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Dr. Page: I'm in the first few weeks of the life of an embryo. I have a slide presentation that I can show you if you would like... to share this information with you or did you have another question? ...I'm going to try and share the screen if possible.

Maria Caulfield: I think we've got some handouts for your slides. Still back to the presentation.

Dr. Page: So there's no point in sharing the screen, is that what you're saying?

Maria Caulfield: Yeah, I think so....

Dr. Page: Ok... So in order to discuss whether the developing human can experience pain we have to establish some foundational principles of truth. The first being, if you look at the first slide there with the different stages of the embryo. There are no transitional non-human phases of the developing human. The human is distinctly human from the beginning. And even if the images do not look human to you, it's really our limited the ability to see, and what we need to do is to allow the embryo itself to present the evidence to us...The next slide you have...so we're going to talk about the perception of pain. The definition will change our direction of study, so if we impose the definition that's ... and is psychological and vague, we're not going to get the right kind of answers because we haven't asked the right questions. So it's better to use an objective definition, a scientific definition of pain that describes it as a defense mechanism to the body and is directly correlated to tissue damage. People feel pain when they experience tissue

damage. It's very reliable and reproducible data. Okay, because I didn't do the screen share, here

for a minute. Um, I need to see what you're seeing.

The pain...the location of the pain happens in the reticular activating system, so all the messages

about pain arrive in our ... in that part of the brain. So the next slide here where you have the drawing, the schematic of the reticular activating system it shows where all the pain fibres are targeting ... This is where pain perception occurs. It occurs in the lower brain centres, not in the cortex. There are only a few fibres that will exit and will connect to the thalamus out to the cortex for the purpose of localization of pain only. There's not perception. In the next slide here I was showing you, um, how the, um, medical journals repeatedly will imply that pain perception is out of the cortex. Again, this is not the location of pain perception. So the cortex is not necessary for pain perception. And also consciousness exists, and the seat of consciousness is in

the lower brain centres, not in the cortex. The cortex only elaborates pain perception.

So can we return to the picture where we have all the diagrams? I want to kind of help you to see a little bit of the motion change that occur in the developing human. And just shine a little light on what happens there. First of all, when you have these changes occurring we need to realize that the humans are also as a whole. It's knit together and it's never put together in pieces, it's not assembled. It's elaborated as a whole being. Did you have a question?...OK. Um, and so the problem that we have is relating to kind of lifeless, 2-dimensional images, but we have the advantage of seeing things sometimes a little closer to home and that's why I gave you a

picture of a little baby about nine weeks. It was a spontaneous miscarriage. It looks ... helpless

and more fragile and somewhat human, and it's not that hard to imagine that it might feel pain if it were harmed.

This next slide at seven and a half weeks shows the human right at the stage where the entire system that is necessary for pain perception has dramatically enlarged and spread throughout the entire body, so the thalamus starts out a small little button in the brain, and it's mushroomed out at the same time that the peripheral nerves that expanded is stretched out to the periphery of the whole body. So at this time the whole pain perception system has developed and dramatically grown as a whole functioning unit. So at seven and a half weeks this little baby is able to perceive the sensitivity of his environment: he can touch, he can feel, and his brain is being shaped by the stimulus that he is getting in the environment... because he is now able to sense and learn about, touch, and feel, and pain if that would happen there.

In the next picture, at 10 weeks now we have the transition into a new learning stage for the embryo where he is beginning to move and there are all of the expressions and gestures that we

experience as human, that we recognize as human, are beginning to take shape here and they're a

little awkward at first. ...They're frequently practiced until later on they become more coordinated and elegant movements. And that includes smiling and grimacing and yawning and thumb sucking and waving -- all the motions that we would link to human behavior. So this is something that happens, beginning at 10 weeks, and it's becoming more sophisticated with time.

And that includes the motion of breathing, which is also visible to us at 10 weeks, which shapes and develops the lung. So this is important because these motions are actually shaping the brain.

It's not the reverse, where the brain suddenly turns on and the motions appear. They're being practiced, they're being rehearsed, and they're shaping those well-worn paths in the brain. It's a different idea than what we usually think of as the developing process. So now if I show you this picture of a little baby at 14 weeks and ask the question if you think it would hurt if harmed, knowing how far it's come and how much has been going on the whole time, you might consider it a little differently than you would before because you can imagine that he's already experiencing a lot about his environment...I'm going to close that picture.

Maria Caulfield: Okay, well thank you very much, that's...we all found that really helpful in terms of going through the very early stages of development. From your view, in your experience, do you think of a fetus potentially will be experiencing distress during, say, dilation and evacuation and feticide by potassium chloride? You know, at what sort of stages of development do you think they're going to start to feel, if any, discomfort and distress during those two procedures?

Dr. Page: So, first of all, the process of the dilation and evacuation involves tearing the fetus apart and I would imagine that we wouldn't apply that method of execution to any human being. The other method used, when there's an injection of potassium chloride...I want to describe to you testimony given by Dr Gary George, who, ...he's a radiologist, board certified, he served in

the United States Air Force for four years where he was the consultant to the Surgeon General in

radiology during his final two years. And he's currently in Miami Valley Hospital in Dayton, Ohio. And this is his testimony based on his personal experience. When he was a resident, doing

his first ultrasound rotation, he observed his first selective reduction procedure. A woman had undergone IVF treatment for infertility. She was pregnant with triplets. She and her husband decided they could only handle having twins and wanted to have selective reduction of one of the triplets at 18 weeks. "I observed while the ultrasonographer," This is Dr. George's testimony, "scanned the three babies and provided live images so the obstetrician could aim a long needle through chest and into one of the babies' hearts in order to make a lethal injection. As the sharp needle touched the baby's chest, the baby immediately withdrew, and began to rapidly move its arms and legs. The needle was unable to penetrate the chest. The mother started crying when she

saw the horrific images on the screen. Her husband told her not to look, and the obstetrician told the tech to turn the screen away from the mother's view to soften the reality of what was happening. The obstetrician made a second and third attempt on the same baby, but the same immediate withdrawal and flailing about...but again was unsuccessful. At that point the obstetrician decided to target another one of the triplets, a weaker member..." and at that point, Dr. George said he felt physically sick like he was going to vomit, and left the room. He says "I know from talking to the ultrasonographer that the obstetrician was eventually successful in penetrating chest and heart of one of the weaker triplets." He also knew that from that point on he was no longer ambivalent about abortion: "the baby that I saw that day," he says, "felt pain and suffering. This was not just some automatic reflex. That mother also suffered tremendously that day, and likely everyday since then. I can only imagine the pain of looking into the faces of two living twins knowing that there was another baby just like them that was selectively reduced." I've heard Dr. George give that testimony a couple of times and give a very graphic description of what really goes on that most of us don't see.

Maria Caulfield: Well thank you. I mean, that's very moving testimony indeed. Fiona, did you have some questions?

Fiona Bruce: Yes, I'm conscious that we have very little time, and your testimony has been extremely helpful. Do we need to...

Lord Alton: Would it be ok if...Dr. Page, please may we send you the last few questions to you by email for you to respond to, because unfortunately we have run out of time.

Dr. Page: Okay. I'm having a little bit of trouble hearing you, are you asking that I send a written email of the...in answer of a few questions?

Lord Alton: Yes. We'll just send a few more by email, but thank you so much for your testimony just now.

Maria Caulfield: It was very helpful

Fiona Bruce: Very helpful indeed, yeah.

Dr. Page: Thank you for giving me the opportunity. Have a good day. Bye.