

Blind man sees with help from tooth-implanted lens

9 October 2013, by John Hewitt



Ian Tibbets radical eye surgery. Credit: video.perthnow.com.au

(Medical Xpress)—In 1998, Ian Tibbets lost vision in his right eye, some time after he severely injured the cornea with a piece of scrap metal. Later on he also lost vision in his left eye. Tibbets was eventually referred to Christopher Liu, a surgeon at the Sussex Eye Hospital, and was qualified for a radical procedure known as osteo-odonto-keratoprosthesis (OOKP). The procedure sounds a little strange, and it is, but for Tibbets and the five other patients who have undergone the procedure, it worked.

The two step [procedure](#) was developed in the early 1960s. A [tooth](#), along with a bit of attached bone, is first removed from the patient and machined to accommodate a plastic lens. The lens-tooth is then implanted within a fleshy pouch under the socket of the eye that not being operated on. A flap of skin is also removed from the inside of the cheek, and stitched to the front of the eye which will receive the tooth. The tooth itself is acts a convenient chassis for the lens that is acceptable to the immune system. Provided it is from the patient themself, the tooth should not be rejected.

The second part of the procedure is done about

four months later, after there has been sufficient time for vascularization of the tooth. Part of the cornea, iris and the vitreous gel are first removed from the operated eye. Then the tooth and associated bone lamina are cut out and stitched into the prepared eye socket, and re-covered with the flap of cheek skin. The procedure generally has a good prognosis. Over time there is a risk of failure of the lamina, mainly due to the possibility that the body will resorb it. Those risks can be significant when the procedure involved glaucoma, or if the implanted tissue was an allograft (obtained from another person).

Mr Tibbetts' [vision](#) in the repaired eye has gradually come back to around 40 per cent, permitting him to see the face of his wife, and for the first time, his two children. The small black pupil inside of a pink [eye](#), makes his new look rather distinctive, to say the least. But for Tibbets, and potentially many others, the rewards are worth the occasional second glance from strangers.

More information: via [Independent](#)

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