

Vision must for infant brain to develop face recognition skills

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Hyderabad: A study has revealed that infants need to see early for their brains to recognise faces. It adds that sounds might help the brain recover some visual abilities when sight is restored later, if the infants can't see.

With modern cataract surgery, even people born blind can regain sight. Conducted by doctors from LV Prasad Eye Institute (LVPEI) and from two German varsities, the study aimed to explore the issue that when vision returns, does the brain's sound-processing pathways help or interfere with learning to see?

Published in US journal Human Brain Mapping, the study included eight adults born blind due to dense cataracts but who gained sight through surgery aged between 6 months and 4 years. They were compared with eight people with normal vision of similar age. Doctors showed them short video and audio clips of faces, body parts, places and objects. The findings revealed that people with cataracts early in life showed much weaker brain activity for faces than those with normal sight. "This may explain why many such people have trouble recognising faces even after surgery," said LVPEI's Dr Ramesh Kekunnaya, author of the study.

It looked at a part of the brain called ventral occipital temporal cortex (VOTC), which helps people recognise things such as faces, places and objects. In people born blind, this area can still respond to sounds such as laughter or ocean waves. The brain can use hearing to make up for missing vision to some extent. However, brain

responses to other things such as objects or scenes were mostly usual. Doctors stressed early vision's importance to develop proper face-recognition skills.

Prof Brigitte Röder, head of biological psychology and neuropsychology at University of Hamburg, said, "Early vision from the centre of the eye is important to learn to recognise faces, though this part of the eye develops over the first few years. This study shows why early treatment is vital for children born blind."