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GROUP**

ALL PARTY OIREACHTAS

LATE-TERM ABORTION AND FOETAL PAIN

PROPOSING A HUMANE RESPONSE



LATE-TERM ABORTION AND FOETAL PAIN

INTRODUCTION

This overview on the topic of late-term abortion and foetal pain has been compiled on account of the growing scientific evidence from around the world that unborn babies in the womb feel pain before 20 weeks. We hope it will make a valuable contribution to the public discussion on the matter.

In a 2020 article, published in the influential *Journal of Medical Ethics*, the authors say there is now “good evidence” that the brain and nervous system, which start developing at 12 weeks’ gestation, are sufficient enough for the baby to feel pain. In their article, Professor Stuart Derbyshire and Dr John Bockmann say research indicates unborn babies might be able to feel “something like pain” as early as 13 weeks.

Today, it is routine practice for unborn babies undergoing surgical procedures to be given pain relief to ensure they feel no pain or distress during the procedure.

Babies being aborted at an identical gestational age, however, are denied the same dignity and respect as they are regarded as non-persons in the eyes of the law and by those carrying out the abortion procedure.

The refusal to extend even a morsel of compassion to these babies as they breathe their last breath in this world is the most forceful and ringing evidence that we are losing our empathy and way as a society.

Enshrining protections in law to ensure unborn babies receive pain relief before a late term abortion wouldn’t save the baby’s life but it would at least introduce a degree of humanity into the law and ensure that no baby suffers a harrowing and painful death that could easily be avoided.

Instead of looking for excuses not to introduce humane pain relief amendments to the new abortion law, we need to acknowledge the growing scientific evidence in this area and come together as a society to guarantee the passage of these reasonable amendments without delay.

The emerging evidence highlighting foetal pain is something that any society wishing to call itself civilised cannot ignore.

EVIDENCE THAT UNBORN BABIES FEEL PAIN

The old, uninformed notion that unborn babies cannot feel pain is being challenged by a growing body of scientific evidence. The most up to date published scientific literature shows that unborn babies can experience pain at 20 weeks gestational age and possibly even much earlier.

A recent thorough review of the scientific literature¹ including neural development and psychology of pain sensation, concludes that unborn babies may experience pain as early as 13 weeks.

Lead author of the review, British professor Stuart Derbyshire, has previously acted as a consultant to the US’ largest abortion provider – Planned Parenthood. In 2006, he wrote in the *British Medical Journal* that not talking to

women seeking abortions about pain experienced by unborn babies was “sound policy based on good evidence that foetuses cannot experience pain”.

However, on foot of his latest review, he says: “It is now clear that the consensus is no longer tenable,” and to ignore the latest evidence “flirts with moral recklessness”.

Professor Derbyshire and his co-author Dr John Bockmann, write:

“Most reports on the possibility of foetal pain have focused on developmental neuroscience. Reports often suggest that the cortex and intact thalamocortical tracts are necessary for pain experience. Given that the cortex only becomes functional and the tracts only develop after 24 weeks, many reports rule out foetal pain until the final trimester. Here, more recent evidence calling into question the necessity of the cortex for pain and demonstrating functional thalamic connectivity into the subplate is used to argue that the neuroscience cannot definitively rule out foetal pain before 24 weeks. We consider the possibility that the mere experience of pain, without the capacity for self reflection, is morally significant. We believe that foetal pain does not have to be equivalent to a mature adult human experience to matter morally, and so foetal pain might be considered as part of a humane approach to abortion.”

And they advise:

“Given the evidence that the foetus might be able to experience something like pain during later abortions, it seems reasonable that the clinical team and the pregnant woman are encouraged to consider foetal analgesia [pain relief].”

Their review paper also notes that neural connections from periphery to brain are functionally complete after 18 weeks.

“Nevertheless, we no longer view foetal pain (as a core, immediate, sensation) in a gestational window of 12–24 weeks as impossible based on the neuroscience,” the authors write.

There is also a growing body of additional research highlighting the unborn baby’s sensitivity to pain and that pinpoints the developmental stages showing the presence of pain sensory mechanisms.

1. Derbyshire SWG and Bockmann JC, Reconsidering fetal pain, *J Med Ethics* 46, 3-6, 2020

The basic anatomical organisation of the human nervous system is established by 6 weeks.² The earliest neurons in the cortical brain (the part responsible for thinking, memory, and other higher functions) are established starting at 6 weeks.³ Nerve synapses for spinal reflex are in place by 10 weeks.⁴ Sensory receptors for pain (nociception) develop first around the mouth at 7 weeks, and are present throughout the skin and mucosal surfaces by 20 weeks.⁵ Connections between the spinal cord and the thalamus (which functions in pain perception in unborn babies as well as in adults⁶ are relatively complete by 20 weeks.⁷

Challenging the claim that the brain cortex is necessary to experience pain and suffering, decordate individuals as well as animals lacking higher cortical structures obviously do feel pain. In fact, the human brain cortex does not fully mature until approximately 25 years of age, yet infants, children, and teenagers obviously can experience pain.⁸

The unborn baby reacts to noxious stimuli with avoidance reactions and stress responses. As early as 8 weeks the baby exhibits reflex movement during invasive procedures.⁹ There is extensive evidence of a hormonal stress response by unborn babies as early as 18 weeks¹⁰ including *“increases in cortisol, beta-endorphin, and decreases in the pulsatility index of the foetal middle cerebral artery.”*¹¹

Two independent studies in 2006 used brain scans of the sensory part of unborn babies' brains, showing response to pain.¹² They found a “clear cortical response” and concluded there was *“the potential for both higher-level pain processing and pain-induced plasticity in the human brain from a very early age.”*

In 2013, a study used functional magnetic resonance imaging (fMRI) to study the brains of healthy human babies still within the womb, from 24-39 weeks. They found that functional neuronal connections sufficient to experience pain already exist by 24 weeks.¹³

In 2010, one group noted that “the earlier infants are delivered, the stronger their response to pain.”¹⁴ This increased sensitivity is due to the fact that the neural mechanisms that inhibit pain sensations do not begin to develop until 34-36 weeks, and are not complete until a significant time after birth.¹⁵ This means that unborn, as well as newborn and preterm, infants show *“hyperresponsiveness”* to pain.¹⁶

Authors of a 2015 study used the fMRI technique to measure pain response in newborns (1-6 days old) vs. adults (23-36 years old), and found that *“the infant pain experience closely resembles that seen in adults.”*¹⁷ Babies had 18 out of 20 brain regions respond like adults, yet they showed much greater sensitivity to pain, responding at a level four times as sensitive as adults.

UNBORN BABIES RECEIVE PAIN MEDICATION DURING ROUTINE SURGICAL PROCEDURES

Foetal surgeons who perform operations on unborn babies look upon them as their patients. As a result, pain relief medication is routinely administered as standard medical practice.¹⁸

A leading children's hospital performed nearly 1,600 foetal surgeries between 1995 and June 2017.¹⁹ Perinatal medicine now treats unborn babies as young as 18 weeks for dozens of conditions where every care is taken not to inflict pain or cause distress to the unborn baby.

In 2019, in reply to a parliamentary question from Sir Edward Leigh MP,²⁰ the Secretary of State for Health and Social Care in the UK confirmed that unborn babies receiving recently announced innovative Spinal surgery will as a matter of course receive pain relief during the procedure.



2. Carlson BM, Patten's Foundations of Embryology, Sixth Edition, McGraw-Hill, Inc., New York; 1996; Nikolopoulou E et al., Neural tube closure: cellular, molecular and biomechanical mechanisms, *Development* 144, 552, 2017.
3. Bystron I et al., The first neurons of the human cerebral cortex, *Nature Neuroscience* 9, 880, 2006.
4. Okado N et al., Synaptogenesis in the cervical cord of the human embryo: Sequence of synapse formation in a spinal reflex pathway, *J. Comparative Neurol.* 184, 491, 1979; Okado N, Onset of synapse formation in the human spinal cord, *J. Comparative Neurol.* 201, 211, 1981.
5. Brusseau R, Developmental Perspectives: Is the Fetus Conscious?, *International Anesthesiology Clinics* 46, 11, 2008; Lowery CL et al., Neurodevelopmental Changes of Fetal Pain, *Seminars in Perinatology* 31, 275, 2007.
6. Chien JH et al., Human Thalamic Somatosensory Nucleus (Ventral Caudal, Vc) as a Locus for Stimulation by INPUTS from Tactile, Noxious and Thermal Sensors on an Active Prosthesis. *Sensors (Basel)*. 17, 2017
7. Van de Velde M and De Buck F, Fetal and Maternal Analgesia/Anesthesia for Fetal Procedures, *Fetal Diagnosis and Therapy* 31, 201, 2012; Van Scheltema PNA et al., Fetal Pain, *Fetal and Maternal Medicine Review* 19, 311, 2008.
8. Arain M et al., Maturation of the adolescent brain, *Neuropsychiatr Dis Treat.* 9, 449, 2013
9. Ohashi Y et al., Success rate and challenges of fetal anesthesia for ultrasound guided fetal intervention by maternal opioid and benzodiazepine administration, *J Maternal-Fetal Neonatal Medicine* 26, 158, 2013.
10. Myers LB et al., Fetal endoscopic surgery: indications and anaesthetic management, *Best Pract Res Clin Anaesthesiol* 18, 231, 2004; Brusseau R and Mizrahi-Arnaud A, Fetal Anesthesia and Pain Management for Intrauterine Therapy, *Clinics in Perinatology* 40, 429, 2013.
11. Lin EE and Tran KM, Anesthesia for fetal surgery, *Seminars in Pediatric Surgery* 22, 50, 2013.
12. Slater R et al., Cortical Pain Response in Human Infants, *J Neuroscience* 25, 3662, 2006; Bartocci
13. Thomason ME et al., Cross-Hemispheric Functional Connectivity in the Human Fetal Brain, *Sci Transl Med* 5, 173ra24, 2013.
14. Badr LK et al., Determinants of Premature Infant Pain Responses to Heel Sticks, *Pediatric Nursing* 36, 129, 2010.
15. Brusseau R and Bulich LA, Anesthesia for fetal intervention, in *Essential Clinical Anesthesia*, Charles Vacanti, Pankaj Sikka, Richard Urman, Mark Dershwitz, B. Scott Segal, Eds., Cambridge University Press, NY; July 2011; 772-776.
16. Greco C and Khojasteh S, Pediatric, Infant and Fetal Pain, *Case Studies in Pain Management*, Alan David Kaye and Rinoo V. Shah, Eds., (Cambridge: Cambridge University Press, 2014), 379.
17. Goksan S et al., fMRI reveals neural activity overlap between adult and infant pain, *eLife* 4:e06356, 2015.
18. See, e.g., Ramirez MV, Anesthesia for fetal surgery, *Colombian Journal of Anesthesiology* 40, 268, 2012; Tran KM, Anesthesia for fetal surgery, *Seminars in Fetal & Neonatal Medicine* 15, 40, 2010; Schwarz U and Galinkin JL, Anesthesia for fetal surgery, *Semin Pediatr Surg* 12, 196, 2003; Anand KJS and Hickey PR, Pain and Its Effects in the Human Neonate and Fetus, *N Engl J Med* 317, 132, 1987.
19. "Volumes and Outcomes: Fetal Anomalies," Children's Hospital of Philadelphia, 2017, <http://www.chop.edu/centers-programs/center-fetal-diagnosis-and-treatment/volumes-outcomes#.VLbMhCvF8T->. See also, "Fetal Family Reunion," Children's Hospital of Philadelphia, 2017, <http://www.chop.edu/events/fetal-family-reunion>.
20. Reply from Secretary of State for Health and Social Care in the UK to Sir Edward Leigh MP (6 February 2019)

One of the premier foetal surgeons makes the obvious point:

*"Foetal therapy is the logical culmination of progress in foetal diagnosis. In other words, the foetus is now a patient."*²¹

A European foetal surgery team states: *"The administration of anesthesia directly to the foetus is critical in open foetal surgery procedures."*²²

The leading textbook on clinical anesthesia says:

*"It is clear that the foetus is capable of mounting a physiochemical stress response to noxious stimuli as early as 18 weeks."*²³

A recent review of the evidence concludes that from the 15th week of gestation onward,

*"the foetus is extremely sensitive to painful stimuli, and that this fact should be taken into account when performing invasive medical procedures on the foetus. It is necessary to apply adequate analgesia to prevent the suffering of the foetus."*²⁴

A prenatal surgery group that has performed many foetal surgeries informs the mother before the surgery:²⁵

"You will be given general anesthesia, and that anesthesia will put your baby to sleep as well. In addition, during the prenatal surgery, your unborn baby will be given an injection of pain medication and medication to ensure that the baby doesn't move."

This all points to the fact that unborn babies undergoing surgical procedures are administered pain relief, thereby acknowledging the reality that unborn babies feel pain.

This is in stark contrast to what happens to unborn babies who are about to have their lives ended through late term abortions.

There is simply no justification for denying the same pain relief to an unborn baby about to endure a late term abortion that will end its life and likely involve him or her suffering extreme pain and distress during the procedure.

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21. Adzick NS, Prospects for fetal surgery, Early Human Development 89, 881, 2013.
 22. Mayorga-Buiza MJ et al., Management of fetal pain during invasive fetal procedures. Lessons learned from a sentinel event, European Journal of Anaesthesiology 31, 88, 2014.
 23. Brusseau R and Bulich LA, Anesthesia for fetal intervention, in Essential Clinical Anesthesia, Charles Vacanti, Pankaj Sikka, Richard Urman, Mark Dershwitz, B. Scott Segal, Eds., Cambridge University Press, NY; July 2011; 772-776.
 24. Sekulic S et al., Appearance of fetal pain could be associated with maturation of the mesodiencephalic structures. J Pain Res. 9, 1031, 2016
 25. Adzick NS et al., A Randomized Trial of Prenatal versus Postnatal Repair of Myelomeningocele, N Engl J Med 364, 993, 2011 (from the Informed Consent section of the supplementary Protocol to the paper). We commend the Charlotte Lozier Institute which we found to be a very useful and authoritative resource when compiling this document. <https://lozierinstitute.org>

ABORTION PROCEDURES COMMONLY USED

Two of the most common procedures used to carry out late-term abortions are D&E (Dilation and Evacuation) and Feticide. Termination of pregnancy through induction of labour and without feticide is also practiced. There is the possibility with this method of abortion that the unborn baby will be born alive. Horrifyingly, it is not uncommon for babies that survive the procedure to be given no medical or palliative care and are simply left to die alone unaccompanied in some corner of the facility where the abortion takes place.

During D&E abortions, each limb is removed in turn, the skull is then crushed and then removed from the womb along with the torso. The duration of the procedure is typically 30 minutes.

Feticide involves an injection of potassium chloride into the baby's heart inducing cardiac arrest. Death by feticide usually happens within minutes but can take several hours if the injection goes into the amniotic fluid.

During evidence to the Oireachtas committee on abortion in 2017, Dr Peter Thompson (a consultant in foetal medicine and practitioner of feticide in England) described in detail how in one of the procedures he carries out, the baby is first paralysed with an injection to keep it in position and stop it from moving, then a second injection is administered to stop the baby's heart from beating. When questioned about whether the unborn baby feels any pain during the procedure, he shed no light and appeared totally unfamiliar with the research in this area.

The facts however are clear. D&E abortions expose the baby to a potentially agonising death. In the case of feticide, while potassium chloride usually acts quickly, it is excruciatingly painful if administered without proper anesthesia. When injected into a vein, it inflames the potassium ions in the sensory nerve fibres, literally burning up the veins as it travels to the heart.

The French College of Obstetricians and Gynaecologists guidelines state: [English translation]: "Foetal analgesia is justified by pain stimulation in case of an intracardiac puncture, but also because the injection of KCL [potassium chloride] or death itself can be painful."

In the US, foetal pain legislation currently exists in 19 States, with varying safeguards and protections for unborn babies.

The Institute of Obstetricians and Gynaecologists in Ireland sets out very clearly in its guidelines (January 2020) the various types of abortion procedures used in Ireland for late-term abortions and abortions where the baby has a 'fatal foetal anomaly'.²⁶ There is no mention at all in the guidelines or legislation of any duty on the doctor performing the abortion to administer pain relief to the baby in advance of the procedure.²⁷

A recent study conducted by UCC researchers,²⁸ features interviews with 10 doctors who carry out abortions under Ireland's new abortion law. The doctors talk openly about the "brutal" reality of performing abortions and are forthcoming about the fact that babies are sometimes born alive after failed abortions and are left to die, with doctors "begging people to help" them deal with the situation. The doctors interviewed talk about the "internal conflict" they experience in carrying out the abortions but there is no mention anywhere about giving pain relief to the babies undergoing these late-term abortions.

26. Extracts from Interim Clinical Guidance Pathway for Management of Fatal Fetal Anomalies and/or Life-Limiting Conditions Diagnosed During Pregnancy: Termination of Pregnancy - Institute of Obstetricians and Gynaecologists, Royal College of Physicians (revised January 2020, P.19): Termination of pregnancy can be performed surgically before 14 weeks of pregnancy, when uterine evacuation can usually be achieved by vacuum aspiration with an appropriate-sized instrument after cervical preparation with misoprostol. After this gestational age, fetal size precludes complete aspiration and dilatation and evacuation (D&E) becomes necessary. The Royal College of Obstetricians & Gynaecologists (RCOG, UK) only recommends D&E when undertaken by specialist practitioners with access to the necessary instruments and who have a sufficiently large caseload to maintain their skill. It is unlikely that surgical termination of pregnancy after 12 weeks will be widely available nor that D&E after 14 weeks will be offered in Ireland in 2019, but this may change over time. When undertaking a termination of pregnancy, the intention is that the fetus should not survive and that the process of termination of pregnancy 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 concomitant extreme prematurity. In later stage termination of pregnancy there is the possibility that the fetus could be delivered showing signs of life. This can be traumatic for the woman undergoing the termination and challenging for the healthcare professionals providing treatment and care. Appropriate local policies should be in place to deal with later gestation medical terminations of pregnancy and should be clear about the role of the healthcare professional, in the event of the neonate showing signs of life. Feticide can be performed before medical termination takes place after 21 weeks and 6 days of gestation to ensure that there is no possibility of a live birth. Feticide refers to induced fetal demise performed as part of termination of pregnancy procedure. Feticide should only be performed in tertiary referral centres where there are fetal medicine specialists with the appropriate level of training. In Ireland, it is likely that feticide will only be performed by a few fetal medicine specialists in a small number of tertiary centres. Feticide is most commonly performed before medical termination for FFA/LLC after 21 weeks and 6 days of gestation to ensure that there is no chance of a live birth. Inducing fetal death before medical termination of pregnancy may have beneficial emotional, ethical and legal consequences. In terminations where the fetal anomalies are not compatible with life, abortion without feticide may be preferred. However, in cases where the fetal anomaly is not immediately lethal and TOPFA is being undertaken after 21 weeks and 6 days of gestation, failure to perform feticide could result in a live birth and survival, an outcome that contradicts the intention of the termination. Parents should be offered sympathetic and supportive counselling before and particularly after the procedure. Some may still not opt for feticide, preferring to spend time with the baby whilst alive. Feticide should be performed by an appropriately trained practitioner under aseptic conditions and continuous ultrasound guidance. To perform feticide, intra-cardiac potassium chloride (KCl) injection is most commonly administered and is the recommended method to ensure fetal asystole. Alternatively, and less commonly, fetal demise may be induced by intra-amniotic or intrathoracic injection of digoxin or by umbilical venous or intra-cardiac injection of 1% lidocaine. Neither of these procedures, however, consistently induces fetal demise. After aspiration of fetal blood to confirm correct placement of the needle, 2–3 ml strong (15%) KCl is injected into a fetal cardiac ventricle. A repeat injection may be required if asystole has not occurred after 30–60 seconds. Asystole should be documented for at least 2 minutes and a scan repeated after 30–60 minutes to ensure fetal demise. It is recommended (RCOG, UK; BMFMS, UK) that all units performing feticide develop their own local written guidance with documented procedures; noting, for example, the time at which the needle is inserted, the drugs employed and dose administered, and the times when a needle is withdrawn and asystole confirmed and reconfirmed. Selective feticide can be employed in circumstances where one fetus in a multiple pregnancy has a FFA/LLC. This can be undertaken at various gestational ages. The type of procedure is determined by chorionicity. When fetuses have separate placentas intra-cardiac potassium chloride injection is most commonly performed. In shared chorionicity, selective feticide of the affected twin should be performed by a vascular occlusion procedure such as radiofrequency ablation, bipolar cord coagulation, laser cord coagulation or cord ligation. The optimal surgical approach remains undetermined and is dependent upon gestational age and available expertise. Women may need to be referred to an international centre for these procedures.

27. The Health Regulation of Termination of Pregnancy Act 2018 permits late-term abortion under three separate headings (sections 9, 10, 11). Section 9 permits abortion up to the cusp of viability where “there is a risk to the life, or of serious harm to the health, of the pregnant woman.” This includes risk to the mental health (as well as the physical health) of the woman and doesn't take account of the peer reviewed research in this area that overwhelmingly indicates that abortion is not a treatment for any mental health condition and in fact can have adverse mental health consequences for women. Also, the risk of “serious harm to the health” of the woman is not based on any precise clinical markers or assessments and has been interpreted by some senior medics as meaning if the woman says the continuation of the pregnancy will cause ‘serious harm’ to her health, then that should be enough to satisfy the doctor to proceed with the abortion. Sections 10 and 11 of the Act permit abortion up to birth, where there is no duty of care to the baby at any point whatsoever.

28. Fetal medicine specialist experiences of providing a new service of termination of pregnancy for fatal fetal anomaly: a qualitative study -S Power S Meaney, K O'Donoghue, The Irish Centre for Maternal and Child Health Research (INFANT), University College Cork. Published in British Journal of Obstetrics and Gynaecology (2020)

PAIN RELIEF FOR ANIMALS PROVIDED FOR IN PRIMARY LEGISLATION

The Animal Health and Welfare Act 2013 obliges veterinarians to administer pain relief during any procedures carried out on animals where they are likely to feel pain, discomfort or distress.

Section 17 (1) of the Act states:

"A person shall not, except in accordance with animal health and welfare regulations, perform an operation or procedure (with or without the use of instruments) involving interference with the sensitive tissue or bone structure of an animal without the use of an appropriate anaesthetic or analgesic administered so as to prevent or relieve any pain during or arising from the operation or procedure."

During the Oireachtas debate in 2018 on amendments to the new abortion law, the then Minister for Health rejected a proposed amendment on pain relief during late term abortions and stated as his reason that proposals of this kind could not be best catered for in primary legislation. When it was pointed out to him that the duty to provide pain relief to animals was provided for in primary legislation, the Minister did not address the specific point.

But it remains an issue that must be addressed. What justification can there be for protecting animals from pain and not unborn babies?

PAIN RELIEF AMENDMENT FOR UNBORN BABIES REJECTED

At the conclusion of the Oireachtas debate in 2018 on the Government's abortion law, the Dáil and Seanad voted to reject an amendment put forward by several members of the Oireachtas that would have ensured babies were given pain relief before late term abortions are carried out.

The amendment was a reasonable and humane proposal that also provided for exceptions where the anaesthetic or analgesic would not be administered if it posed any risk to the health or life of the pregnant woman.

PUTTING POLITICS TO ONE SIDE

Making sure that no baby ever dies experiencing pain that could be avoided has to be something that all people of goodwill can agree on?

The growing scientific evidence from around the world that unborn babies experience pain should unite everyone behind putting safeguards in place.

The decision on whether to give pain relief to an unborn child before a late term abortion should not be left to clinicians. It is not a medical decision but rather an ethical and humanitarian one.

Enshrining a provision in law to ensure unborn babies are given pain relief during late term abortions would not in any way impede the functioning of the new abortion law. Introducing a pain relief provision is an entirely separate matter, designed to mitigate the pain and suffering of the baby and nothing more. Attempts to link the two issues together are simply disingenuous.

It is time to put politics to one side and work together to make a small but merciful adjustment to the new law.

