to the reduced expression of TGF-β1 and stimulation of the antifibrotic pathway.

CONCLUSION: Overall, our results show that EGF and TGF-β1 can influence the genetic markers in keloid tissue and stimulate the antifibrotic pathway within the intracellular environment.

Effectiveness, Indications, and Side Effects of Oral Propranolol Treatment for Infantile Hemangioma in Japanese Patients

Presenter: Michika Fukui, MD

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BACKGROUND: Infantile hemangioma (IH) is a common benign tumor, which arises in 1.7% of newborns in Japan. They are often treated at the field of plastic and reconstructive surgery. IH can cause disfigurement and/or lead to serious complications depending on their specific locations, for example, disturbing vision, airway at perioral area. It has been reported that 12%–24% of IH patients have any complications and require medical treatment. In our country, oral propranolol treatment for IH application has only been covered under the national health insurance system since 2016. However, there have been few reports about the efficacy of oral propranolol against IH in Japanese patients. In this study, we examined the effectiveness and side effects of oral propranolol treatment for IH conducted at our hospital.

METHODS: This study examined 12 cases of IH that were diagnosed between January 2017 and August 2018. All 12 patients were treated with oral propranolol (due to ulceration, a functional disorder, or cosmetic issues or risks of tumor-related bleeding). Sex, age at the onset, the affected site, clinical type, age at the initial administration of propranolol, the reason for propranolol treatment, the hospitalization period for initiation of propranolol treatment, the duration of propranolol treatment, the treatment response (tumor reduction, color change, regression, or softening; rated as excellent, good, or fair), and side effects were evaluated.

RESULTS: The 12 patients included 3 males and 9 females. The face and trunk were affected in 8 and 3 cases, respectively. Nine patients had superficial IH. The patients’ mean age at the start of propranolol treatment was 3.7 months (range, 1–8 months), and the mean duration of hospitalization was 4.5 days (range, 4–7 days). Oral propranolol was continued for 12.4 months on average. All of the IH reduced in size after the propranolol treatment. Nine, 2, and 1 cases exhibited excellent, good, and fair responses, respectively. There were no side effects (0 of 12 cases). Six patients were treated with a dye laser. Two of them underwent dye laser treatment while being treated with propranolol because of the rapid growth of their IH. In 3 patients, a dye laser was used to alter the color of the IH after the propranolol treatment.

CONCLUSION: Oral propranolol treatment successfully reduced the size of the tumor in all cases. The success rate (excellent or good) was 91.7% (11 of 12 cases). In this study, no patients have side effects. However, serious side effects have been reported. Therefore, further accumulation of Japanese IH cases is expected. It is important to observe patients carefully after the initiation of propranolol treatment and to monitor their vital signs and blood sugar levels. Finally, oral propranolol treatment is recommended for IHs, especially which disturb the patient’s vision, airway, eating at perioral sites, or expands rapidly, or which is not feasible in laser irradiation, for example, IH at hairy area or IH with ulceration.

Silver-impregnated Negative-pressure Wound Therapy for the Treatment of Open Wounds in Lower Extremity: A Prospective Randomized Clinical Study

Presenter: Dong Hwan Lee, MD

Co-Authors: Hyung Min Hahn, MD; Il Jae Lee, MD, PhD

Affiliation: Ajou University, Suwon-si, Korea, Republic of (South)

Over the last 2 decades, negative-pressure wound therapy (NPWT) has been successfully applied to the treatment of various wounds. Recently, as a result of the development of a more-refined NPWT system, a silver-containing polyurethane open-cell foam has been introduced. The aim was to demonstrate the antibacterial efficacy of silver-impregnated NPWT compared to conventional NPWT when applied on open contaminated wounds of the lower extremities. We designed a prospective, double-blind, randomized controlled trial at 2 tertiary center institutions comparing the 2 types of NPWT in acute traumatic lower extremity ulcers with exposed soft tissue deeper than the deep dermis. Subjects were randomly allocated into either an experimental group treated with silver-impregnated NPWT or a control group treated with conventional NPWT, then the study wounds were administered NPWT at initial presentation. Wound cultures for all patients were obtained serially for semiquantitative analysis on a weekly basis during dressing changes. The cultures were serially obtained...
The Use of the Fasciocutaneous Flap Harvested From Revascularized Limbs With Peripheral Arterial Disease

**Presenter:** Dong Hwan Lee, MD

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**BACKGROUND:** Free fasciocutaneous flap is used for soft tissue reconstruction, often in patient with peripheral arterial disease. The purpose of this study was to determine whether reconstructive outcomes and healing time were affected by peripheral arterial disease in flap reconstruction harvested from revascularized extremities.

**METHODS:** We reviewed 97 consecutive cases of fasciocutaneous flap harvest for microsurgical lower extremity reconstruction with >1 year of follow-up. The cases were divided into 2 groups; one group with flaps harvested from lower extremity with angiographically confirmed peripheral arterial disease and the other group with healthy arterial system. Clinical data including patient demographics, risk factors, details of reconstruction, flap outcomes, and completion of wound healing were collected. Multiple logistic regression model adjusted using inverse probability weighting was computed to determine the association between peripheral arterial disease and the outcomes of harvested flaps.

**RESULTS:** Mean follow-up was 26 months. Flap harvests from revascularized extremities were performed for 27 cases and from nondiseased limbs for 70 cases. Fifty-four cases out of 97 cases developed flap-related complications, 8 cases of them were vascular compromise at immediate postoperative phase. One case of total flap necrosis developed in each group. The most common complication was partial flap necrosis, which required additional skin graft procedure. The presence of peripheral arterial disease was not associated with increased flap complication in nonadjusted statistical analysis. Donor site complication was not also significantly affected. Although complete healing of surgical wound was significantly delayed in diseased limb. Similar result was obtained after propensity score-adjusted analysis.

**CONCLUSION:** Although peripheral arterial occlusive disease is thought to influence wound healing significantly, the authors found no difference in reconstructive outcomes of harvested flap from between diseased and nondiseased limb. Using free fasciocutaneous flap after revascularization would presumably be a safe and effective reconstructive option for complex wounds.

**Reduction Mammaplasty in Adolescents: A Comparison of Wise and Vertical Incision Patterns**

**Presenter:** Francesco M. Egro, MBChB, MSc, MRCS

**Co-Authors:** Kritika Kulkarni, BS; Elizabeth M. Kenny, BS; Alexander Stavros, BS; Lorelei J. Grunwaldt, MD

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**BACKGROUND:** Reduction mammaplasty was shown to ameliorate physical and psychological problems in