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Are you responding on behalf of an organisation or as an individual?

Organisation

Name of organisation (if applicable):

Medical Ethics Alliance

Position in organisation (if applicable):

Chairman

Profession:

Paediatrician rtd

Please describe your interest in the questions raised by the inquiry:

cf doctorsonfetalpain.com

Do you wish for your evidence to be kept anonymous? (please select)

No

Questions

1. Fetal development and activity - current state of evidence

(Please note if you only have expertise in one area of fetal development, feel free to provide

evidence only for that area. For all evidence provided please provide citations. Please give fetal age in weeks from conception.)

1.1 Please provide an outline of the current evidence regarding fetal development and what age of development each milestone is likely to begin to occur.

Examples of areas that can be covered in this section: Fetal response to light, sound, taste/smell, touch, noxious stimuli and the response that is likely to occur eg limb movement, change in pulse rate, adrenaline level, facial expression; fetal awareness and learning.

FETAL PAIN: THE EVIDENCE

The eleven points below summarize the substantial medical and scientific evidence that unborn children can feel pain by 20 weeks after fertilization.

Click on each statement to see a compilation of quotations from medical publications and experts documenting it, or download the complete set here: [Fetal Pain – The Evidence](#).

(1) Pain receptors (nociceptors) are present throughout the unborn child's entire body by no later than 20 weeks after fertilization and nerves link these receptors to the brain's thalamus and subcortical plate by no later than 20 weeks.

(2) By 8 weeks after fertilization, the unborn child reacts to touch. After 20 weeks, the unborn child reacts to stimuli that would be recognized as painful if applied to an adult human, for example by recoiling.

(3) In the unborn child, application of such painful stimuli is associated with significant increases in stress hormones known as the stress response.

(4) Subjection to such painful stimuli is associated with long-term harmful neurodevelopmental effects, such as altered pain sensitivity and, possibly, emotional, behavioral, and learning disabilities later in life.

(5) For the purposes of surgery on unborn children, fetal anesthesia is routinely administered and is associated with a decrease in stress hormones compared to their level when painful stimuli are applied without such anesthesia.

(6) The position, asserted by some medical experts, that the unborn child is incapable of experiencing pain until a point later in pregnancy than 20 weeks after fertilization predominately rests on the assumption that the ability to experience pain depends on the

cerebral cortex and requires nerve connections between the thalamus and the cortex. However, recent medical research and analysis, especially since 2007, provides strong evidence for the conclusion that a functioning cortex is not necessary to experience pain.

(7) Substantial evidence indicates that children born missing the bulk of the cerebral cortex, those with hydranencephaly, nevertheless experience pain.

(8) In adults, stimulation or ablation of the cerebral cortex does not alter pain perception, while stimulation or ablation of the thalamus does.

(9) Substantial evidence indicates that structures used for pain processing in early development differ from those of adults, using different neural elements available at specific times during development, such as the subcortical plate, to fulfill the role of pain processing.

(10) The position, asserted by some medical experts, that the unborn child remains in a coma-like sleep state that precludes the unborn child experiencing pain is inconsistent with the documented reaction of unborn children to painful stimuli and with the experience of fetal surgeons who have found it necessary to sedate the unborn child with anesthesia to prevent the unborn child from thrashing about in reaction to invasive surgery.

(11) Consequently, there is substantial medical evidence that an unborn child is capable of experiencing pain by 20 weeks after fertilization.

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1.2 Please provide an outline of psychological, physical or behavioural examples of how life in utero might impact later life, whether childhood or adult.

2. Fetal pain and use of analgesia - current state of evidence

2.1 Please provide an outline of the current evidence regarding fetal pain.

(Eg 4D ultrasound, EEG signals, fetal analgesia for surgery in utero, children with hydranencephaly, measurable physiological responses to needling, mesodiencephalon/CNS maturity, extremely premature babies (20 weeks) etc)

2.2 In your opinion, from what age would you consider that a fetus:

(i) Is very likely to feel pain (>90% certainty of pain)

(ii) Probably feels pain (>50% certainty of pain)

(iii) Possibly feels pain (>10% certainty of pain)

(iv) Is unlikely to feel pain, but is theoretically possible to (>1% certainty of pain)

2.3 What reasons might a fetus have for experiencing more acute pain than an adult, and to

what extent might this be experienced?

2.4 As medical science advances and surgery in utero can be performed even earlier, in your opinion, what will be the earliest fetal age that consultants need not administer any fetal analgesia and give muscle relaxant only?

2.5 In your view, what will a fetus potentially experience during these procedures performed under the current published guidelines in the UK:

(i) Dilation & evacuation (used from around 15 weeks of pregnancy)

(ii) Feticide by potassium chloride (used from around 22 weeks of pregnancy)

3 Views on the law, guidance and practice

3.1 Giving reasons, in your opinion, are the current guidelines (eg RCOG Fetal Awareness 2010) relating to fetal development and activity effective:

(i) For medical practitioners?

(ii) For women requesting an abortion?

(iii) For the fetus?

3.2 Please make any recommendations for changes in the following areas that you think would reflect the current evidence regarding fetal development and activity:

a) Law

b) Guidance for:

(i) Medical practitioners

(ii) Women requesting an abortion

c) Education

3.3 Giving your reasons, do you think the current systems (eg RCOG/DH) in place that develop and review guidelines on issues such as fetal development and activity are effective, accountable and impartial to outside interest? Can you suggest ways in which the current systems can be made more effective, accountable and impartial?

3.4 In what ways can you suggest improvements in reassurance to mothers requesting a late term abortion that their fetus will not suffer in terms of:

(i) Fetal pain

(ii) Being born alive after abortion

3.5 In what ways can you suggest to improve data collection and reporting on abortions (including, but not limited to, fetal pain and babies being born alive after abortion)

3.6 In your view, are there any useful precedents for abortion legislation or professional guidance reflecting evidence on fetal pain, awareness and physiological responses from other jurisdictions?

Yes

If yes, please specify:

3.7 Do you have any personal examples or experiences relating to fetal development and activity that you would like to communicate to this Inquiry?