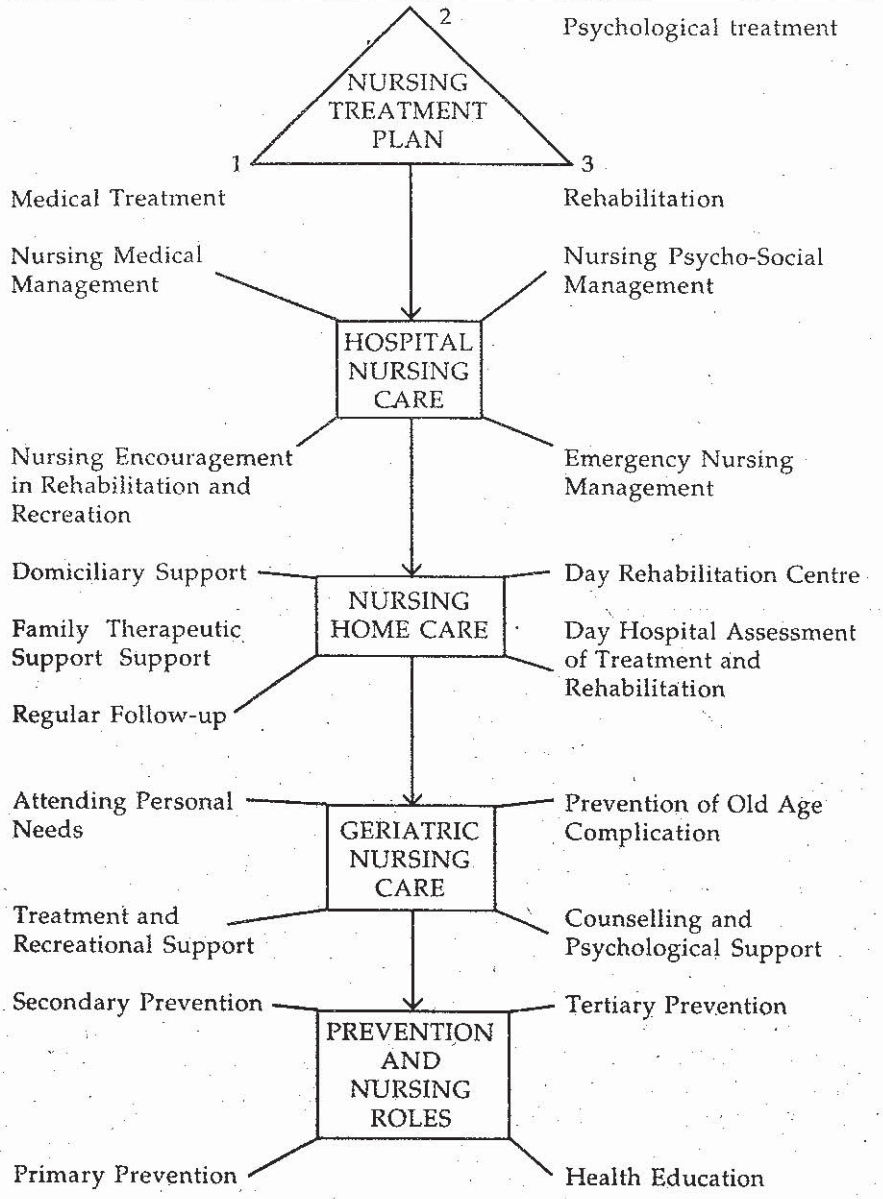
In most of the Nursing care and management the goal is complete abstinence from alcohol and drugs, in any form and under any condition, for the rest of the patient's life. This is coupled with the goal of a change in life style, which will help in arresting the disease and complication.

Nurse's Therapeutic Roles

One of the most challenging aspects of the work of the Nurse is the opportunity to fill a variety of therapeutic roles while participating in patient care. The Nurse finds that she has the role of teacher, role of mother, role of counsellor when the patient needs someone to listen with understanding and sympathy while they talk about problems which are troubling them. The Nurse probably never functions in any single role at any given time. The traditional role of the Nurse includes those technical aspects which are involved in administering medications, carrying out medical treatments, helping with Aversion Therapy, Antabuse Treatment, and Rehabilitation, and observing and recording patient behaviour, sleep patterns, interpersonal relationships, socialization activities and descriptions of personal habits.

Treatment is often far from satisfactory. The patient requires to be initially "Dried Out" and each expert has his own particular method of doing this. Some advise a rapid progress leading to severe abstinence symptom, while others believe that "Drying-Out" process must be taken slowly with the patient's co-operation. The "Drying-Out" is best undertaken in a special unit.

Fig: 1
Goal of Nursing Management



Once the patient is "Dried-Out" the Nurse must advise the patient directly and through responsible relatives against any further intake of alcohol. Even a single social drink can lead to a full-blown relapse into alcoholism.

Firstly, the patient is examined for medical and biological problems; secondly, after noting social history, psychological tests may be given after which he/she could be placed in the therapy group with other alcoholics, and gradually put to individual interviews with a psycho-therapist or counsellor. The patient may be given Antabuse or Temposit (Citrated Calcium Carbimide). The Nurse must explain about the action and side-effect of drugs.

It is preferable to institute alcohol withdrawal in a hospital or other specialised facility, and to use adequate doses of tranquilizers, decreasing the dose as quickly as possible. Minor tranquilizers must be used with caution. Dosage should be decreased to zero by the time the patient is ready to leave the hospital. Anti-convulsive medication, if required, should be used during withdrawal, but the patient should not be heavily medicated. Convulsions occur only during an acute withdrawal phase, after which anti-convulsion medication should be discontinued.

Benzodiazepines have become the mainstay of therapy, chlorodiazepoxide is recommended in most situations in initial 50 mgm to 100 mgm oral doses which may need repetition. Diazepam is a useful alternative. Isolated seizures will respond to 5 to 10 mgm doses of intra-venous diazepam. Phenothiazines are not recommened. Since they may not control severe delirium tremens, and they lower the seizure threshold. The treatment and care of the alcohol dependent individual begins with an understanding of his or her personality and the problem from which he/she has a need to obtain relief. The treatment and care of the alcohol dependent individual is to aid him in meeting life's responsibilities without using alcohol as an escape. This generally means a long period of re-education.

Unfortunately many Nurses

and other co-workers approach the treatment of the alcoholic and addicted individual with the same rejection that is meted out to such individuals by the society in general. The Nurse can maintain regular contact with a patient who is not yet willing to accept treatment over time. The Nurse may be able to guide the patient relationship into a rehabilitation programme.

Selected cases improve with what is known as "Conditioned Reflex Treatment", in which with the help of emetics and nauseating drugs, the patient is conditioned to abstain from drinking. It requires expert handling and strict medical and Nursing supervision. Antabuse Therapy can be instituted. Antabuse is a drug which produces acute discomfort in the patient if alcohol is ingested within 12 hours of its administration. It is a very toxic drug and should be handled with care.

Treatment of the personality disorders resulting from tension, maladjustments, is by prolonged psychotherapy. This is long, tedious and often disagreeable both to the patient and the therapist, because usually the patient finds that it is easier to give away to alcoholism than to live through a tension, anxiety provoking, stressful life and disciplined occupational and recreational facilities.

The Rehabilitation Nurse is responsible for developing a patient care plan directed towards defined patient goals and for coordinating the actions of other team members towards these goals. A goal includes the restoration and maintenance of optical physical and psycho-social health. The Nurse is in an excellent position to involve the spouse and other family members in the process of rehabilitation. The alcoholic behaviour patterns have a direct impact on the spouse and, conversely, the spouse and family are likely either to exacerabate and play into the perpetuation of the alcoholic behaviour or to contribute significantly to change, for effective rehabilitation. Therefore, effective management of the alcoholic and effective involvement in treatment are likely to be directly related to the degree of effective family involvement.

Health Education

Health education is very important for an alcoholic patient. Health education is an essential tool of alcoholic consumer. Health education is rather an abstract term meaning different things to different types of people. Health education will be promoting health as well as reducing medical, general and social complication and also decreasing the onset (incidence), duration (prevalence) and residual disability of alcoholic personality disorders. In other words, health education is concerned with establishing or inducing changes in personal and group attitudes and behaviour. Health education is to be given in a community like urban, rural, slum area, school and college, village heads group, bar and restaurant, boys and ladies' hostel, social and cultural group, etc. Health problems, economic problems, family problems and social problems are considered by some as synonymous with propaganda. Many equate these with transmission of information about health and disease from the expert professionals to the patients.

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NOTICE

Hepatitis B Vaccine

The State Director of Medical Education, Kerala, has informed that the cost of Hepatitis B Vaccine is reimbursible to all Nurses in the State Vide GO(P)40/93/H&FWD dated 25.3.1993. A communication to this effect has been received by TNAI from Ms. G. Leela, Under Secretary, Health & Family Wealth(C) Department, Thiruvananthapuram (Kerala). The communication states that since the financial commitment for releasing Hepatitis B Vaccine free of cost will be high, the Government of Kerala regret their inability to accept the proposal for free supply of the medicine.

Secretary-General,
TNAI