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Screening creates 'disease free' baby (BBC News)



The child is now 18 months old and genetically "safe"

A woman has chosen to have a genetically selected baby to ensure it does not develop early onset Alzheimer's disease which runs in the family.

The woman, who is 30 and has not been identified, may be unable to recognise or care for her daughter within 10 years.

She and her family carry a mutation which causes the onset of Alzheimer's disease before the age of 40.

However, the child, who is now about 18 months old, did not inherit the tendency to develop the disease.

Early onset Alzheimer's, a very rare condition, is defined as Alzheimer's - a form of dementia - that strikes before the age of 65.

Researchers at the Reproductive Genetics Institute of Chicago said the baby's birth marked the first time preimplantation genetic diagnosis, as the technique is called, has been used to weed out embryos carrying the defect that causes early onset Alzheimer's.

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Dr Yuri Verlinsky

The little girl is thriving, said Yuri Verlinsky, chief author of the report in this week's Journal of the American Medical Association.

Verlinsky said genetic screening has been used more than 3,000 times and is often employed to avoid inherited disorders like sickle cell anaemia.

His clinic was involved in a case last year where an embryo was chosen to provide stem cells to assist a sibling of the unborn child.

Ethical debate

While the child's mother is still healthy, her sister developed early onset Alzheimer's at the age of 38, her father died at 42 after suffering psychological and memory problems and one of her brothers began having short-term memory problems at 35.

He said: "I can't speak for the public, but it's a decision of the family and not the public."

In a commentary published in the same journal, Dena Towner and Roberta Springer Loewy of the University of California said the study raised ethical questions.

They said: "Much like her sister, the woman in the report ... most likely will not be able to care for or even recognise her child in a few years."

The two doctors said the mother acted responsibly by ensuring that her child will not have to live with the threat of developing early onset Alzheimer's.

However, they took issue with defining her ethical responsibility "solely in terms of disease prevention" without considering that she may not be able to care for her child.

"The differences between these two interpretations of ethical responsibility are stark, but both rest on assumptions made about reproduction - is it a privilege or it is an unquestionable and inalienable right?" they asked.