Frankenstein fears after head transplant

A new brain could be available in the future

A controversial operation to transplant the whole head of a monkey onto a different body has proved a partial success.

The scientist behind it wants to do the same thing to humans, but other members of the scientific community have condemned the experiments as "grotesque".

Professor Robert White, from Cleveland Ohio, transplanted a whole monkey's head onto another monkey's body, and the animal survived for some time after the operation.

The professor told the BBC's Today programme how he believes the operation is the next step in the transplant world.

And he raised the possibility that it could be used to treat people paralysed and unable to use their limbs, and whose bodies, rather than their brains, were diseased.

This is medical technology run completely mad Professor Stephen Rose, Open University
"People are dying today who, if they had body transplants, in the spinal injury community would remain alive."

He said that in the experiment, his team had been able to: "transplant the brain as a separate organ into an intact animal and maintain it in a viable, or living situation for many days."

He added: "We've been able to retain the brain in the skull, and in the head."

That, he said meant the monkey was conscious, and that it could see, hear, taste and smell because the nerves were left intact in the head.

He admitted that it could appear "grotesque", but said there had been ethical considerations throughout the history of organ transplants.

"At each stage - kidney, heart, liver and so forth - ethical considerations have been considered, especially with the heart, which was a major, major problem for many people and scientists.

"And the brain, because of its uniqueness poses a major, major ethical issue as far as the public and even the profession is concerned."

'Scientifically misleading'

The arguments against head and brain transplants were outlined by Dr Stephen Rose, director of brain and behavioural research at the Open University.

He said: "This is medical technology run completely mad and out of all proportion to what's needed.

"It's entirely misleading to suggest that a head transplant or a brain transplant is actually really still connected in anything except in terms of blood stream to the body to which it has been transplanted.

"It's not controlling or relating to that body in any other sort of way."

He added: "It's scientifically misleading, technically irrelevant and scientifically irrelevant, and apart from anything else a grotesque breach of any ethical consideration."

"It's a mystification to call it either a head transplant or a brain transplant.

"All you're doing is keeping a severed head alive in terms of the circulation from another animal. It's not connected in any nervous sense."

The issue of who someone who had received a head transplant would "be" is extremely complicated, said Professor Rose.

"Your person is largely embodied but not entirely in your brain."

He added: "I cannot see any medical grounds for doing this. I cannot see that scientifically you would actually be able to regenerate the nerves which could produce that sort of control.

"And I think that the experiments are the sort that are wholly unethical and inappropriate for any possible reason."

He added that the way to help the quadriplegic community was to work on research to help spinal nerves regenerate.