Surgeons at Kochi-based Amrita Institute of Medical Sciences and Research Centre has successfully carried out the first phase of trachea transplant in Asia for a female patient.

The highly complex procedure known as tracheal homograft has been carried out only once earlier in Belgium, though surgeons in Spain and the USA have tried different procedures like tissue engineering or synthetic trachea.

The first trachea transplant was carried out by Dr. Paolo Macchiarini at a hospital in Spain on Claudia Castillo, through tissue engineering. The second person in the world and the first in the US to receive a synthetic trachea engineered with the patient's own stem cell was Christopher Lyles of Maryland. But he survived only four months after the surgery and died in 2012.

The patient in Kochi was suffering from cancer of the whole length of trachea - the wind pipe from voice box to lungs. She had a slow-growing tumour, which blocked breathing due to internal growth, said Professor Subramanian Iyer, Head of Neck and Plastic Reconstructive Surgery at Amrita Institute of Medical Sciences & Research Centre.

The procedure was done on a lady who was diagnosed to have cancer of trachea. As the cancer was involving the whole length of trachea, tracheal transplant could be the only treatment for her, said Dr Iyer, confirming the success of the first stage.

The transplantation has been planned in two stages. In the first stage, done on Thursday, the soft tissue and mucosa of the donor trachea was denuded off before it
was placed into the recipient forearm by a complicated and lengthy surgery, which took 12 hours.

In the second stage, two months after the initial surgery and once it is sure that it has taken new blood vessels and become viable, the new trachea in the forearm will be harvested along with its blood vessels to replace the diseased trachea.

The success of the procedure can be made sure only after the second stage, said Dr. Krishnakumar Thankappan, who was part of the team alongwith Dr. Iyer. (ANI)