Scientists: Now Using Pig Organs For Transplants Into Humans

Technocrat scientists see no risk to humans when substituting pig organs for human organ transplants, which they claim are ‘functionally similar’. To qualify, the pigs must first be tested for 40 different kinds of viruses to prevent unwanted infections. There will be no widespread testing before this practice becomes routine.

A team of scientists says it has created a pig that can be used in transplantations in humans.

According to the team, which includes researchers from Meiji University and Kyoto Prefectural University, the animal is the first to be developed for transplantation based on national guidelines for xenotransplantation, in which animal organs and cells are transplanted into humans.
The team will present its findings at a forum of the Japanese Society for Xenotransplantation in Suita, Osaka Prefecture, on Saturday, and plans to jointly supply the pigs with a private company early next year.

More than 200 pig-to-human xenotransplantations have been conducted in New Zealand, Russia and other countries in response to a shortage of organs for transplant, as pig organs are functionally similar to those of humans. No such xenotransplantations have been conducted in Japan.

In 2016, the Health, Labor and Welfare Ministry revised guidelines on the production of animals for transplantation, among other matters. The guidelines require pigs to be raised in a clean, isolated environment and to be tested for 40 kinds of viruses to prevent infections and ensure the safety of humans.

The scientists raised the miniature pigs in pathogen-free conditions. They first removed and disinfected the uteruses of three pregnant pigs, before extracting 17 newborn piglets. The piglets were fed sterile artificial milk and raised for three weeks. The final result yielded pigs that each weighed about 1.8 kilograms and were suitable for transplantation.

Tests thus far have only revealed the presence of a retrovirus that is harmless to pigs but said to potentially cause unknown diseases in humans.

However, there have been no reports of pig-to-human retroviral infections in transplants conducted overseas, with the guidelines calling for long-term monitoring after transplantation.

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