





HKU Faculty of Dentistry launches research project providing free implant treatment for facial defects

The HKU Faculty of Dentistry has been awarded a project grant of HK\$ 2.13 million by the SK Yee Medical Foundation to investigate the use of a modern method to artificially replace missing facial parts, such as eyes, ears, or nose, while helping Hong Kong residents who are financially challenged.

The project will use metal implants and computer-assisted design and manufacturing technology to improve the retention of artificial replacements (prostheses) in local patients who have a facial defect due to congenital conditions, traumatic injuries, burns, or surgical removal of tumours. The grant will enable clinicians in the Faculty's Discipline of Oral and Maxillofacial Surgery and co-investigators at the Prince Philip Dental Hospital and United Christian Hospital to provide free implant-supported facial prostheses for 60 adults who come from lower-income families. Patients who are financially stable can also apply but will have to pay for the implant and prosthesis treatment.

A dedicated hotline (Tel: **2859 0234**) staffed by the project group has been set up to enrol potential patients and to answer any queries about the free treatment. Prospective patients will be asked to attend a screening appointment to assess eligibility and they will be informed of the project details and possible risks and benefits.

The surgical treatment provided will involve attaching a facial prosthesis to one or more titanium posts that have been implanted into the patient's bone. With time, the titanium implant will permanently fuse with the bone. This strategy has advantages over traditional methods of prosthetic attachment such as applying medical-grade skin glues or solvents, or attaching a facial prosthesis directly to bony or soft tissue.

"Unfortunately, traditional treatments often have difficulties with retention, stability, discoloration, inconvenient use, and lack of acceptance," said Prof Lim-kwong Cheung, Chair Professor of Oral and Maxillofacial Surgery, who is the principal investigator of the funded project. "Past research by us and others has shown that the use of implants in providing retention to craniofacial prostheses minimises most of these disadvantages. Furthermore, the use of digital colouring can improve the matching of the prosthesis to facial skin colour."

Patients with skull or facial disfigurements that affect their appearance can experience increased vulnerability to psychological and social difficulties throughout their lives. "Adults with craniofacial deformities have reported that they feel discriminated against because of their facial appearance, with negative effects on getting hired for a job, keeping a job, and getting a promotion," added Prof Cheung. "Improvements in appearance and function could have profound effects on both well-being and productivity."

Prof Cheung's project team will investigate the short- and long-term impacts of using implant-supported facial prostheses, including physical, psychological, and social effects, as well as people's satisfaction, well-being, and quality of life. The project co-investigators are Prof Samuel Ho, Prof Colman McGrath, Dr Edmond HNPow, Dr Siu-chung Fung, Dr John Lo, and Dr Stephen Tam.

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Media contact:

Ms Sau-wan Cheng, Knowledge Transfer Officer, HKU Faculty of Dentistry; Tel: 2859 0410; E-mail: dentke@hku.hk

Prepared by Dr Trevor Lane, Knowledge Exchange Unit, HKU Faculty of Dentistry. Although every care has been taken to ensure the accuracy of the contents of this news release, they do not necessarily reflect the official policies of the Faculty or University and are intended for informational or educational use only; the copyright owner accepts no responsibility for errors or omissions.

