



COSMODERM TIMES

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Dear Doctor,

Greetings from Micro Labs. We are happy to bring you "COSMODERM TIMES" which contains latest and interesting news in the field of Dermatology.

This issue contains:

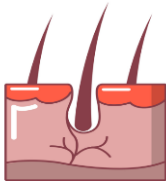
1. Comparing Dermis Graft with Split-Thickness Skin Auto-Graft for The Treatment of Burns
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Should you require any article or, medical information, please feel free to contact us medicalservices@microlabs.in

Looking forward to your valuable feedback.

Best Regards,

Medical Team, Micro Labs Limited



Comparing Dermis Graft with Split-Thickness Skin Auto-Graft for The Treatment Of Burns

Introduction

Irrespective of their cause or site, the skin grafting stands as an important and useful reconstruction option for covering skin defects. Amongst skin grafts used for reconstructive surgery, split-Thickness Skin Auto-Graft (STSG) is the most commonly used and has the broadest application in everyday surgical care¹. Burn treatment is defined by the depth and extent of the injury, with deeper and more extensive injuries requiring early excision and timely treatment with split-thickness skin grafts (STSG) to achieve definitive closure and optimize clinical outcomes but grafting is associated with significant pain, pruritus, infection, dyschromia, delayed healing, and hypertrophic scarring². Until the utility of early wound excision in full thickness burn wounds was understood, use of skin grafting in acute burn wound treatment did not occur. use of skin grafts to reconstruct wounds caused by burn injuries, successful use of skin grafts in chronic burn wounds was noted³.

Methods

A prospective, dual-centre controlled comparison study was conducted in twenty-one patients received both an unmeshed dermis graft and a regular 1:1.5 meshed STSG. Patient and Observer Scar Assessment Scale (POSAS) and a Cutometer Dual MPA 580 was used for aesthetic and scar assessments on both donor and recipient sites. Males and females between 18 and 80 years with Thermal & chemical burns <30% TBSA, at least one coherent full-thickness burn measuring 15×7.5 cm and a minimum of 15×7.5 cm coherent undamaged skin located at the front or lateral side of one of the thighs for graft harvest were included in the study. Wilcoxon Matched Pair Test was used to assess significance of the difference between variables.

Results

In a total 21 patients, 17 (81%) were males and median age was 53 years at admission. Median percentage total body surface area (TBSA %) burned was 10 (2–16) % and duration of hospital stay was 13 (5–30) days, four patients (19%) were treated in the outpatient clinic. The aetiology of the burns were 62% flame burns, six 29% contact with hot surfaces, 5% chemical burn, and 5% scalding.

After surgical revision of the wound the excision depth was recorded on 13 patients and it varied from fascia/muscle (n=4), subcutis (n=7) and the deepest layer of dermis (n=2). Most of the patients were categorised as ASA I or II. Fifteen (71%), 18 (86%), and 14 (67%) participants had POSAS recordings at the 3, 6, and 12 months follow up, respectively. Figures 1 show the 12 months follow up for both recipient and donor sites graft at the recipient site was more elastic than the STSG at the 6 months follow up. No differences in the viscoelastic properties between the different grafts and the different donor sites. The analysis of differences in viscoelasticity over time in grafts and donor sites showed that the STSG



became less elastic between 3 and 6 months and that the dermal grafts became less firm between 3 and 12 months, and less elastic between six and 12 months.

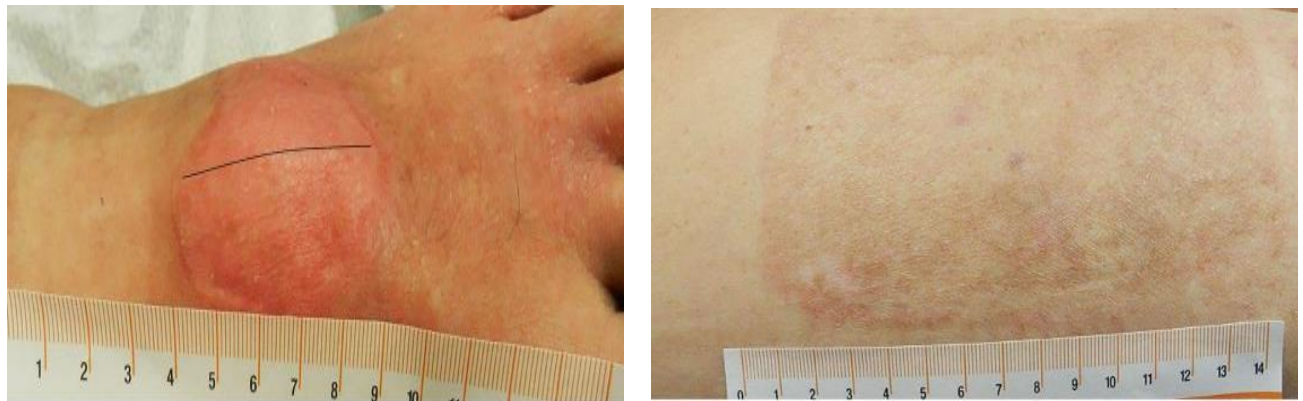


Figure :1 12 months follow up for both recipient and donor sites

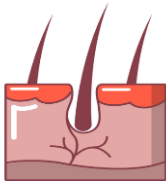
Conclusion:

These findings suggest that, dermis graft decreased donor site morbidity, because returning the STSG component to the donor area heals faster than the standard STSG technique. The long-term outcomes of the recipient sites were also favourable because without necessitating the mesh procedure the elasticity of the dermal graft facilitated the graft expansion.

Reference

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The results demonstrate that dermis graft decreased donor site morbidity, because returning the STSG component to the donor area heals faster than the standard STSG technique. The long-term outcomes of the recipient sites were also favourable because without necessitating the mesh procedure the elasticity of the dermal graft facilitated the graft expansion.



Evaluation of the Efficacy of 595-nm Pulsed Dye Laser Combined with 755-nm Long-Pulse Alexandrite Laser in the Treatment of Hybrid Infantile Haemangioma's Application of Color Doppler Ultrasound

Introduction

The Common benign vascular tumours in children is Infantile haemangioma (IH)¹. Its prevalence is about 4-10% of infants with the majority being solitary lesions and mostly restricted to the head and neck (44%). Topical timolol therapy was used to treat lower risk IHs are treated with observation and/or and do not require hospitalization. It has high risk features, particularly in locations such as the face, eyes, and lips which may lead to disfigurement or functional impairment². Based on the size or location, other IHs require treatment after being evaluated by IH specialists. Large facial IHs may cause permanent scarring, disfigurement and related structural abnormalities. IHs involving the airway may affect patients' respiratory function, leading to life-threatening upper airway obstruction³. Recent method of management of haemangioma is injection of sclerotherapy is a and surgical excision has great rule also in management of IH especially in involution phase and in superficial lesions not invading deep structures⁴. The aim of current study is to evaluate the efficiency of 595-nm PDL combined with 755-nm long-pulse alexandrite sequential laser treatment for hybrid IH by the application of regular Color Doppler ultrasound.

Methods

A retrospective study in which children with hybrid infantile haemangioma. Children's with solitary infantile haemangiomas within 1 year of age, who underwent regular Color Doppler ultrasound examinations during the treatment, children who have been treated continuously for 6 months. The interval between laser treatments was around 4 weeks, and 6 laser treatments or complete removal of the tumour was the end point. All children underwent Color Doppler ultrasonography at the 0th, 1st, 6th months of treatment. Children were grouped by gender, age, thickness and location. Treatment outcomes were defined as effective when the A-value is <75%.

Results

A total of 116 children with hybrid IH were included in this study, in which 56 males (48.28%) and 60 females (51.72%). the hybrid IH thickness measured by Color Doppler ultrasound before treatment was divided into two groups, with thickness <8mm defined as the shallower group and thickness >8mm defined as the deeper group, with 72 cases (62.07%) in the shallower group and 44 cases (37.93%) in the deeper group. compared to the pre-treatment, after 1time laser treatment was $95.94\% \pm 13.1\%$ and 30.17% of the children had an increase in volume. After 6 months of sequential laser treatment, A-value of the overall sample was $64.68\% \pm 24.86\%$. In total, 74 children had Grade 3 (63.79%), 38 children had Grade 2 (32.76%), and 4 children had Grade 1 (3.45%). In a total of 74 cases had an effective outcome including 42 cases with Color Doppler ultrasound suggestive of decreased blood flow and 32 cases with unchanged blood flow; 42 cases had an ineffective outcome, including 8 cases with decreased blood flow and 34 cases with unchanged blood flow.



Among them, 4 children with increased volume were treated with oral propranolol or local sclerotherapy injection at the end of the study, and all achieved effective relief. Results show that efficacy of treatment in the shallower group was superior to that of the deeper group, with a statistically significant difference as shown figure 2. The overall sample showed a statistically significant difference in the decrease of IH's volume after 6 months of laser treatment compared to pre-treatment ($P < 0.001$).



Figure:2 Lesions and color Doppler ultrasound images of a child with hybrid IH with an effective outcome

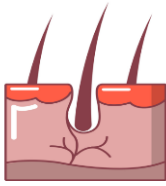
Conclusion:

The study suggests that diagnosis of hybrid IH and evaluation of treatment time and outcomes can be made by application of Color Doppler ultrasound, and it can help clinicians recognize hybrid IH with greater accuracy. The earlier intervention for hybrid IH we perform, give the better outcomes.

Reference

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Efficacy and Safety of Intense Pulsed Light and Erbium Fractional Laser for Patients with Striae Gravidarum

Introduction

Striae gravidarum (SG) is a common skin problem that affects most of the women¹. SG is a common skin problem reported to affect 55% to 90% of gravid women, termed as atrophic linear scars in dermal stretching areas, most commonly the abdomen, breasts, buttocks, hips, and thighs. During the second half of pregnancy after the 24th week of gestation they appear². genetic factors and physical factors like excess weight gain during pregnancy, large for gestational age foetuses have been shown to contribute to this condition. women's quality of life (QoL) was disrupted due to skin lesions as they are considered aesthetically undesirable and therefore pose a significant psychosocial and therapeutic challenge². Although SG are not physically detrimental, lesions can be undesirable and, in severe cases they are cosmetically disfiguring. Despite the expense and lack of efficacy of various therapies for SG, many women report trying oils, emollients, massage, prescription and over-the-counter topical remedies, vitamins, lasers, and more recently micro needling to prevent lesions or ameliorate their appearance³. The present study was aimed to analyse the effect of combined IPL and fractional Er: YAG laser for SG treatment to provide a theoretical basis for clinical treatment.

Method

A pre-posttest and self-controlled clinical study that recruited 60 female SG patients meeting the diagnostic criteria of abdominal SG and with symmetrical white SG in the abdomen, SG duration was more than 6 months postpartum. The general clinical information of SG patients was recorded. The Patients were treated at 4-week intervals for a total of 3 treatments and results of the patient's previous and last treatment were recorded. SPSS as well as Graph Pad Prism 6.0 software was used to analyse Clinical data.

Results

Sixty SG subjects completed all courses of treatment, with a mean age of 27.8 ± 2.7 years, duration of disease of 24.3 ± 10.2 months, and mean weight gain of 17.59 ± 4.95 kg. The results show that Overall assessment score of stretch marks decreased from 2.5 ± 0.50 pre-treatment to 1.57 ± 0.49 post-treatment and subjective GAIS score of 3.15 ± 0.68 also confirmed that the combination treatment improved the aesthetics of stretch marks, the gray value of stretch marks was decreased from 7.82 ± 1.15 pre-treatment to 5.22 ± 0.93 post-treatment, suggesting a decrease and aesthetic enhancement of stretch marks in which these results are statistically significant as shown in the figure 3.

Compared with the pre-treatment of 7.89 ± 0.66 cm², the area of stretch marks was decreased to 4.94 ± 1.16 cm² after combined treatment. The combination of IPL and Erbium fractional laser reduced the pre-treatment atrophy score from 2.30 ± 1.21 to 0.85 ± 0.76 and the VAS score of SG patients during treatment was 5.45 ± 1.31 for 10 patients with local itching, 2 patients with short-term pigmentation, and 3 patients with redness in the treatment area, but all



of them could recovered after 2–3 days, and 25% was noted with incidence of adverse reactions. Patient satisfaction after the combined treatment was noted 96.67%

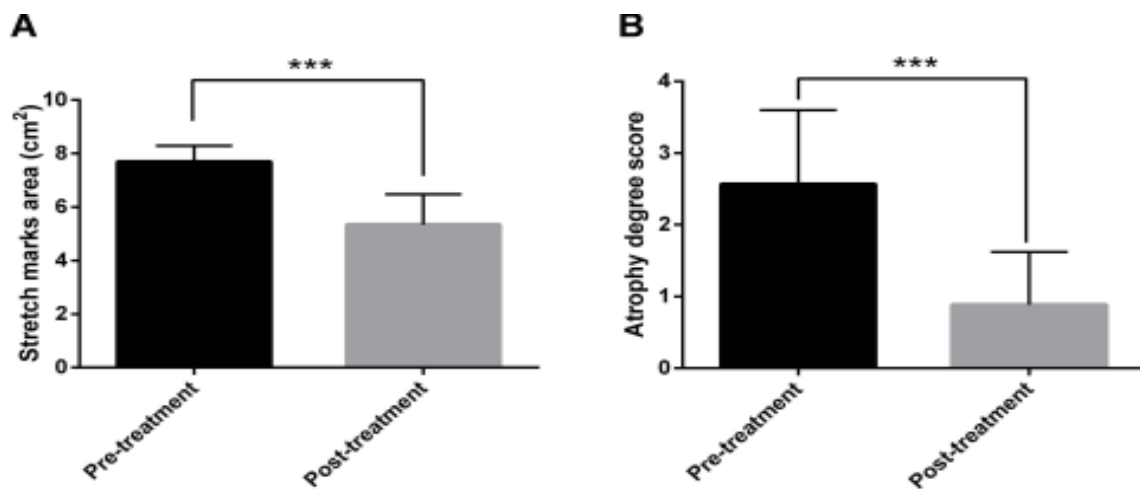


Figure 3 Assessment of the area and degree of atrophy of stretch marks before and after treatment

Conclusion:

In conclusion, the study found a combination of Erbium fractional laser and IPL treatment for stretch marks can significantly improve the degree of atrophy, increase elasticity, and facilitate the degree of healing of the lesions, which is a safe and effective treatment for stretch marks and worthy of clinical promotion.

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Reference:

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Advancing Acute Marjolin's Ulcer Arising in a Burn Scar-A Case Report

Introduction

Marjolin's ulcer is considered as a highly aggressive disease that develops from chronic wounds and skin scars. Nearly 65% of these ulcers have been diagnosed on underlying burn scars, raising the malignancy degeneration rate of a burn to 1.5%¹. The incidence of MU varies globally as in certain Asian cultures, heating pads are frequently used for comfort. Asian individuals therefore may experience chronic burn wounds and, in turn, MU. The most common histologic variant of MU is squamous cell carcinoma². The development of squamous cell carcinoma (SCC) of chronic ulcer is the worst in comparison to other types, moreover, it develops de novo and requires aggressive treatment. In some studies, early recurrence and death within 6 months of surgery have been reported. For managing the recurrence, Re-excision, radiotherapy, and adjuvant chemotherapy are recommended. The prognosis of Marjolin's ulcer depends on various factors that include age, size, type, grade of the disease, stage of disease, presence of local recurrence, and distant metastases³. The aim of current study is to present a case report on appearance of Marjolin's ulcer.

Case Presentation:

A 48-year-old male patient consulted the emergency room about an extensive 7-month-evolution thermic burn in the dorsum that has presented a torpid evolution, as he presents a large, exophytic, malodorous ulcerated lesion on the back with an approximate length of 15 × 10 cm. Past history shows that patient refers to a dermal burn 7 months ago that has worsened gradually despite multiple antibiotic treatments and local dressings with all kinds of antiseptics and bactericides in his primary care centre. After two biopsies of the lesion were taken, the histological results are described as moderately differentiated infiltrative squamous-cell carcinoma that invades deep reticular dermis.

They have performed a wide resection of the primary tumour with 2 cm lateral margins and including deep lumbar fascia into the resection and also a regulated left inguinal lymph node dissection was performed. The lumbar defect was reconstructed with meshed partial-thickness skin graft. Post-surgery evolution was favourable, with the results after a 6-month follow-up shown in Figure 4. 7 months after diagnosis, during a routine check-up, 2 axillary lymph nodes become palpable. A PET-CT scan is performed, and the progression of the disease is shown. Images are positive for malignancy in that axilla.

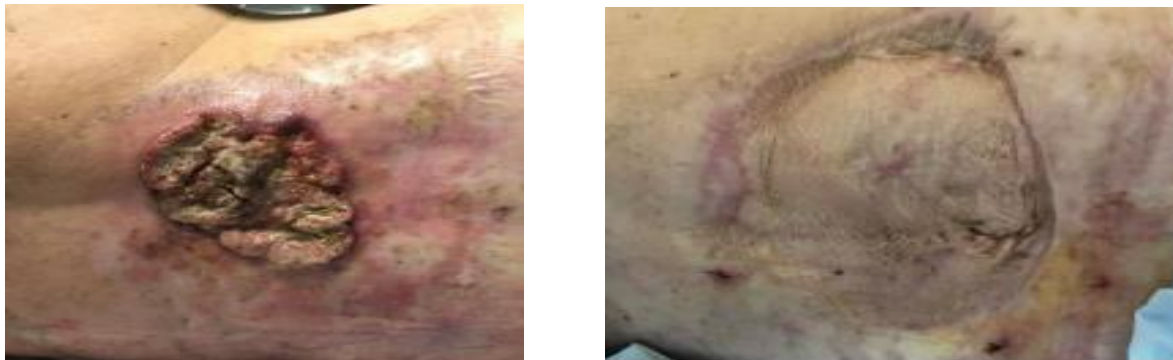


Figure 4 Exophytic ulcer Pre and post-surgery



A second surgery was performed two weeks later in which regulated right axillary lymph node dissection is accomplished. Results inform metastatic affectation in 7 out of 31 lymph nodes extirpated Radiotherapy was elected as an adjuvant treatment for this patient Due to the aggressiveness of the disease, 6 months after the last surgery and as far as our follow-up has arrived, the patient still continues to be stable without any further progression of the disease either locally or systemically. The study shows that it is very important to recognize signs and symptoms that denote a possible malignant degeneration in chronic wounds and burns so an early biopsy can be taken in order to establish the diagnosis as soon as possible. If a squamous-cell carcinoma is confirmed, due to its high aggressiveness, it is mandatory to start treatment as soon as possible with a radical extirpation with wide margins.

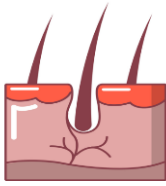
Conclusion

The study presents that it is important to recognize symptoms that indicate malignant degeneration of chronic wounds, allowing the clinician to make an early diagnosis in order not to delay the surgical treatment that is required to improve the global survival of the patient. even when the onset is acute, it should be taken into account due to its aggressiveness and fatal consequences if the diagnosis is delayed.

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Reference

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