

The Management of the Pregnant Drug Addict

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The number of drug abusers in this country has increased over the past 20 years, and the pattern of drug taking has also changed. More people now take drugs on a recreational basis, and a smaller proportion of addicts show the full-blown picture of physical and mental deterioration associated with addiction in the past. Where such deterioration is present, pregnancy rarely occurs because of suppression of menstruation and ovulation and reduction of male fertility. Perhaps because of this change, the number of pregnant drug addicts has also increased.¹ They now create a significant problem in the obstetric departments of hospitals in major population centres where addicts tend to congregate.

Over the past few years, an average of 12 pregnant addicts per year have been treated at University College Hospital, but 29 were seen in 1986, and already 12 have presented for treatment in the first three months of 1987. The type of drug commonly taken has also changed over the years. The predominance of barbiturates, amphetamines and psychedelic drugs in the 1960s has been replaced by heroin and cocaine, together with increasing use of benzodiazepines and analgesics. It is important to note that addiction of any serious degree nearly always implies the abuse of multiple drugs. These women commonly smoke, may also abuse alcohol, and are often in a poor nutritional state.

Drug-using mothers also have multiple social problems, for example homelessness, poor housing conditions, poverty, and lack of emotional support from family or friends. Some have had previous psychiatric problems, exhibit disordered personality traits, and many have been involved in criminal activity to support that habit. Many do not seek ante-natal care at all; most book late, and are poor attenders at the ante-natal clinic.¹

The effects of specific drugs on the foetus

Foetal tissues metabolise drugs poorly, so that drugs which pass the placental barrier may be concentrated in the amniotic fluid and recirculated through the foetal mouth and lungs. The teratogenic effect of drugs appears to target on the organ system that is at its peak of development at the time, so that the stage of pregnancy at which the drug is taken can also affect the damage to the foetus.

Barbiturates. Studies on epileptic mothers have shown a small increase in foetal abnormalities possibly related to folate deficiency. Withdrawal effects may occur in the infants.

Benzodiazepines. There is some evidence to suggest an increase of oral cleft defects. If the mother is taking these drugs at the time of delivery the baby may be hypotonic,

hypothermic and have respiratory difficulties. There is also a theoretical risk of increased neonatal jaundice due to enzyme induction.

Cocaine. There has been one report of capillary angioma in two of eight children born to cocaine addicts. In addition, the babies are likely to be small for dates due to the appetite suppressant effect of the drug.

Morphine and heroin. There are no reports of an increase in foetal abnormality, but the babies are generally small for dates and premature delivery and abruption of the placenta with consequent stillbirth or neonatal death is common. The perinatal death rate is increased by a factor of 3.^{2,3} Withdrawal symptoms occur in the neonate if the mother is a multi-drug user or taking more than 15 mgms methadone daily. These include an increase in muscle tone, irritability, fever, poor feeding behaviour and diarrhoea which may lead to dehydration. Severe withdrawal symptoms may include convulsions, and admission to a special care baby unit is needed.

Cannabis. CNS and limb abnormalities have been reported in experimental animals, but because cannabis is usually taken with other drugs, no such connection can be shown in humans.

LSD. There are individual case reports of unusual limb deformities, and in two of these LSD was the only drug taken.

Amphetamines. Babies are generally small for dates because of the appetite suppressant effect of the drug, and increased rates of biliary atresia and cardiac abnormalities are reported.

Solvent abuse. Many of these substances are teratogenic in animals. Many also contain lead and other heavy metals. Toxic and anoxic effects on the foetus are therefore likely.

Maternal complications of drug abuse

1. Physical complications

These include malnutrition, vitamin deficiencies, anaemia, and chronic bronchitis. Infections are common and may be bacterial, e.g. urinary tract infections, endocarditis, pneumonia, septicaemia, gonorrhoea or syphilis; or viral, e.g. hepatitis, herpes or HIV. Parasitic infestations such as scabies or body lice occur in some patients with poor living conditions. If drugs are injected, thrombophlebitis, skin ulceration and even gangrene can occur.

2. *Social complications*

These patients often finance their habits through criminal activities especially shoplifting, theft, prostitution and dealing in illicit drugs. Their partners are almost invariably users too, as are their circle of friends and acquaintances. Most are rejected by their families of origin. Poor housing conditions are common and may lead to further physical and mental ill-health.

3. *Emotional complications*

Drug users commonly resort to the habit because they enjoy the effect of the drug, and because of peer group pressure, and may continue because of pre-existing emotional disturbances. These may be personality disorders resulting from difficulties in early life, or mood disorders arising later. Chronic drug users are often shy, unconfident people with severe difficulties in making or sustaining relationships, and have little emotional capacity to deal with frustration. They are often untruthful yet plausible, and unreliable in keeping appointments or following instructions. Perhaps because of their mistrust of authority and their fear of being withdrawn from drugs or of having the baby taken into care they often book late or do not seek ante-natal care at all. Those with insight suffer from severe guilt about the effect of their drug use on the pregnancy.

4. *Obstetric complications*

Early miscarriage may occur and may be unrecognised because of amenorrhoea due to drugs. There is a higher incidence of previous termination or miscarriage in these women and this may predispose to further foetal loss due to an incompetent os. Intra-uterine death of the foetus may occur from a too sudden withdrawal from opiates, from intermittent use, such as occurs in 'weekend users', or from using illicit heroin of widely varying purity. In one study, 34 of 40 children born to heroin using mothers weighed less than the 50th percentile.¹ Although premature labour is clearly a factor, those who are delivered at term are also growth retarded. The incidence of placental abruption is increased, and the stillbirth rate is more than three times higher than normal.^{2,3} Multiple births may also be more common.

5. *Paediatric complications*

Babies born to mothers on opiate drugs do not usually need resuscitation, nor develop respiratory distress, but up to 90% show withdrawal symptoms which develop during the first three days after birth. Affected infants are irritable, have muscle twitches and a high-pitched cry. They may sweat or sneeze excessively. Convulsions may occur if the mother was on a high dose. These babies feed poorly and vomiting, diarrhoea and dehydration are common if they are untreated. However, with careful management there is no increase in the death rate in the early neonatal period. Mothers on 15 mgms or less of methadone may breast feed. The infants are treated with gradually decreasing doses of chlorpromazine over the first few weeks of life. Other

medications used for withdrawal symptoms include diazepam,⁴ or chloral hydrate and phenobarbitone.⁵

The problems for the infant do not end in the neonatal period. Many of these mothers are immature, psychiatrically vulnerable and lead a chaotic life style. They may revert to their previous patterns of drug abuse after delivery, and this is more likely if they develop post-natal depression, a condition to which they are not immune, although it may be more difficult to diagnose in these patients. Failure of the baby to thrive, maternal neglect and non-accidental injury are all more common in these cases. There have been three reports of an increase of 'sudden infant death syndrome' in the babies of addicted mothers,^{6,7,8} and a recent survey at University College Hospital⁹ showed that 80% of babies of addicted mothers had been taken into care at some stage, 50% remaining in care.

The management of the pregnant drug addict

Because of the suspicion with which many of these patients regard authority figures, it is easy for them to 'slip through the net' of regular ante-natal care, so adding to the risks for both mother and foetus. The following programme has been devised as a result of discussions between the relevant agencies in an attempt to provide the best possible care and outcome. It is by no means the only possible pattern, but may form a useful basis for discussion with other centres involved with drug-using mothers. Regular meetings continue in order to amend and improve the programme, and to liaise about individual patients.

These patients may be referred to the clinic by their general practitioners, but more commonly come to obstetric notice through the Drug Dependency Unit, Accident and Emergency Department or as a result of self-referral.

The first contact is crucial in establishing a working relationship with the patient. She may be expecting a censorious attitude and be hostile and defensive. It is vital to establish a non-judgemental atmosphere and to reassure her that all those involved are concerned for a healthy outcome for her and her baby.

A full explanation is given of the dangers of continued illicit drug taking, and an attempt is made to involve both the patient and her partner in a withdrawal programme in which methadone is substituted for the street drug. This is generally less harmful, not adulterated with unknown substances and, because it is prescribed, avoids the need for dealing in drugs or other criminal activity to support the habit. Ideally the patient is admitted for a full physical check, HIV testing (with prior counselling), a scan to establish dates, and a urine test for non-prescribed drugs. This may confirm multiple drug use. During her admission, she is offered methadone syrup DTF (1 mg in 1 ml) in a dose of 5 mgms at each medicine round if withdrawal symptoms are present. A single dose of 15 mgms morphine may be needed whilst the methadone is taking full effect, and night sedation with promethazine is also helpful. Over the course of two to three days an estimate can be made of the total daily requirement, and she may be discharged to attend for weekly or fortnightly out-patient prescriptions. The daily

dose is then reduced by 2–3 mgms each week. Counselling is offered to those with a positive HIV test, and termination of pregnancy is considered.

If the pregnancy is to continue, an early planning meeting is held involving midwives, obstetricians, social workers, the obstetric liaison psychiatrist and members of the Drug Dependency Unit staff. This meeting devises an individual plan for the couple, ensuring regular ante-natal checks at the clinic or from community midwives, regular prescriptions and supportive care for the patient and, if possible, a methadone withdrawal programme for her partner. The patients' prescriptions can be renewed by the Drug Dependency Unit which has the advantage of being able to offer regular supportive group therapy. In this case arrangements are made for the patient to have ante-natal care from the community midwives. Alternatively, they may receive their scripts from the obstetric psychiatrist. The latter works in the ante-natal clinic and can ensure that the mother attends for regular ante-natal examinations. In either case a prescription record sheet is included in the mother's ante-natal Co-op card.

At 30 weeks into the pregnancy a further random urine sample is analysed for non-prescribed drugs and the HIV test repeated. The couple also visit the neonatal unit and are introduced to the paediatrician, who explains the procedure for the baby post-delivery.

At 34 weeks, a late planning meeting is held at which housing, finances and future support systems are considered. These plans may involve the general practitioner, community psychiatric nurses, area social workers, probation officers, health visitors, drug dependency unit staff and obstetric psychiatrists, and are primarily concerned with ensuring the safety of the baby and the provision of conditions enabling the mother to care for the child herself.

When the patient is admitted to the labour ward, a urine sample is sent for screening for illicit drugs. Although the result may not be available for some days, it is useful for the paediatricians and for the later case conference to know if drugs other than those prescribed have been taken shortly before delivery.

Following delivery, a statutory case conference may be convened to consider the baby's placement on the 'At Risk' register. However, if the mother has been co-operative throughout the pregnancy, has adequate housing and support, and has shown herself to be adequately bonded to and caring for the baby, this is often replaced by an informal discussion to reinforce the 34 week plan in the light of any further developments. A flow chart showing the procedure for these patients is displayed in the ante-natal clinic so that all members of the team may refer to it and so that no item is forgotten. (Appendix I).

Comments

Although these women are relatively few, they present enormous problems to the obstetrics service. Experience

has shown, however, that it is possible, with a multidisciplinary approach and flexibility in providing appropriate care, to minimise the adverse effects of drug use in the mother and to give her the opportunity to withdraw from her addiction and be able to care for her child. Pregnancy and childbirth may be the first occasion that she has had any real motivation to give up illicit drug taking and the chaotic life-style that usually accompanies it, and it is important to give her every encouragement and practical support to do so.

The relationship which she develops with those caring for her is all-important. Even covert disapproval is readily detected, and authoritarian attitudes will lead to default from regular supervision. If the relationship is a truly caring one so that the patient can develop trust in those involved in her care she is more likely to conform to the treatment programme and the outcome is more likely to be successful.

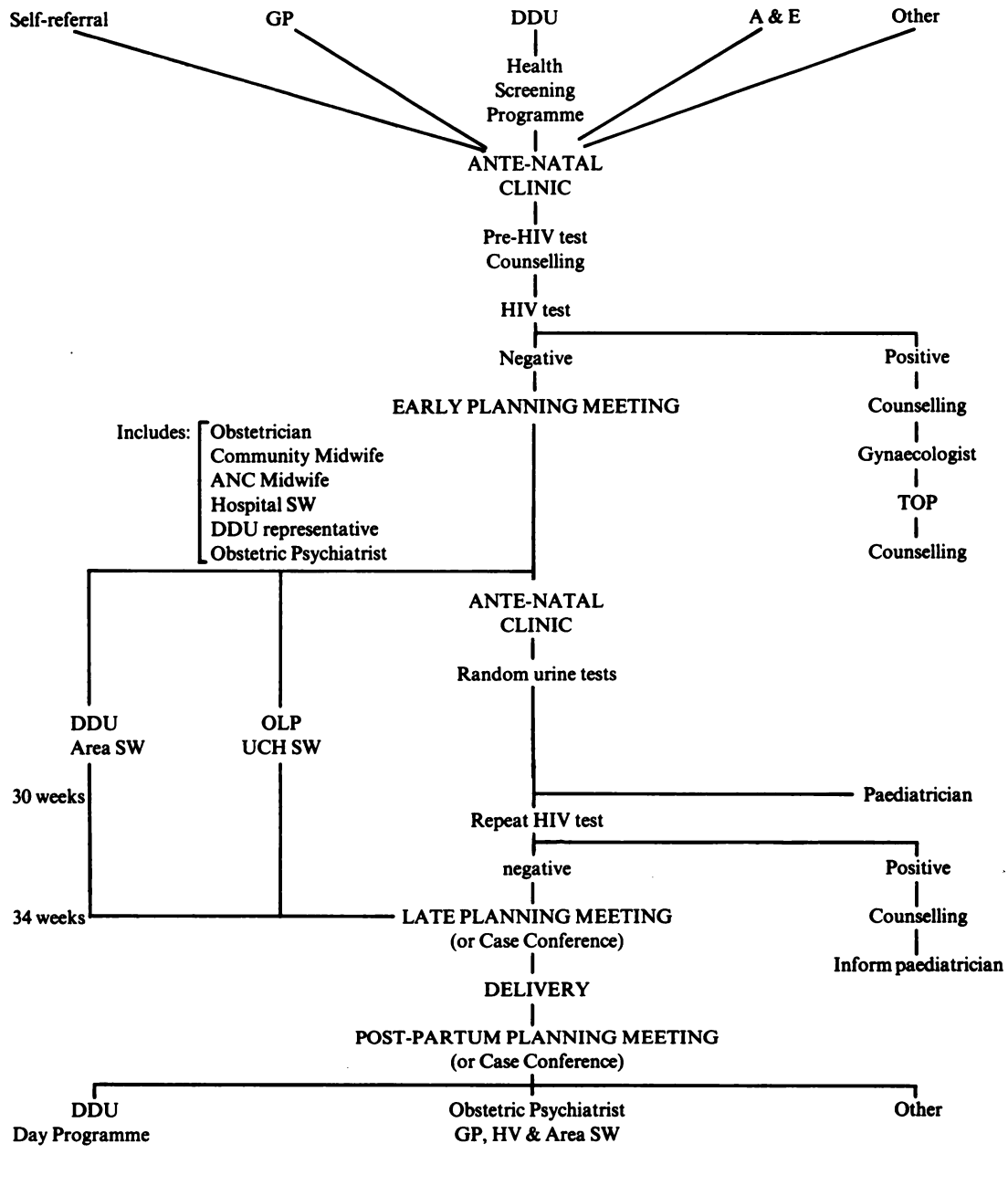
To quote Dr Elizabeth Tylden, who has many years of experience with addicted mothers, "The future of the child must be assumed to be in the hands of the parents, and the aim of treatment must be to enable them to undertake this responsibility."

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NOTE *References have deliberately been kept to a minimum. A full bibliography is available from the author.*

APPENDIX I
Flow Chart



Key					
GP	General Practitioner	HIV	Human immunodeficiency virus	TOP	Termination of pregnancy
DDU	Drug Dependency Unit	ANC	Ante-natal clinic	HV	Health Visitor
A & E	Accident & Emergency Department	SW	Social worker	OLP	Obstetric Liaison Psychiatrist