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Case Report

A Case Report on Successful Detoxification during Pregnancy of a 20 Year Old Patient with Complex Social Issues, by a Multidisciplinary Team

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Abstract

A 20year patient was first encountered by the Obstetric team at twenty-two weeks pregnant when she presented with signs and symptoms of a deep vein thrombosis; she was diagnosed with extensive bilateral external iliac DVT and was managed by a multidisciplinary team for the treatment of thrombosis and detoxification by a Methadone programme. A variety of social factors had led her to heroin addiction: her parent was a drug addict. She had been raised by numerous foster carers until she then found her mother who introduced her to drug addiction. Her partner was violent and forced her to be a commercial sex worker and she lived in a community where substance misuse was rampant.

During this pregnancy, the Obstetric care and MDT support helped this patient to successfully detoxification from her heroin addiction and the use of other illicit substances. She had a normal vaginal delivery of a healthy infant, which was immediately taken into care. Post-natal follow up ensured abstinence of illicit substances and an opportunity for this patient to change her lifestyle and social setup.

This case report is a success story of a patient who initially sought medical help in desperate and life-threatening circumstances. It highlights the importance of a multidisciplinary approach in the successful management of a high risk pregnancy and a detoxification programme. This case required a holistic and patient-centred approach to the antenatal care, along with willingness to change and determination from the patient herself.

ABBREVIATIONS

DVT: Deep Vein Thrombosis; IVDU: Intra-Venous Drug Use; SMW: Specialist Midwife; MDT: Multidisciplinary; NAS: Neonatal Abstinence Syndrome

CASE PRESENTATION

A 20year old primiparous woman booked her first pregnancy with a community midwife. At this initial appointment, multiple issues of concern were highlighted; including a history of opiate abuse, currently on a Methadone programme, hepatitis C infection, social isolation and an abusive relationship. Knowing these details subsequent referrals to multiple specialist teams were appropriately completed to involve an array of healthcare professionals with an aim to provide antenatal care to this woman. Despite identifying the risks of this pregnancy early on at booking, the woman did not engage with services; and did not attend routine ultrasound scans or midwife appointments.

At 22+5/40, held in police custody, this woman complained of left leg swelling and pain. A medical review was sought and referral to the Haematology Obstetric team made. She had a Doppler study and a diagnosis of bilateral extensive deep vein thrombosis and a groin infection secondary to injecting illicit substances was made. Urine toxicology screening detected heroin and cocaine use. This hospital admission not only initiated treatment for the above medical problems, but also enabled further investigation of this woman's social circumstances and ultimately provided time for the specialist teams to work with this woman to commence a detox programme. She self-discharged, coerced by her partner, which prompted a team of a specialist midwife and policeman, to look for her, not able to find her at her known address. The following day, the woman attended her GP and from this consultation, she was readmitted to hospital for ongoing care.

A disadvantaged upbringing, homelessness, unemployment, prostitution, domestic violence and drug abuse are all factors which contributed to the unfavorable environment which surrounded this lady and her unborn baby. She was in extremely difficult circumstances; expressing social isolation, vulnerability, fear of being hurt and understood the difficulties that lay ahead: the risk of losing her child due to her threatening social environment.

A multidisciplinary approach to this woman's care was essential; of which treating the medical complications of substance misuse was just a fraction of the care, yet the holistic approach to initiating and completing a detox programme,

ensuring no contact from her abusive partner and finding her safe accommodation were so important in achieving a positive pregnancy outcome and helping this woman change her life and social circumstances for a better future.

A prolonged hospital admission over three weeks enabled ongoing medical review, obtaining advice from the Infectious Diseases, Haematology and Obstetrics teams and care from the Substance Misuse Consultant Obstetrician and Specialist Midwife. . A specialist organisation found a refuge for this woman to stay and involvement of social services allowed plans to be put in place for the unborn baby and ongoing support in the community. Specialist midwives had regular contact with the woman, which encouraged engagement of all of these services. She was the discharged to a refuge and the two specialist midwives did the regular antenatal checks until delivery.

From an Obstetric perspective, serial growth scans were arranged, ongoing detox with input from community drug team and liaison with the specialist midwives ensured ongoing antenatal care and engagement with all services. This woman had a vaginal delivery following an induction of labour for social circumstances and obstetric cholestasis. At delivery, the baby was born in good condition with normal APGAR scores (9 and 9 at 1 and 5minutes respectively) and was noted to have signs of neonatal abstinence syndrome on the day after delivery. As anticipated, in view of the social environment surrounding this woman, it was not safe for the baby to be discharged with its mother. Immediate foster care was arranged. Postnatally, she was followed up by community midwives and she was relocated to a new area.

Three years later, this woman presented in her second pregnancy, having changed her social circumstances considerably. She had not used any illicit substance since last pregnancy 2 years previously. The pregnancy, although still labelled high risk due to previous DVT in pregnancy and previous substance misuse, required much less surveillance and intervention, both from the Obstetric and Substance Misuse teams. The woman engaged with services reliably; this behavior likely being influenced by the same healthcare professionals being involved in her care. All toxicology screens were negative, proving abstinence and although social services were involved and a safeguarding form completed, it was deemed safe for this woman to take this baby home with her.

DISCUSSION

As noted in the Pregnancy and Complex Social Factors NICE guideline, woman-centred care should be implemented in women who present antenatally with complex social backgrounds [1]. As recommended, this case report demonstrates the positive outcomes which can be achieved when specialised services work together and opiate replacement therapy programmes are implemented as part of the antenatal care plan.

Substance misuse and addiction in pregnancy are commonly seen, frequently enough for exclusive antenatal clinics to be implemented in maternity centres nationally, to tailor this high risk antenatal care. In the MBRACE-UK 2009-2013 report [2], 58deaths were reported as a consequence of substance misuse and a further 14deaths from suicide in women with substance misuse as a comorbidity, of which polysubstance abuse was not uncommon. 1% of pregnant women report substance misuse which demonstrates its prevalence and the requirement of specialist services to optimise care and outcomes.

A booking appointment during pregnancy is an opportunity for all healthcare professionals to screen for substance misuse and if identified act upon, complete referrals to specific healthcare professionals and offer help. A thorough assessment at booking identifies risks for that pregnancy, of which substance misuse can have implications for the woman's pregnancy and health, increase risk of medical complications arising secondary to the drug habit and obviously the care of the unborn baby. It is important to inform and educate the woman about the risks associated with substance misuse in pregnancy, including: stillbirths, low birth weight, prematurity, admission to a neonatal unit, requiring treatment for neonatal abstinence syndrome (NAS) and that these outcomes can be reduced when specialist addiction services are implemented and engaged with1. With this information, will-power and the appropriate support, women who find themselves living a life with substance misuse and other poor social factors, but willing to make change can be given the opportunities to make positive life-changing decisions.

To optimise a woman's care and address the multiple needs, it has been recognised historically that multi-agency partnerships need to be developed and services commissioned2 to provide service models that obstetric teams can work with and refer to when complex cases present in pregnancy. This case above has proven that with the collaborative multi-agency input, positive outcomes are achievable.

This case has two main components: the management of medical complications that arose in pregnancy and the detoxification from heroin addiction that was facilitated during a pregnancy.

Firstly, the DVT and groin infection required medical management of anticoagulant and antibiotic therapy. These complications required the mutli-disciplinary Haematology-Obstetric team to formulate a specific care plan and this medical history will have implications for this patient in any future pregnancies.

Secondly, the main focus of this case is the successful detoxification programme of heroin. As this patient presented in pregnancy, not only were the community drug teams involved, but there was additional support from the Substance Misuse Consultant Obstetrician and SMW. It is unclear if this detoxification would have been successful if completed outside of pregnancy. It could be argued that the specialized Obstetric team members added a more personal element of care, providing continuity both in the community and in secondary care.

Seeking help for addiction during a pregnancy, can be an extremely emotive time for women. With failure and even success in the detoxification, there are child protection and safeguarding issues and the risk of the unborn child going into care and the biological mother not having parental responsibility is always present. This means that the incentive of keeping the unborn child is not always realistic, particularly in the current pregnancy. However, a successful detoxification without relapse in the

future can lead to parenting in the future, therefore the long term benefits, both on her health and implications for future parenting must be emphasised, which may act as a powerful incentive to support the woman and may act as a powerful incentive to change her behavior and social circumstances.

Midwives, particularly those specialising in substance misuse, play an essential role in a woman's maternity care in those women who present with drug addiction in pregnancy. A midwife helps in liaising with other team members, providing continuity throughout pregnancy and post-natal period and can provide more personal care.

In women who come from such an unfavourable social environment, lack of engagement with services and poor compliance with treatment is not uncommon. It has been reported in the literature regarding the importance of midwives in the management of these patients [3].

This case report demonstrates this initially in the pregnancy, but then after twenty-two weeks gestation, things change. This behavior was likely influenced by the numerous healthcare professionals being involved in her care, the woman perhaps feeling empowered and trusting the professionals to help her after one-to-one conversations and continuity of care.

As mentioned above, drug addiction in pregnancy not only poses risk to the mother but also to the fetus in-utero and the infant at delivery. Neonatal abstinence syndrome is a condition in neonates of women who are addicted to heroin and other opioid use. The incidence of this neonatal condition is increasing in keeping with drug use in pregnancy. as the use in pregnant women is increasing [4].

NAS is caused by inutero exposure to illicit or prescribed opioids, including those agents used in the detoxification of illicit drug use. The symptoms are variable in time of onset and severity and can range from mild tremors and irritability to excessive weight loss and seizures. It usually occurs in first few days of life and therefore a period of neonatal observation is often required after delivery, even if the infant is born in good condition showing no immediate concerns.

Simultaneous exposure to other agents such as selective serotonin re-uptake inhibitors and benzodiazepines can affect the signs and symptoms a neonate shows. The symptoms include vasomotor symptoms (sweating, fever, and mottling), respiratory depression, gastrointestinal features including vomiting, weight loss, poor appetite and neurological symptoms such as tremors, irritability and a high pitched cry [6].

The treatment depends on severity and includes admission to a neonatal unit, nonpharmacological measures (soothing, cuddling, breast feeding) and pharmacological treatment (oral morphine or methadone) in babies who don't respond to conservative management.

As discussed, the use of methadone in a detoxification programme can still cause NAS. Methadone is the most commonly used opioid for detoxification in heroin users but does have alternative uses such as an analgesic in cases of severe pain associated with malignancy. For detoxification, methadone is started at a lower dose which is increased gradually on titration against the control of withdrawal symptoms. Before commencing this, contraindications such as adrenocortical deficiency, asthma, inflammatory or obstructive bowel disorders should be excluded.

Methadone is not the sole agent used for detoxification. In pregnant women Methadone and Buprenorphine, are both used [8]. A comparison between these agents and Naltrexone [5] has been undertaken detoxification in pregnant women to guide professionals in which agent to use depending on the individual case circumstances. Decisions about treatment approaches should also be considered when confronted with a pregnant woman with opioid abuse – a clinician can decide whether maintenance prescription is preferred or if this should be transitioned to detofixication [5], which if successful may have longer-lasting benefits for the pregnant woman, unborn child and future pregnancy outcomes.

Buprenorphine is associated with shorter treatment duration and less treatment was found to be required forneonatal abstinence syndrome (NAS) symptoms. Naltrexone is not used as first line treatment in pregnancy. Methadone is expensive and its availability in certain areas can be limited, in which case Buprenorphine is likely to be the agent of choice for detoxification and the women transitioned from heroin to Buprenorphine detoxification [9].

Although not in the absence of risk, Methadone is often the preferred treatment of choice, particularly in cases when women require higher doses for stabilization, there is a risk of treatment discontinuation or in whom there have been unsuccessful treatment attempts with Buprenorphine [11]. Detoxification in pregnancy requires close liaison with the Obstetric, Community Drug Liaison Service and pharmacy teams to ensure that the woman is receiving the appropriate dose. Due to the renal physiological changes in pregnancy, including increase of both renal plasma flow and glomerular filtration rate [3] and increase of excretion of waste products due to the above changes, dose adjustments of Methadone may be required as the pregnancy continues into the second and third trimesters.

It is known that a high level of support is required in the post-natal period. Some areas have implemented specific specialist health visitor services to provide this support, which has been positively viewed both by professionals and women [3], but in this case it was the community midwife who continued postnatal care. The level of support required is likely to depend on the individual's woman's needs and other social support, therefore problems may arise when the limited services available or not having a specific post-natal role are not able to meet the demands in the community.

A prolonged hospital admission enabled the MDT [1] to not only medically manage this patient but also address the social concerns and implement changes which removed this patient from her social environment. Relocation and preventing contact with the people who had influenced her behavior detrimentally was a major step forward in changing this patient's life and working towards the positive outcomes which she later achieved. The involvement of a charitable organisation to find a refuge and ongoing follow up by community drug workers enabled this re-location to happen. In women who present with substance

misuse, like this case report, it is not uncommon for these women to be surrounded by other social factors which influence their poor physical and mental health: alcohol use, domestic violence, commercial sex working and disadvantaged upbringing and so multi-agency care providers are often the only way in which all these needs can be addressed. With substance misuse, there is a sharp rise in drug use in the postnatal period [3]. If after a pregnancy a woman returns to her original social environment, reversion back to the life of substance misuse and other poor social behaviours is difficult to avoid – relocation and the community social support that comes this, often is the only way to have a lifelong , successful impact on drug detoxification.

This case report is a success story of a patient who initially sought medical help in desperate and life-threatening circumstances. It highlights the importance of a multidisciplinary approach in the successful management of a high risk pregnancy and a detoxification programme [3]. This case required a holistic and patient-centred approach to the antenatal care, along with willingness to change and determination from the patient herself. It shows that with the right services available, maternity care providers with other specialised healthcare professionals can have lifelong beneficial impact for those women who present not only with medical problems but challenging social circumstances.

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