

Drug Abuse Among Physicians - Specific Concerns in Anaesthesiologists

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Abstract: The drug abuse by physicians in general and anaesthesiologists in particular is a significant societal problem that affects all aspects of medical care. Earlier studies have revealed that 10-14% of physicians become addicted to drugs or alcohol at some point in their careers. Amongst all subspecialties, incidence of chemical dependency is most frequent amongst anaesthesiologists. Of all physicians treated for drug abuse, 13% are anaesthesiologists. Special risk factors for drug abuse amongst anaesthesiologists are complex. Stress is probably an important factor. Chronic fatigue due to long working hours is another factor that leads to consumption of alcohol or drugs to 'relex', when off duty. Access to opioids and occupational exposure to other psychotropic drugs play an important role in the onset of drug abuse. Early diagnosis and treatment of drug abuse can be remarkably effective but must be done by experts in the field. Tighter regulation of controlled drugs and education have been tried to reduce this menace. Most important factor in successful rehabilitation of such anaesthetists is individual's own will. Enthusiastic, supportive and compassionate colleagues will be the vital factor in satisfactory outcome.

Key Words : *Drug abuse, Physicians, Anaesthesiologists.*

Among the physicians, self-administration of drugs is far more common than other potential threats. No occupational hazard in the practice of anaesthesiology has more devastating consequences than the abuse of drugs¹. For example, no serious effects from waste gases have been reported except occasional hepatitis while administering halothane, but the suicide rate in anaesthesiologists is three times higher than an appropriate control group². Drug abuse may play a role in this figure. Otherwise, also four to eight deaths of residents by overdose are reported each year (Arnold WP: Personal observation). The signs and symptoms of drug abuse or chemical dependence or are so subtle that the disease is not detected until it has reached its last stages. It is hard to imagine that a friend in this profession may be addicted to drugs and may feel powerless when it occurs.

The experts in the field of drug abuse have provided the terminology³. 'Addiction' is the compulsive continued use of a drug in spite of adverse consequences. 'Drug dependence' is either physical or psychological dependence on a drug. It is the result of an inability to control drug use. 'Drug abuse' or 'drug abuse' is use of drugs in a detrimental way, but not to the point of addiction. Simply speaking, drug abuser can quit without help; the addict cannot. 'Recovery' is the process of conquering the disease. The individuals who have previously been drug dependent are referred to as 'recovering', rather than as recovered. It has been emphasized that drug dependence is an incurable disease, like other chronic diseases, such as, diabetes and hypertension. It can be controlled but not cured.

Drug abuse as an illness

It has been proved that addiction is a chronic, relapsing disease resulting from long-term effects of drugs on the brain⁴. By considering an affected colleague to be ill rather than an object of disdain, one may provide better initial guidance that the impaired colleague needs. Genetics also plays the role in addiction. For example, alcoholism is four times more common in the offspring

of alcoholics and is related more to genetic than to environmental influences⁵. Most of the addicted persons are male. All the drugs of abuse work through a single pathway in the brain. The mesolimbic reward system is not only activated by drugs of abuse, but is also altered beyond repair following chronic exposure to these drugs. The molecular, structural, cellular and functional changes are responsible for relapses that follow periods of abstinence. At the outset, drug abuse is a voluntary event. However, once these neural changes develop, it becomes an addiction that is characterised by compulsive, irrational, drug-seeking behaviour.

Concerns in Anaesthesiologists

The exact incidence of drug abuse and drug dependence in physicians is unknown⁶. However, a survey estimates a 2.1 percent annual and a 7.9 percent life-time prevalence among physicians while it is 16 percent in general population⁷. In medical field, it is more common in anaesthesiologists⁸. Through questionnaires and treatment centres, it has been observed that prevalence in anaesthesiologists ranges from 1-2 percent^{9,10}. However, how many drug abusers become actually addict, is not known. Treatment programmes also provide the data. Twelve to 14 percent of physicians treated were anaesthesiologists, although only 4 percent of USA physicians are anaesthesiologists¹¹. Out of 1225 physicians treated in one centre, 146 were anaesthesiologists. Nearly 50% of them were younger than 35 years of age and one-third were residents. Fifty percent of anaesthesiologists used both drug and alcohol, 40 percent used drugs alone and 10 percent used only alcohol. Younger anaesthesiologists more frequently prefer narcotics. Fentanyl was the most commonly abused narcotic followed by sufentanil, meperidine, morphine and oral agents. Some use of benzodiazepines, cocaine and marijuana was also reported. Some believe that this apparently high incidence is indicative of the diligence of anaesthesiologists in recognising the disease in colleagues.

Causative Factors

Drug dependence is a complex disease with multiple factors

modifying the genetic predisposition. There are various factors prevalent among the anaesthesiologists, as listed below :

Availability of drugs : Among physicians, anaesthesiologists are unique, as they administer drugs directly rather than order their administration by others. Therefore, drugs are immediately available. This is the most important cause of addiction in the speciality. Some recovering anaesthesiologists said "we work in the candy store". In one report, 85 percent anaesthesia residents treated in a programme stated that having drugs within reach influenced their career choice¹¹. Some hospitals have developed strict control measures to combat drug pilferage. However, an addict, who is desperate for drugs, can make all such measures inadequate.

Exposure to Stress: In the practice of medicine, exposure to stress is a universal feature. Most physicians manage these stresses through acceptable outlets, such as exercise programmes, social interactions and occasional drinking in moderation. A few do not have these abilities and withdraw from others. About one-half of residents need counselling¹². Residency is particularly difficult for some. The working environment is highly competitive. True relaxation is not available and some patients may evoke negative emotions. Some non-professional pressures, such as, marriage, bringing up of children, separation from parents and financial matters also play a role. A sense of professional inadequacy is quite universal¹³. Death of a patient after a resident has provided high-quality care may result in such feelings. Residency may lead to social isolation i.e. withdrawal from friends and family. It causes further stress because physician senses social failure. There is self-imposed isolation that may extend well beyond the resident years. All these elements lead to drug abuse and excessive use of alcohol, which are unhealthy escapes.

Potency of drug : Drug abuse is much more prevalent than addiction. Some physicians abuse drugs for 'recreation' to get high; others 'self-medicate' to treat stress. Causal abuse of alcohol does not always lead to addiction. Though very risky, abuse of morphine, meperidine or codeine also may not lead to addiction¹⁴. In contrast, addictive potential of fentanyl and other potent opioids is great any carry enormous risk of becoming drug dependent: A single experience with sufentanil is so overwhelming that it is impossible to stop using the drug. Once abuse begins, one needs very high dose to prevent withdrawal symptoms, mainly due to rapidly developing tolerance. The use of 50-100 ml of fentanyl or 10-20 ml of sufentanil per day is common in addicted individuals. This happens within a few months for fentanyl and a few weeks in case of sufentanil.

Miscellaneous factors : Just an experimntal use of drugs increases the risk of future addiction¹⁴. Progression from drug abuse to addiction has genetic basis, too. Denial that drug abuse can lead to addiction, lack of self-respect and assumption that knowledge of drug actions will prevent addiction, are other causative factors.

Signs and Symptoms

Till the disease reaches its late stage and performance is impaired at work place it is difficult to identify the drug abuser. In earlier stage of disease, usual sequence of events may help in identification (Table 1)¹⁵. First sign, usually is withdrawal from outside interests. Examples are giving up athletics, social activities and get-togethers. Next feature is increased turmoil at home. Domestic arguments, lack of interest in family matters and sexual problems are common. Next are unexplained illnesses, personality changes and multiple jobs. All this happens in addiction, which are slow to develop.

With rapid onset addictions, such as to fentanyl and sufentanil, above features are uncommon.

The last activity to be affected is performance at work place (Table 2). Page operators and nurses may be the first to recognise behavioural changes. Record keeping becomes sloppy. Excessive use of certain drugs becomes obvious and difficult to explain the need of these drugs in patient management. Direct observation of self-administration by colleagues confirms the diagnosis but it is not common¹⁶. Keystone of disease is denial. The affected physicians put forward not so logic reasons to explain their bizarre behaviour. Colleagues, too accept these explanations rather than considering the affected colleague to be a drug addict. For these reasons, diagnosis is not made until the manifestations are very obvious.

Intervention

The first step is to seek help from someone experienced in managing drug abusing physicians¹⁷. In United States; all state medical societies have 'committees on impaired physicians'. They give advice to the sick physician and act as buffer between him and the medical board or licensing agency. They also help in conforming the diagnosis and then refer to appropriate centres. Intervention is the process of apprising a drug dependent person that he or she is ill and needs treatment¹⁸. Intervention is attempted by at least

Table 1 : Features of drug abuse outside workplace.

1. Wide mood swings
2. Arguments at home
3. Withdrawal from family, friends and social activities.
4. Unexplained illness (more in alcoholism)
5. Extramarital affairs
6. Drugs/Syringes found in home
7. Weight loss
8. Pinpoint pupils (opioid addicts)
9. Withdrawal symptoms (Tremulousness, diaphoresis)

two persons experienced and preferably member of State Committee. The key is to be caring and compassionate in spite of patient's arguments. The addicted physician is a superb con artist. He is able to counter all ploys attempted by a single individual and gives the people a good workout. Information is collected from co-workers, family and friends. Related pharmacy records and anaesthetic records are gathered to document the illness. A recovering physician may be an invaluable role model for intervention. When all is in order, physician is invited into

Table 2 : Features of drug abuse at workplace.

1. Wide mood swings
2. Gossip by others
3. Increase in particular narcotic use
4. Preference for working alone
5. Poor record keeping
6. Frequent bathroom breaks
7. Appears in hospital when on call
8. Excessive postoperative pain in patients managed by individual
9. Pinpoint pupils
10. Weight loss
11. Witnessed self-administration (conforms)
12. Found comatose

a room where other participants are already seated. Each should describe the aberrant behaviour he or she has observed. If necessary, documents at hand can be shown. Basics of disease and its treatment should be explained and patient should be urged to accept the proposed plan. If he refuses, he should be informed that a group of specialists will examine him and if he is found normal, he will be discharged. If he still is reluctant, the intervners should tell him that medical board and 'controlled drug authorities'

would have to be informed. The patient has diverted narcotics, which is a ground for prosecution.

To prevent the self-inflicted injury by the patient, someone should stay with him after the intervention. Most interventions are successful, if adequate preparation is done.

Basic of Treatment

The treatment includes thorough evaluation followed by therapy, which is both inpatient and outpatient. Therapy may even last for several months¹⁹. Majority feel guilty, ashamed and totally alone on admission. Just seeing that other physicians share their disease is therapeutic. Goal of treatment is to provide the recovering physician with the ability to remain sober. He is encouraged to develop a strong relationship with peer support groups, such as 'Alcoholics Anonymous' and 'Narcotics Anonymous'. In the last stage, the physician may become involved in evaluating new patients that allows personal reflection on his own course, referred as 'mirror imaging'.

Return from Treatment

For a recovering physician, return from treatment is a difficult process. At treatment centre, environment is different from work place. After his discharge, he faces colleagues who are less knowledgeable about his disease and are fearful of him and disease. So, he needs understanding and compassionate colleagues for his re-entry to work place. Gradual return to work, with others managing administration of narcotics, is important. Without this support, changes of relapse are high. Committee on impaired physicians plays a vital role in recovering. After discharge from formal treatment, committee keeps in touch with recovering physician through 'aftercare contract' and physician follows the committee's recommendations. Committee may take random urine samples and in case relapse occurs, certain procedures are followed²⁰. Many recovery programmes recommend naltrexone or disulfiram or both for six months after returning. Few new drugs, such as acamprosate, bromocriptine and bupropion are under investigation²¹. Federal law in United States considers successfully treated and capable of working individuals as 'qualified individuals with a disability'. "Americans with Disability Act" (ADA) defines a history of drug dependence as a disability. This act does not force the employer to get the individual treated but requires that 'reasonable accommodation' be made for qualified individual who wants to return to practice. For a recovering physician, a modified work schedule may be made, such as no call for a few months and assistance with administration of narcotics. The employer is entitled to refuse accommodation with legal argument that return of recovered physician may have negative impact on other employees or could result in prohibitive costs for the employer.

Outcome

Most recovering physicians are able to return to a productive professional life, as reported by various treatment programmes²². Successful outcome depends on lifelong participation in aftercare programmes and a total abstinence from drugs and alcohol. Prognosis for long-term sobriety in anaesthesiologists depends on age and status of the physician at the time of identification. Residents who have been dependent on fentanyl have a significant rate of relapse¹⁰. In case of junior residents, who become addicted to potent opioids, change of speciality should be strongly considered. The American Board of Anaesthesiology requires a physician recovering from alcoholism or other drug dependence to take both written and oral examination, even if he is otherwise qualified. On the result of such examination the board decides whether to award certification or defer it so that he does not pose

a threat to the health and safety of others²³. Length of time the candidate's certification is deferred depends on the individual history of alcoholism or other drug dependence. Addiction is a lifelong disease. Its immediate effects may be overcome, but its sequelae leave an indelible mark on each victim. The disease makes the recovering physician guilty in the eyes of others, forcing them to prove their innocence whenever they are challenged. As there is no way to ensure that drug abuse will not lead to addiction, the only method to prevent is to absolutely avoid the abuse of drugs.

In conclusion, it has been shown that the lives and work of a significant number of physicians in general and anaesthetists in particular have suffered from the effects of misusing drugs and alcohol. The impact of intervention and treatment in cases of drug abuse as well as early recognition may improve the outcome. There is a need for training and education for all doctors for their personal and professional development²⁴.

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