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Proposed Campus Intellectual Product for Business Development Program "Ocular Prosthesis Consultation and Service Center Second Year"

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Abstract **Original Research Article**

In relation with the efforts to develop a knowledge-based economy culture, Universitas Sumatera Utara needs access in realizing knowledge and technopark that utilize the knowledge, education, and research results of lecturers. By organizing the Campus Intellectual Product Business Development Program, Universitas Sumatera Utara has the opportunity to obtain income and helps create new entrepreneurs. As one of the study programs at Universitas Sumatera Utara, Prosthodontics Study Programs also wants to participate to develop a knowledge-based economic culture to create new entrepreneurs in accordance with the vision and mission of the Prosthodontics Study Program. For this year, the proposing team wants to continue a business unit for the Consultation Center and Ocular Prosthesis Services. In this second year, many developments were carried out from the first year, especially equipping tools and materials in the eye laboratory and providing clinical services such as consultation and manufacture of ocular prosthesis.

Keywords: Campus intellectual product, ocular prosthesis consultation, ocular prosthesis service center.

INTRODUCTION

Manufacturing custom ocular prosthesis is one of the competencies of prosthodontists, because prosthodontists not only deals with denture problems but also maxillofacial rehabilitation, such as custom ocular prosthesis, ears prosthesis, noses prosthesis, feeding plate, and obturator. In principle, the procedure for manufacturing ocular prosthesis has many similarity with prosthesis. The initial procedure starts from impression of the eye sockets using low viscosities impression material and a special tray, followed by a wax pattern trial, secondary impression, sclera trial, determination of iris and pupil, and coloring of the iris that is adjusted to the patient's original eye color [1, 2].

Etiology of the loss of eye can be congenital, trauma, and pathologic. Treatments that can be done for eye surgery such as evisceration and enucleation. Evisceration is a surgical procedure that removes the contents of the eyeball, but leaves the sclera and the binding tissue in the orbital cavity. The appropriate treatment for evisceration is using stock eye, and in a special condition can be done with modification of custom eye. Enucleation is surgical procedure that involves removing the entire eyeball by removing and cutting the tissue that binds it in the orbital cavity. In this case, the appropriate treatment is using a custom eye [3-6].

The problem that we were facing was that, after the surgical procedure there was no place that was able to facilitate the synergy between ophthalmologists and prosthodontists, so that if the patient received advices from an ophthalmologists at an eye hospital or eye clinic about postoperative care with making an ocular prosthesis, the patients needed to go to find the prosthodontist again which was not efficient in terms of time and cost, because the patient did not only from Medan, but also from the surrounding areas. If there has already one place that directly serves from consultation to making ocular prosthesis, this will definitely make it easier for patients. With these problems, an idea emerged from the team that proposed the Campus Intellectual Product Business Development Program to create one center that focused in giving services such as consulting and making ocular prosthesis, which so far did not exist in Indonesia.

METHOD

The consultation procedure was carried out online with an ophthalmologist, after the ophthalmologist states that the patient could proceed to

the next stage, prosthodontist would proceed in making an ocular prosthesis. Starting from anatomical impression (Figure 1) to obtain an anatomical model, then proceeded to making wax pattern and did the try-in.

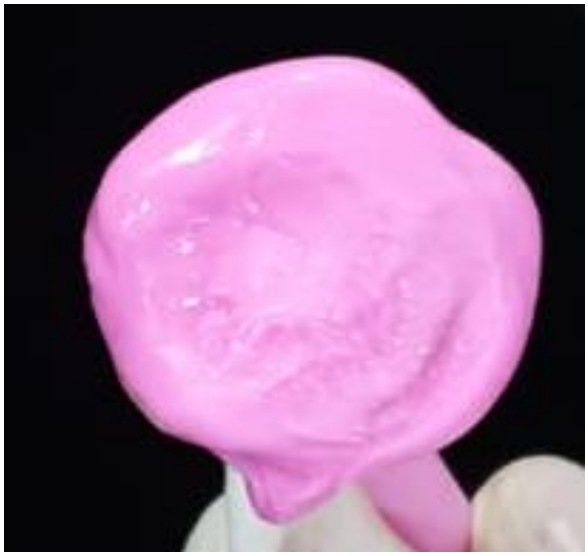

Fig 1: Anatomical impression

After that, physiologic custom tray was made, and followed with physiological impression to obtain a working model. Iris button was made, which consisted of coloring the iris, making the button, and polishing it. Followed by making the scleral wax pattern, try-in, and determining the iris position and color of the sclera (Figure 2).

Fig 2: Sclera wax pattern try-in, and determining iris position and color of the sclera

After that, sclera was packed with acrylic, try-in the acrylic sclera, reducing the sclera, coloring the sclera, packing with clear resin acrylic, ocular prosthesis insertion (Figure 3), and control (Figure 4).

Fig 3: Insertion of ocular prosthesis

Fig 4: Control

Fig 5: Ocular prosthesis laboratory in the development stage

DISCUSSION

The ongoing activity resulted in several suggestions, such as:

1. Continuity in providing counseling about the manufacture of ocular prosthesis, so that there will be many medical teams and post-evisceration and enucleation patients that know the importance of making ocular prosthesis after surgery and know the competence of prosthodontists in making ocular prosthesis.
2. Patients who were already wearing ocular prosthesis must have periodic control to check the condition of the eye sockets and the suitability of the ocular prosthesis that is used.
3. After seeing a patient who felt comfortable and have improved their quality of life after wearing the ocular prosthesis, then patients who have not previously been motivated to make an ocular prosthesis, or are unable to attend during the activity, can immediately contact the staff at SMEC, and report to the team, so that further activities can be made.
4. The main obstacle in this activity is that the USU Dental Hospital has not been opened for service activities. With several urgent matters such as professional activities both in dentistry and dental specialist education programs, as well as the Campus Intellectual Product Business Development Program, it is hoped that can be used as material for consideration in carrying service activities while still prioritizing health protocols.

CONCLUSION

So far, there has not been a single service center that was able to facilitate a synergy between ophthalmologists and prosthodontists, so that if the patients received advice from an ophthalmologist at an eye hospital or eye clinic regarding post-surgical care with ocular prosthesis fabrication, the patient had to go looking for prosthodontists again. This condition was less efficient in terms of time and cost, because these patients did not only come from the Medan area, but also from the surrounding area. If there was already a place that could directly serve from consultation to the manufacture of ocular prosthesis, it would definitely make it easier for the patients. Thus, with the Campus Intellectual Product Business Development Program "An Eye Consultation and Service Center", which so far did not exist in Indonesia, it was hoped that post-eye surgery patients would find it easier to find information and services that suit their needs in an effort to improve their quality of life. In addition, training on making ocular prosthesis will be carried out, with the target (resident) who are attending post graduate prosthodontic program can increase their creativity for the development of the entrepreneurial spirit.

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