AIMS For a better birth...

Blood money for what? The continuing saga

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In the AIMS Journal (Vol 16 No 4), Professor Naomi Pfeffer, a sociologist and historian who researches and writes about human tissue collection and stem cell research and therapy, explained why unregulated private blood banks threaten to exploit pregnant women.
George Macridis, Managing Director of Future Health Technologies responded.

While Professor Naomi Pfeffer's article on unregulated private cord blood banks contained some interesting points, I feel that I must disagree with her about some of the conclusions she drew. Although stem cell transplants are currently used to treat leukaemias and blood disorders, medical researchers have discovered that stem cells may have an important future role to play in combating heart disease and diabetes.

This means that there is every point in storing umbilical cord blood, if a parent chooses to do so, because we do not know what advances are around the corner.

Professor Pfeffer is correct when she states that it is not yet known whether stored cells remain viable after a prolonged freezing period. However, there is evidence that they can remain viable after 15 years. It is quite likely that they will last longer. Also, because at Future Health Technologies our facilities are accredited by the Department of Health, if parents feel they no longer need the stored cells then they can be donated to the NHS cord blood bank. For a parent to store blood in a private bank ensures they can gain access to the sample if it is ever needed, something which does not necessarily happen with the NHS bank.

I believe that Professor Pfeffer is missing the point when she says that stem cells collected from cord blood will not be useful for the treatment of an individual with a genetically inherited disease, as the stem cells themselves would have the same defect. While this is undoubtedly true, it should also be mentioned that the cord blood is extremely likely to be compatible with siblings and other family members. As a result, stored cord blood from a healthy sibling could potentially be used to treat one with a genetically inherited disorder.

Here at Future Health Technologies, we aim to ensure that all our clients are completely informed about stem cells, their use, potential and the procedure in collecting and storing them. There is no such thing as the ultimate health insurance and we have never promised such.

We are completely open about the fact that the stored cord blood may never need to be used. In fact we compare banking stem cells to taking out house insurance; very few people will ever need to claim but it

is always reassuring to have it.

We agree that there may have been some over-hyping of the potential of stem cells by the media in the sense that although there are constant developments it may be some years before stem cells are used to treat common diseases. But we believe that parents should be fully informed of the services available and have the freedom to choose whether to take advantage of them. One issue where I would wholeheartedly back Professor Pfeffer is in the lack of regulation of private cord blood banks. It is shocking that we are, to the best of my knowledge, the only such bank that has been fully accredited by the Department of Health. The only way for members of the public to be able to use the private sector with confidence is if all such organisations have to obtain accreditation before being allowed to operate in the UK. This would ensure that, at the very least, all would meet minimum standards.

We invited Professor Pfeffer to comment on his letter and this is her reply

Our body, our own stem cell bank

I welcome the letter from George Macridis, MD of Future Health Technologies, as it provides me with an opportunity to explain how placing your baby's umbilical cord blood in a private bank has become even more unnecessary than I previously pointed out.

Stem cell research is a rapidly moving field. One of the most exciting recent discoveries is that so-called progenitor cells, the cells which are the basic building blocks of all tissue and organs in the human body, are found in adults. These 'adult' progenitor cells can be recovered, expanded and used to repair damage of tissue and organs of the person from whom they are collected.

And another recent research finding is that 'adult' cells are much more plastic than had been thought, which means they can be manipulated to form other cells, so that, for example, cells that line the nasal passage might be reprogrammed to repair a damaged spinal cord. These findings sound the death knell of private cord blood banks: there is no need to store a baby's umbilical cord blood 'just in case' she needs stem cell therapy later on in life because progenitor cells can be found in her body. Another great advantage of this discovery is it gets rid of the problem of immunology. A transplant of stem cells from one person to another risks rejection for the same reason as a transplanted organ such as a kidney or a heart is rejected. A transplant recipient, throughout their life, must take drugs to prevent their immune system from rejecting the transplant.

George Macridis might claim that stored cord blood from a healthy baby could still be used to treat a sibling with a genetically inherited disorder, but closely related people do not necessarily have a similar immunological identity. The only exception to this rule is identical twins where both siblings will have the same genetically inherited disorder.

In using progenitor stem cells collected from the patient's body, the problem of rejection disappears. The technical term for this process is autologous; a stem cell transplant from another person is called allogenic. Therapies using autologous stem cells are recognized as the most promising development in

stem cell research. Their value is currently being tested, for example, in the treatment of heart disease, and to see whether it is possible to 'grow' a patient's own skin to treat a drastic burn or wound. Autologus treatments mean that each of us is our own stem cell bank. Autologous treatments with 'adult' progenitor cells mean there is no good reason to pay a private tissue banker to freeze your baby's cord blood.

Professor Naomi Pfeffer