The Japan Times

Blind patients detect light through retina chips

OSAKA (Kyodo) A group of researchers has succeeded in getting two blind patients to perceive light again by installing electrodes in their eyes to stimulate their retinas, a senior researcher said Sunday.

The procedure, which had never been performed in Japan, can only be used on people who have lost their vision because of retina problems.

From April through July, the team at the Osaka University Graduate School of Medicine placed 7-sq.-mm platinum chips with 49 electrodes each behind the retinas of the eyeballs of two women who had lost sight more than a decade ago due to retinitis pigmentosa, according to professor Takashi Fujikado.

They also installed a 1-mm electrode in each eyeball.

The research group attached CCD cameras to the women's foreheads to convey visual information to the eye chips after converting the data through an extracorporeal device.

The converted information stimulated their retinas and was conveyed to their brain, allowing them to follow lights on computer screens with their fingers, according to Fujikado.

"We want to help them read big characters within two years, and they might be able to walk without canes in several years' time," Fujikado said.

The patients, a 72-year-old woman from Hyogo Prefecture and 67-year-old woman from Chiba Prefecture, used the chips for about a month before they were removed.

Later, the Chiba woman found that she could still perceive candlelight even without the chips because the nerves in her retina were somehow reactivated, Fujikado said.

A different method of delivering electrical stimulus to the retina

has been studied in the United States, but the technique developed by the Osaka team is said to be safer because positioning the chips in the sclera makes it less likely they will cause damage.

The Japan Times: Monday, Dec. 6, 2010

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