Journal of Assisted Reproduction and Genetics (2019) 36:1971
https://doi.org/10.1007/s10815-019-01503-z

LETTER TO EDITOR

Letter to Editor

Meenakshi Choudhary [1]

Received: 5 June 2019 / Accepted: 7 June 2019 / Published online: 19 June 2019

To The Editor,

The article by Pompei and Pompei published recently in JARG challenges the current ban in the USA for mitochondrial replacement therapies (MRT) to prevent transmission of mitochondrial DNA disease (2019 36:383–393; doi.org/10.1007/s10815-018-1370). It explores the regulatory, ethical and inheritance hurdles in the USA to permit the use of this technique.

However, it would be pertinent to offer clarity in the paper regarding the purpose and objective of performing MRT. Although the whole paper is based around preventing inheritance of life-debilitating mtDNA disease, it overlooks the fact that the babies born in Ukraine by MRT were for unexplained infertility and recurrent implantation failure rather than to women with mtDNA disease for disease prevention in offspring. This is a crucial argument that needs to be highlighted especially when addressing allowing MRT in the USA. From an ethical point of view, should MRT be permitted only for those who are at risk of passing on severe mtDNA disease? Or should it be offered for non-heritable indications such as recurrent implantation failure whereby there is lack of robust scientific evidence to support this?

The key omission in the paper is the emphasis on the rationality of purpose for mitochondrial replacement therapies. It should be made clear that the first country to legalise MRT in the world, the UK, has permitted cautious use of this technique only for those women with mitochondrial DNA disease mutation and not for other causes such as ovarian ageing or implantation failure.

It is also pertinent that there are checkpoints present to ensure transparency throughout the process to avoid misuse of the reproductive technology and to have robust quality management system in place.

There is a right way to do (for instance, the UK way with science, ethics, law and societal deliberation) vs a shortcut way by bypassing the system which may open a can of worms and be open to exploitation.

Another example that raised uproar in the scientific and ethical field alike was the recent news of babies born in China by using the germline modification, CRISPR technique to prevent HIV infection. It is our responsibility to take cautious measured steps in the rapidly evolving field of reproductive technology prior to its clinical implementation so that we can protect the future generation from any potential harm. A 'regulated' approach is far better than a 'total ban' or 'no restriction' policy.

Yours sincerely,
Dr Meenakshi Choudhary

✉ Meenakshi Choudhary
meenakshi.choudhary@nuth.nhs.uk

[1] Reproductive Medicine, Egg and Mitochondrial Donor Programme, Newcastle Fertility Centre at Life, Newcastle upon Tyne Hospitals NHS Trust, Biomedicine West Wing, Newcastle upon Tyne NE1 4EP, UK