Feticide

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Derived from: Feticide in midtrimester termination for fetal abnormality Version 1 2009 (Frimley site)
Late termination of Pregnancy and Fetocide. 2009 (Wexham site)

Name of authors: P. Sarkar (Consultant O&G, Wexham site)

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1. Introduction

When undertaking a termination of pregnancy, the intention is that the fetus should not survive and that the process of abortion should achieve this. Death may occur before delivery, either by the procedure undertaken by an obstetrician (feticide) or as a consequence of a compromised fetus being unable to tolerate induced labour. Death may also occur after birth either because of the severity of the abnormality for which termination was performed or because of extreme prematurity, or both.

The RCOG currently recommends feticide for terminations over 21+6 weeks. The only exception to this rule is when the fetal abnormality itself is so severe as to make early neonatal death inevitable irrespective of the gestation at delivery, and it is reasonable to assume that anencephaly would fulfil this criterion.

In the Epicure study, 11% of 2122 fetuses believed to be 20–22 weeks of gestation were born alive, of which two (0.1%) survived to discharge. For those born at 23 weeks, live birth and survival rates increased to 39% and 4%, respectively. Wyldes and Tonks reported data on live birth rates in terminations for fetal abnormality in the West Midlands between the years 1995 and 2004. Overall, 102 of the 3189 (3.2%) fetuses were born alive, of which 36% survived 1 hour or less and 6% for 6 or more hours. And whilst many professionals will find the procedure of feticide stressful, most agree that feticide will prevent parents and labour ward staff from facing the agony of neonatal distress and pain.

Instances of recorded live birth and survival increase as gestation at birth extends from 22 weeks. In accordance with prior RCOG guidance, feticide should be routinely offered from 21+6 weeks of gestation. Where fetal abnormality is not compatible with survival, termination of pregnancy without prior feticide may be preferred by some women. In such cases, delivery management should be discussed and planned with the parents and all health professionals involved and a written care plan agreed before termination takes place.

2.0. Prerequisites prior to feticide

2.1. Counselling and consent

2.1.1. Parents must receive sympathetic and supportive counselling before and after the procedure. Where a fetal abnormality has been diagnosed at or greater than 21+6 weeks of gestation and termination is an option, the woman should receive counselling in the Fetal Medicine Clinic by the fetal medicine consultants. This is the start of the consenting process, which follows the principles of the Montgomery ruling.

2.1.2. Parents should be offered further counselling with the antenatal screening team before the procedure and/or the hospital chaplain and bereavement midwives depending on their wishes. It is important that parents have constant access to the fetal medicine/screening team as long as it takes to resolve their queries and an informed consent is reached in principle. Counselling should include discussing the pain and discomfort associated with feticide and also the administration of prostaglandins, pain and bleeding associated with delivery of the fetus, and that surgical procedure may become necessary for removal of a retained placenta.
Parents should also be given the option to decline the procedure. Parents needed to be informed of the associated consequences of the fetus showing signs of life at delivery. When possible the bereavement Midwives should be involved with these discussions.

2.1.3. Although some parents may become very distressed upon a diagnosis of a severe fetal anomaly and may request feticide and termination immediately, best practice dictates that the parents have time to reflect on the diagnosis and their decision. The period of reflection ideally should be at least 24 hours allowing parents to firm their thoughts and their decision. It is the practice at both Frimley Park and Wexham Park sites to encourage patients and their families some time to reflect and possibly grieve before they undergo termination of pregnancy.

2.1.4. It is important that the parents have contact names of screening team and contact numbers during the time between diagnosis of fetal anomaly and delivery, The contact numbers for Antenatal screening team are 01276 526989 for the Frimley Park Hospital site and 01753 633301 at the Wexham and Heatherwood Hospital sites.

2.2. Mandatory documentation prior to termination of pregnancy

Where it is agreed that the pregnancy will be terminated, the following is required:
• The appropriate Abortion Act form signed by two registered medical practitioners (Blue HSA1 form)
• The HSA4 form (yellow abortion notification) to be signed (sections 1 and 2)
• The appropriate consent form signed by the woman (written consent)
• The drug regime prescribed on the drug chart

3.0. Procedural principles of feticide

3.1. Feticide should be performed by an appropriately trained practitioner (and always under consultant supervision) under aseptic conditions and continuous ultrasound guidance.

3.2. Intracardiac instillation of 15% potassium chloride (KCl) is the recommended method to ensure fetal asystole. After aspiration of fetal blood to confirm correct placement of the needle, 2-3ml of strong (15%) KCl is injected into a cardiac chamber. A repeat injection may be required if asystole has not occurred after 30–60 seconds. Asystole is observed for approximately 2 minutes. After this period of observation, the Ciba needle is flushed with normal saline before retracting it to avoid KCl reaching maternal tissues. A scan is repeated after 30–60 minutes to ensure fetal demise.

3.3. Although, the recommended site of administration of KCl for feticide is a fetal cardiac chamber, it can also be administered in an umbilical cord insertion (cordocentesis), either at the placental cord insertion or into the intra-abdominal part of the umbilical vein. These sites should be used only if the operator feels competent.

In a series of 239 cases of feticide using this technique, between 20+5 and 37+5 weeks of gestation, there were no failures (live births); asystole was confirmed in all cases within 2 minutes of the initial injection, with no woman requiring a second needle insertion and no maternal complications (5). The mean volume of KCl required was 4.7 ml (range 2–10 ml). Although KCl can be administered via the umbilical route after cordocentesis, failures have been recorded 5.6.
3.4. Feticide is performed as an outpatient procedure in a designated ultrasound room. The procedure is performed by the fetal medicine consultant (operator) assisted by either a second consultant (Frimley Park site) or the screening midwife (Wexham Park site). The fetal medicine consultant is the lead professional for this procedure and the screening Midwives role is to support the consultant and the family. It is the responsibility of the Consultant to prescribe and administer the intra cardiac KCL. The third member of the team is a midwife from the screening team who supports the patient and family member, and also acts as a runner.

It is essential that an experienced practitioner is available with sufficient time to carry out the procedure and support the family. If not consideration should be made to refer the patient to the tertiary referral centre with a clear follow up plan in place for admission to labour ward. The Bereavement Midwives should be informed of all planned admissions to the labour ward for TOP.

3.5. Termination of pregnancy is distressing for patients and staff involved in the procedure. Any staff member who would not wish to be involved in feticide procedure should advise the antenatal screening team, and they would not be expected to attend. Extreme care should be taken to provide respect and support to family and staff involved with the case.

4.0. Standard Operating Procedure (SOP)

The woman may be advised to take 1gm of paracetamol an hour before arriving such that some analgesia is already in place. One stat dose of intravenous cefuroxime, 1.5gm may be given either before or after the procedure in women who are not allergic to penicillin. For those with penicillin hypersensitivity, oral erythromycin 250mg QDS for 48 hours may be given as prophylaxis. Administration of prophylactic antibiotics is optional and is guided by local practice.

A trolley with the equipment is made ready before the patient and partner are invited into the ultrasound room. A sterile pack with tray and paper sheet is laid on to the trolley surface.

i. **Drawing up lignocaine:** Five mls of 1% lignocaine are drawn up in a syringe, capped by a blue needle.

ii. **Cardiac bloods:** Where cardiac bloods are required for diagnosis, four 1ml syringes are heparinised. Where cardiac bloods are not required, either a 1ml or a 2ml syringe is taken to aspirate fetal cardiac blood.

iii. **Drawing up of 15%KCl:** Two ampoules of 15% Potassium Chloride (KCl) are obtained from the pharmacy and signed for in the controlled drugs book. Contents of each ampoule is transferred into syringes of a size different to the syringe size for lignocaine. These syringes are marked with bright stickers.

iv. **Syringe size:** The syringe sizes in usual use are 5mls and 10mls. The choice of size of syringe for lignocaine and 15%KCl may vary between the Frimley and Wexham sites, but must be embedded, constant and consistent at each site. It is imperative that the two solutions, lignocaine and 15%KCl are in distinctly different syringes and very clearly distinguishable from one another.

v. **Failsafe to distinguish syringe containing lignocaine and syringe containing 15% potassium chloride solution:** These 2 failsafe mechanisms of...
(i) syringes of different sizes to hold lignocaine and to hold 15\% KCl, and
(ii) marking the syringe(s) holding 15\% KCl with bright sticker(s) eliminate
any risk of confusion about the contents.

vi. **Procedure needle**: A 17-19 gauge Ciba needle is opened from its sterile
pack.

vii. **Obtaining written consent**: After setting the trolley, the patient and a family
member are invited into a counselling room, where the fetal medicine
consultant confirms the patient’s understanding of the procedure, answers
any further questions to the patient’s satisfaction, and obtains a written
consent for termination by feticide.

viii. The patient and family member are then taken into the ultrasound room. Any
additional monitors for viewing of ultrasound images are turned off.

ix. **Aseptic precautions**: The procedure is performed under aseptic conditions
with continuous ultrasound guidance. The maternal abdomen is cleaned with
chlorhexidine solution. A sterile probe cover is applied on to the ultrasound
probe, and either sterile transducer gel or sterile chlorhexidine solution is
used for insonation, depending on operator’s preferences.

x. **Procedure**: The fetus is insonated, and an appropriate target area is chosen,
usually the most accessible cardiac chamber. Five mls of 1\% lignocaine is
infiltrated into the skin at the appropriate point. The 17-19 G Ciba needle is
introduced through the maternal skin, through the uterine musculature into the
cardiac chamber. When the needle appears to be correctly placed, the
assistant removes the stylet and attaches a 1ml syringe to aspirate blood to
ensure correct placement.

xi. **Aspiration of fetal blood**: Where fetal blood is required for diagnosis, 4 mls
of fetal blood are aspirated by the assistant, and the filled syringes handed
over to the third member of team who stores the blood in a labelled lithium-
heparin bottle (fetal karyotype) or EDTA (array CGH) and labels the bottles.

xii. **Administration of 15\% potassium chloride solution to the fetus**: The
assistant then firmly attaches the marked syringe containing 15\% KCl to the
hub of the Ciba needle. Where the assistant is the screening midwife, the
operator will administer the potassium chloride solution into the fetal heart.
Where the assistant is a second consultant, either the operator or the
assistant may administer the solution.

xiii. **Asystole**: The fetal heart activity is noted to slow down and/or stop with
administration of usually 3-5 mls of 15\% KCl. Cardiac activity is then
observed for at approximately 2 minutes to confirm permanent asystole. After
this period of observation, the Ciba needle is flushed with normal saline
before retracting it to avoid KCl reaching maternal tissues. The end of
procedure is then announced.

xiv. **Confirmation of fetal demise**: A repeat scan is performed 30 minutes later
to confirm fetal demise.

xv. **Documentation**: The procedure is then documented in the unit’s reporting
system - Astraia/ Viewpoint.

xvi. **Post feticide procedure**: After fetal asystole is noted following feticide, the
parents are taken to a quiet room to allow space and time to grieve. She is
then taken back into the ultrasound room 30 minutes later, for a confirmation
scan. After this scan, the parents return to the quiet room. After a reasonable
time period, she is given mifepristone (200 mg orally) after checking her blood
pressure. She is then allowed home and will return for induction of labour 48
hours later with misoprostol.

xvii. **Karyotyping and fetal postmortem examinations** are offered in appropriate
cases.
xviii. **Anti-D immunoglobulin prophylaxis** to be given to all RhD-negative women.

xix. **Induction of labour:** Induction of miscarriage or labour is done in accordance to Trust guidelines with intravaginal prostaglandins and/or oral prostaglandins. It is advisable but not essential that on admission to the ward for induction, 48 hrs after administration of mifepristone, that the fetal heart is checked for asystole and fetal death, before administering prostaglandins. This is especially important when the feticide procedure has been performed in a tertiary referral centre and asystole has not been confirmed by a Trust consultant.

5.0. **Postmortem examination**
Parents who had earlier in the process accepted postmortem examination of the delivered fetus should be given the forms to read and understand. This should be done sensitively and with empathy, a few hours after delivery. Should they continue to accept the examination, they could sign the consent for postmortem examination of the delivered fetus. The bereavement midwives should be involved to provide additional support and can also be available to complete the consent process.

6.0. **Funeral arrangements**
Some parents would like to take the delivered fetus to arrange their private funeral service whilst other parents would prefer the hospital to arrange the burial or cremation. Their preferences should be documented in the notes and facilitated.

7.0. **Monitoring compliance**
All mid trimester terminations of pregnancy are monitored through the perinatal mortality audits locally and regionally. Any baby born alive following mid trimester termination of pregnancy will be subject to case review via risk management.

8.0 **Appendices**

HSA 1 form
HSA 4 form

9.0. **References**
4. The care of women requesting induced abortion ((Evidence-based Clinical Guideline No. 7) RCOG publication 2011