Part 4

Issues for Special Consideration

Pregnancy and Drug Use

DRUG and alcohol use during pregnancy is known to cause a range of adverse effects. Early detection and intervention with women who are pregnant and using drugs is an effective way of improving pregnancy outcome.

As with all other aspects of health care an empathic, non-judgemental approach will build rapport and foster a therapeutic relationship. This will allow a comprehensive assessment to be undertaken and ongoing care to be initiated.

ASSESSMENT

The goals of the assessment process are to:

- determine the quantity and frequency of alcohol and other drug use from the date of the woman's last menstrual period
- establish whether substance use is continuing
- assess the possible impact of the substance use on the pregnancy
- provide factual information about the effects of alcohol and drug use during pregnancy
- explore a range of choices for action

Determine the quantity and frequency of alcohol and other drug use from the date of the woman's last menstrual period

Obtaining this information requires the same skills as for any other history. Detailed information on how to obtain a drug and alcohol history is available in Chapter 2.

See Chapter 2
General Principles

Establish whether substance use is continuing

For most women confirmation of pregnancy is a powerful incentive to cease all alcohol and other drug use. However for a small percentage of women this is not possible because:

- they may be unaware of the possible risks of continued use
- they may not be able to stop by themselves
- it may be inadvisable for them to stop abruptly e.g. women dependent on heroin or benzodiazepines

An exploration of each woman's readiness to change and her resources to achieve change is necessary when undertaking an assessment.

Using a Motivational Interviewing style as described in Chapter 13 may be helpful.

See Chapter 13
Psychosocial Interventions

Assess the impact of substance use on the pregnancy

Most women are very concerned about the effects of the drug use on their pregnancy and developing foetus. As many pregnancies are unexpected, women are concerned about damage they may have done prior to finding out about the pregnancy. Some feel pressure or are pressured into considering terminations because of their drug or alcohol use.

Provide factual information about the effects of substance use during pregnancy

Factual information about drug effects will assist women in deciding what is the best choice of action for their individual circumstances.

Explore a range of choices for action

A range of choices for pregnant women is desirable, whether they decide to continue with the pregnancy or to continue or modify their drug use. If a decision to continue the pregnancy is made, pregnancy (antenatal) care is a priority.

Adequate pregnancy care, even in the face of continued substance use will improve outcomes for the mother and baby.

The range of substance use treatment choices available will depend upon each individual's resources and the treatment options available. Consultation with and/or referral to specialist drug and alcohol treatment services is recommended.

The goal of intervention is to facilitate cessation or reduction of drug use or transfer to a safer alternative such as methadone maintenance or nicotine replacement therapy.

INFORMATION ON ALCOHOL AND DRUG EFFECTS

The effects of substance use during pregnancy vary and are dependent on multiple factors:

- type and amount of substances used
- route of administration
- timing and duration of use
- concurrent drug use, particularly tobacco
- maternal nutrition and health status
- amount and quality of pregnancy care

Each woman's individual experience needs to be carefully assessed and possible risks explained. The art is to provide balanced information without scaring women unnecessarily and without minimising the possible risks of continued use.

Research on the extent and effects of prenatal exposure to alcohol and other drugs is complex and sometimes contradictory. There are multiple methodological challenges with this research. These include:

- finding appropriate samples of pregnant women
- difficulty in isolating effects of a particular substance
- determining the relationship between the effects and both the amount of substance used and the timing of use during pregnancy

Finally there is the issue of bias which may influence what studies are published (Brady et al., 1994).

Despite the attention given to illicit substances such as heroin and cocaine it is the licit substances, alcohol and tobacco that are the more commonly used by women during pregnancy and whose known adverse consequences are more significant.

Alcohol

Alcohol is the drug most commonly used by women in Australia and it can be toxic to the developing foetus. Research implicates alcohol in a wide range of prenatal (during pregnancy), foetal and infant effects.

Women are advised to think carefully about drinking alcohol during pregnancy however the infrequent consumption of one standard drink is thought to be unlikely to have any adverse consequences.

Prenatal effects

- increased risk of spontaneous abortion (miscarriage) and stillbirth
- premature birth
- reduced birth size and weight

Foetal effects

The effects of alcohol exposure on the foetus are related to:

- the amount of alcohol ingested
- the stage of pregnancy
- the general health of the woman

These effects occur along a continuum from a small decrease in cognitive functioning to Foetal Alcohol Syndrome (Day & Richardson, 1994).

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Foetal Alcohol Syndrome (FAS)

The cardinal features of FAS include:

- slow growth before and after birth involving height, weight and head circumference
- anomalies of brain structure and function resulting in development delay and disability
- a consistent pattern of birth defects including minor structural anomalies of the face together with heart and limb deformities in some instances

Severe effects of alcohol use during pregnancy such as foetal death, severe developmental disability and the cranio-facial deformities are associated with chronically high alcohol intake throughout pregnancy i.e. 42 standard drinks per week or more (Jacobson & Jacobson, 1994).

Infants born to women who are dependent on alcohol are at risk of developing withdrawal.

Alcohol and breastfeeding

The level of alcohol in breast milk is the same as the woman's blood alcohol level. The infant's brain is sensitive to alcohol therefore alcohol use while breastfeeding is not recommended.

For women who do not wish to stop using alcohol during lactation the following harm reduction strategy is suggested:

- consume alcohol at times when it will have minimal effect on breast milk
- drink no more than one standard drink after the infant has been fed and settled

This level of consumption is not considered harmful as long as another feed is not undertaken for 2 to 4 hours since the alcohol will be metabolised during this time (Capus & Holmes, 1997).

Tobacco

Nicotine, carbon monoxide and other constituents of tobacco smoke restrict the oxygen supply to the foetus. Women who smoke during pregnancy have infants that are significantly smaller and of shorter gestation compared with women who do not smoke. However based on findings in the available literature, smoking during pregnancy is unlikely to cause an increase in the congenital malformation rate (Woods & Raju, 2001).

Prenatal effects

- increased risk of miscarriage
- increased risk of premature labour

Foetal effects

- reduced foetal growth. Birthweight decreases in direct proportion to the number of cigarettes smoked.
- premature birth

Infant effects

There is an increased risk of Sudden Infant Death Syndrome (SIDS) associated with maternal smoking during pregnancy. There is also evidence that household exposure to tobacco smoke after birth has an independent additive effect. Parental drug misuse has an additional small but significant effect on the risk of SIDS (Blair et al., 1996) and increased incidence of respiratory infections, asthma and middle ear infections.

Smoking and breastfeeding

Tobacco use reduces the breast milk supply. Due to the risk of passive smoking exposure to the infant smoking is best avoided prior to, during or within the vicinity of a feeding infant. As a harm reduction measure, smoke after baby's feed only and not within their general vicinity.

Cannabis

The impact of cannabis use on pregnancy is similar to that of tobacco but the evidence is less compelling, and compounded by the concurrent use of tobacco, for women who use cannabis (Hall & Solowij, 1998).

Foetal effects

- reduced birthweight
- possible increase in premature birth rate

Infant effects

Although a number of infant neurobiological and developmental abnormalities have been reported in some studies the clinical significance of these findings are unclear at this time (Hall & Solowij, 1998).

Cannabis and breastfeeding

Breastfeeding whilst using cannabis is not recommended.

Heroin

Babies born to women dependent on heroin tend to be of lower birthweight than those born to women maintained on methadone or non-drug using women.

Heroin using women are also at increased risk of:

- premature delivery
- antepartum haemorrhage
- intra-uterine foetal death

It is unclear whether these effects are specific to heroin use or to the poor health and nutritional status of women dependent on an illicit substance (Ward et al., 1998, Kaltenbach et al., 1998).

Adequate pregnancy care for heroin dependent women can improve pregnancy outcome (Keen & Alison, 2001).

Prenatal effects

- increased risk of miscarriage
- increased risk of placental insufficiency
- premature labour
- increased rate of breech presentation
- increased risk of intrauterine foetal death

Foetal effects

- reduced birthweight, head circumference
- foetal distress (meconium staining)
- premature birth
- increased risk of bloodborne virus infection: hepatitis B & C, HIV

Infant effects

- Neonatal Abstinence Syndrome (NAS)
- increased incidence of SIDS

The long-term developmental outcomes are uncertain, particularly behavioural problems,

as these are related to environmental, social and parenting factors after birth; not just prenatal heroin exposure (Brady et al., 1994).

Methadone maintenance treatment

The treatment of choice for pregnant women who are heroin dependent is methadone maintenance. Pregnant women have priority access to treatment services. Slow reductions in methadone dose are possible during the second trimester of pregnancy under medical supervision.

Methadone and breastfeeding

The advantages of breastfeeding outweigh any potential disadvantages of women on methadone breastfeeding. Only low levels of methadone are present in breast milk (Ward et al., 1998). Women on higher doses of methadone (80 mg or more) are advised to wean their infants slowly to reduce the risk of withdrawal symptoms.

Women who are hepatitis C positive are advised to stop breast feeding if they develop bleeding nipples.

Women who are using illicit drugs while breast feeding should be advised to express and discard their breast milk until they stop using or are stabilised on methadone treatment (Capus & Holmes, 1997).

For more detailed information see Ward et al. (1998)

Psychostimulants — Amphetamines and Cocaine

The impact of psychostimulants on pregnancy varies considerably due to a number of factors:

- gestational period in which the drug exposure occurs
- amount of and pattern of drug use
- differences in metabolism

Malformations and long-term behavioural effects are not all or nothing phenomena. Whether damage occurs depends on interacting factors such as nutritional status, genetic differences, polydrug use, and environmental and social status. The continued use of psychostimulants in pregnancy will increase the risk of adverse pregnancy outcomes (Plessinger, 1998).

Prenatal effects

- maternal hypertension
- placental abruption and haemorrhage
- premature labour

Foetal effects

- premature birth
- foetal distress (meconium staining)
- reduced birthweight, head circumference
- possible increased risk of congenital malformations

However a large, prospective, systematic evaluation for congenital anomalies did not identify an increased number or consistent pattern of malformation associated with psychostimulant use during pregnancy (Behnke et al., 2001).

Infant effects

- possible increased risk of behavioural problems but inconclusive evidence at this time

Ecstasy

No conclusive information on the impact of ecstasy use on pregnancy was available at the time of writing.

NEONATAL ABSTINENCE SYNDROME (NAS)

Infants prenatally exposed to heroin or methadone have a high incidence of Neonatal Abstinence Syndrome (NAS).

NAS is a generalised disorder characterised by signs and symptoms of:

- Central nervous system hyperirritability — increased muscle tone, disturbed sleep pattern, irritability and tremor
- gastrointestinal dysfunction — excessive yet uncoordinated sucking, poor feeding, vomiting and diarrhoea
- respiratory distress — nasal flaring, tachypnoea, chest recession
- vague autonomic symptoms — yawning, sneezing, mottling and fever

The majority of symptoms appear within 72 hours of birth. Many factors impact on the severity of NAS including:

- the nature and dosage of drugs used; and
- time of last use

Heavy benzodiazepine use during pregnancy may exacerbate and prolong the course of NAS. The type of labour and the use of anaesthetics and analgesia can also impact on severity of NAS as does the size and gestational age of the infant. Full term infants require treatment for NAS more often than premature infants. The relationship between maternal methadone dose and the severity of NAS has been difficult to establish (Kaltenbach et al., 1998).

Management of Neonatal Abstinence Syndrome

Infants at risk of NAS are monitored using a modified score chart developed originally by Dr Loretta Finnegan. Pharmacotherapy treatment is instigated when scores reach a predetermined level and the infant is at risk of serious health consequences if not treated. An aqueous solution of morphine administered orally is the most common medication used to manage NAS in Australia.

Mothercraft techniques can provide significant symptom relief to the infant experiencing mild to moderate NAS. Swaddling in cotton sheets and the use of swing cradles or hammocks for sleeping has a calming effect. Dummies provide an opportunity to suck, which also has a settling effect (Capus & Holmes, 1997).

Neonatal Abstinence Syndrome can have a negative impact on mother–infant bonding if not effectively managed. Separation of mother and infant during the treatment of NAS should be minimised. The ongoing treatment of NAS can be successfully managed via a specialist outpatient clinic once the infant is stable on medication thus reducing separation and inpatient length of stay (Oei et al., 2001).

CHILD PROTECTION

Studies of drug using parents indicate that many were victims of child abuse and/or had poor parenting. These parents are at increased risk of neglecting or abusing their children (Keen & Alison, 2001).

It is vital that the wellbeing of infants born to drug using parents is assessed prior to their discharge from hospital. A discharge-planning meeting including the family and all health and welfare professionals involved with the family is required and management plans agreed to and documented. Where risk of neglect or abuse is identified the statutory child protection services must be involved in the care planning and ongoing monitoring of the family.

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