MCPV May Be a Viral Origin for Merkel Cell Carcinoma

Prevalence of Merkel Cell Polyomavirus in Merkel Cell Carcinoma.

Duncavage EJ, Zehnbauer BA, Pfeifer JD:

Mod Pathology 2009; 22 (April): 516-521

The Merkel cell polyomavirus is detected by polymerase chain reaction in three fourths of Merkel cell carcinomas.

**Background:** In 2008, researchers identified a novel polyomavirus in Merkel cell carcinomas. The virus, dubbed the Merkel cell polyomavirus (MCPV) is a double-stranded DNA virus that has been shown to have oncogenic properties and may play an important role in tumorigenesis of the carcinoma. Since Merkel cell carcinoma is rare, an analysis of formalin-fixed paraffin-embedded tissue for MCPV would be helpful to determine the incidence of the virus in archived specimens.

**Objective:** To perform polymerase chain reaction (PCR) analysis on known cases of Merkel cell carcinoma to evaluate the incidence of MCPV.

**Design:** Retrospective review.

**Participants:** 41 cases of Merkel cell carcinoma from 29 different patients.

**Methods:** PCR was used with 3 primers with known specificity for Merkel cell carcinoma.

**Results:** Amplifiable DNA from MCPV was identified in 76% of unique cases (22 of 29). In 11 patients with ≥2 excisions, the MCPV was detected in both the original and follow-up samples in 8 cases, 2 in primary tumor only, and 1 in the metastatic lesion but not the original tumor.

**Conclusions:** This study provides further support for the oncogenic role of MCPV in Merkel cell carcinoma. The primer set used on formalin-fixed paraffin-embedded tissue provides a valuable ancillary test for confirming diagnosis.

**Reviewer’s Comments:** This study adds a very powerful diagnostic tool to understanding and confirming diagnosis of Merkel cell carcinoma. This excellent study with PCR performed on archived specimens adds to our knowledge that the virus is indeed quite prevalent, and it provides additional support that MCPV may play an important role in the development of Merkel cell carcinoma. (Reviewer-Paul K. Shitabata, MD).

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Keywords: Merkel Cell Carcinoma

Print Tag: Refer to original journal article
**Objective:** To determine long-term risks and benefits of surgery for congenital melanocytic nevi (CMN).

**Design:** Prospective study done over 19 years.

**Participants/Methods:** 301 families were asked to complete yearly questionnaires regarding treatment and CMN changes. Of CMNs, 40% were >20 cm projected adult size or were multiple CMNs.

**Results:** There were no significant effects of treatment on the incidence of adverse clinical outcomes. Females were significantly more likely than males to have received some form of surgical treatment (88% vs 77%). Treatments included dermabrasion, excision, dermabrasion and excision, and laser only. Most patients had some form of excisional surgery performed. Development of satellite-pigmented lesions was independently associated with use of tissue expanders. Those treated with excision without tissue expansion were not associated with development of more satellites. A significant proportion of those with CMN >20 cm felt surgery had worsened their appearance. There were no significant effects on timing of surgery as far as satisfaction with the procedure. Those with CMN <20 cm thought that surgery was worthwhile. Surgical intervention was significantly associated with darkening of the affected area. Significant numbers of patients who underwent surgery reported new nevi at the margins of the treated area. The majority of untreated nevi were reported to lighten with time.

**Conclusions:** The risk of malignant melanoma in childhood is affected by CMN phenotype (those with projected adult size of ≥60 cm) and not prophylactic surgery. The majority of CMN lighten with time. Surgery may alter the behavior of melanocytes in patients with giant CMN and may cause adverse events.

**Reviewer's Comments:** This study was based on questionnaires, thus making it subject to recall bias. Also, it relied on data supplied by parents and not clinicians. A prospective study with expert evaluators would have been better. Regardless, this study raises questions about previously held notions regarding these lesions. Recommendations for early excision as a way to improve cosmetic appearance and reduce chances of melanoma in giant CMN may be wrong. (Reviewer-Daniel Eisen, MD).

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Keywords: Surgery

Print Tag: Refer to original journal article
Eyelid lesions must be palpated to rule out dermal involvement, and a biopsy should be taken from persistent or recurrent lesions.

**Objective:** To retrospectively review 5504 consecutive cases of eyelid tumors.

**Methods:** Age, sex, tumor location, and clinical and histologic diagnoses were recorded. Tumors of the palpebral conjunctiva and inflammatory lesions were excluded.

**Results:** Eyelid tumors affected patients of all ages but were more common in the elderly, with the exception of dermoid cysts. The majority of lesions (84%) were benign. The most frequent benign tumors included wart, seborrheic keratosis, melanocytic nevus, epidermal cyst, hydrocystoma, and inverted follicular keratosis. These diagnoses accounted for 81% of benign tumors. Among malignant tumors, basal cell carcinoma (BCC) was the most frequent (772 cases [84%]), and the most common location was the lower eyelid: 3 patients had multiple BCCs and 3 had basosquamous carcinoma. The male-to-female ratio for BCC was 25:1. The second most common malignancy was squamous cell carcinoma (SCC; 67 cases). It was associated with actinic keratosis in 40% of cases. Similar to BCC, the most frequent location for SCC was the lower eyelid. The male-to-female ratio for SCC was 7:1. There were 370 actinic keratoses, 15 cases of Bowen disease (7 on lower eyelid, 3 medial canthus, 3 upper eyelid, 2 unknown locations), and 35 keratoacanthomas (KAs). The latter was suspected clinically in only 3 cases. The rest of the time, they were misdiagnosed as warts, botryomycoma, or carcinoma. All KA lesions were solitary, and the most frequent location was the lower eyelid. There were 4 cases of cutaneous metastases: 2 female patients had metastases from breast carcinoma, and 1 female and 1 male had metastases from conjunctival melanoma. Approximately 7% of all cases in this series were adnexal tumors: 381 tumors of eccrine and apocrine gland origin; 150 hair follicle tumors; 48 cases sebaceous gland tumors including 29 sebaceous carcinomas; 839 melanocytic tumors including 5 lentigo maligna (LM) tumors and 2 LM melanomas; 83 vascular tumors; and 21 tumors of neural crest origin including 4 Merkel cell carcinomas.

**Reviewer's Comments:** This paper is important due to the large number of cases reported. As expected, the majority of eyelid tumors (84%) were benign. Only 16% were malignant, and BCC accounted for 84% of them. The rest of malignant tumors included SCC (67 cases), KA (35 cases), sebaceous carcinoma (29 cases), Merkel cell carcinoma (4 cases), and melanoma (2 cases). Only 5% of cases were actinic keratoses, but it's significant that 40% of SCCs and 8% of BCCs were associated with these premalignant lesions. The take-home message is that lesions must be palpated to rule out dermal involvement, and a biopsy should be taken from persistent or recurrent lesions. (Reviewer-Carlos Garcia, MD.)

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Keywords: Eyelid Tumors

Print Tag: Refer to original journal article
Amelanotic Melanoma - Features, Considerations

Clinical Features of 36 Cases of Amelanotic Melanomas and Considerations About the Relationship Between Histologic Subtypes and Diagnostic Delay.

Gualandi L, Betti R, Crosti C:

J Eur Acad Dermatol Venereol 2009; 23 (March): 283-287

Fewer than 10% of cutaneous melanomas are amelanotic.

Objective: To present a retrospective review of histologically confirmed melanoma cases at a single institution in Italy between 1995 and 2006.

Methods: Recorded data included sex, age at diagnosis, clinical features of pigmentation, site of presentation, suspected diagnosis, clinical course up to May 2006, histologic type, Clark level, and Breslow thickness. Only clinically amelanotic melanomas (AMs) were selected for study, and their clinical characteristics were assigned to 3 main types: an erythematous macule on sun-exposed skin with epidermal changes; a skin-colored dermal plaque without a particular epidermal change; or a papulonodular lesion. Histological subtypes were classified as superficial spreading, lentigo maligna, and nodular melanoma. Diagnostic delay was defined as the interval in months from the patient's first report of the suspected lesion to the date of surgical removal and histologic confirmation.

Results: There were 500 melanoma cases. A total of 36 patients (7.2%) had clinically amelanotic lesions. There were 14 females and 22 males. Average age of patients was 53.8 years compared to 54.9 years for patients with pigmented melanomas. Locations of tumors included 18 lower extremities, 12 trunk, 3 upper arms, 2 head and neck, and 1 genital. The most frequent clinical presentation was a papulonodular lesion in 21 cases, followed by a skin-colored dermal plaque without epidermal changes in 10 cases, and erythematous macule with epidermal changes in 5 cases. Only 4 of 36 AMs were suspected before excision. Regarding histologic type, 17 were superficial spreading and 11 nodular type; 5 were metastatic, and only 3 lesions had a pre-existing nevus. Mean Breslow thickness of amelanotic cases, excluding 5 cases of metastatic AM, was 1.72 ± 1.23 mm. The 464 pigmented melanomas observed in the same period had a mean Breslow thickness of 0.61 ± 1.02 mm. The difference was statistically significant (P <0.001). The delay in diagnosis of AM was 7.05 ± 2.34 months; for pigmented melanomas, it was 7.88 ± 2.04 months (difference not significant).

Reviewer's Comments: The 7% incidence reported by the authors is similar to the 1% to 8% incidence reported in the literature. In contrast to other series in which the majority of AMs were metastatic, in this series, only 5 of 36 lesions (13%) were so. Clinical recognition of truly amelanotic lesions is difficult, especially if they present as scaly plaques resembling inflammatory dermatoses. The authors reported that only 4 of 36 (11%) lesions were suspected clinically. Any clinical subtype of cutaneous melanoma may be amelanotic, although it is more common for this to occur in subungual tumors (25%) and in desmoplastic melanomas (50%). Only 3 of 36 (8%) cases in the present series had an associated melanocytic nevus as compared to 25% described in the literature. (Reviewer-Carlos Garcia, MD).

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Keywords: Amelanotic Melanoma

Print Tag: Refer to original journal article
In this study, there was essentially no significant prevalence of hepatitis C in this group of lichen planus patients.

**Background:** The association between lichen planus (LP) and hepatitis C virus (HCV) has been subject to controversy. Links exist between conflicting findings in Turkey, Germany, India, Iran, and the United States. The problems with most LP/hepatitis C reports are diverse populations, lack of appropriate control groups, and various biases.

**Objective:** To attempt to find an association between LP and HCV after addressing the concerns noted from prior studies.

**Design:** Case-controlled retrospective study.

**Participants:** 173 patients were treated for lichen planus at the University Medical Center Department of Dermatovenereology in Ljubljana, Slovenia, from January 2001 to January 2006. In addition, the authors included a control group consisting of 218 patients with dermatoses other than LP and no known chronic liver disease. Patients with cutaneous vasculitis, prurigo, and porphyria cutanea tarda were excluded.

**Methods:** Medical records were reviewed. Patients with a history of chronic liver disease other than HCV infection were excluded. Patients with anti-HCV antibodies determined at the time of LP were automatically included in the final study group. If not, they were re-invited to the department for a postponed evaluation of possible HCV infection. If those patients had positive anti-HCV antibodies but no obvious persistent signs of LP at the time of postponed serologic testing, they were excluded. The authors also looked for identifiable risk factors for contracting viral hepatitis C through interviews.

**Results:** Of 173 study patients, only 2 patients (1.2%), a male and a female, were positive for anti-HCV antibodies. No anti-HCV positive result was detected in the control group. No statistically significant differences between the study and control group regarding well-established risk factors for HCV infection, such as transfusion, intravenous drug abuse, hemodialysis, unprofessional tattooing and piercing, professional exposure, or risky sexual behavior were found.

**Conclusions:** There was no significant prevalence of HCV infection in patients with LP, and testing was not indicated.

**Reviewer's Comments:** I have been routinely checking hepatitis profiles in LP patients but have yet to find a positive test. Incidentally, I have never had a positive Venereal Disease Research Laboratory test or rapid plasma reagin in a pityriasis rosea patient either. I'll probably keep doing the latter, but in the absence of a risk history, maybe give up on the former. (Reviewer-David L. Swanson, MD).

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Keywords: Lichen Planus

Print Tag: Refer to original journal article
Rheumatology Article Downplays Biopsy Need

Liver Fibrosis in Patients With Psoriasis and Psoriatic Arthritis on Long-Term, High Cumulative Dose Methotrexate Therapy.

Lindsay K, Fraser AD, et al:

Rheumatology (Oxford) 2009; 48 (May): 569-572

Despite risk factors for non-alcoholic steatohepatitis, monitoring for hepatic fibrosis using serial liver function and American College of Rheumatology guidelines tests alone as in rheumatoid arthritis appears safe in psoriasis and psoriatic arthritis.

Background: Dermatologists and rheumatologists have long differed in their use of serial liver biopsy and liver function tests (LFTs) because rheumatologists just don’t see cirrhosis in their rheumatoid arthritis (RA) patients. It is currently standard of care to monitor LFTs only in RA patients, but there are few studies in psoriatic arthritis to justify that approach, so rheumatologists tend to go along somewhat with the dermatology recommendations.

Objective: To investigate the prevalence of hepatic fibrosis in both psoriasis and psoriatic arthritis patients on long-term methotrexate therapy.

Design: Prospective analysis.

Participants: 54 patients with psoriasis or psoriatic arthritis were included in the study. These patients had originally been followed using American College of Rheumatology (ACR) guidelines for long-term methotrexate monitoring in rheumatoid arthritis. All of the patients had received folic acid and had been advised against alcohol consumption. The duration of methotrexate treatment was a mean of 6.9 years, with a mean cumulative dose of 4396 mg.

Methods: The authors ordered liver biopsies on the patients if cumulatively >1 g of methotrexate had been taken.

Results: In these 54 patients, there were no cases of advanced fibrosis or of cirrhosis; 35 had a normal biopsy. Seven patients showed some early inflammatory or fatty changes also known as Roenigk Grade 2, and 11 had Roenigk Grade 3 changes of early mild fibrosis. Presence of these early mild changes was related to the number of risk factors that the patient had for hepatic fibrosis, such as a high body mass index and presence of diabetes (which also are risks for non-alcoholic steatohepatitis), and history of alcohol consumption. The study also included a side study that looked at the levels of pro-collagen 3N-terminal peptide, a blood assay that in the past has been reported to be very useful in monitoring patients with psoriasis on methotrexate. That test, which is widely available in Europe and almost impossible to find in the U.S., has been discussed in this audio journal previously. The test was not helpful and was frequently elevated, despite normal liver biopsies.

Conclusions: The authors were unimpressed with the use of serial liver biopsies for monitoring for hepatic fibrosis. They recommended ACR guidelines tests alone as in rheumatoid arthritis, which means LFTs every 3 months and possibly liver biopsy if LFTs remain persistently elevated.

Reviewer's Comments: This issue is going to remain controversial. However, I suspect the guidelines will become a little more relaxed in the future. It seems likely that we will be able to stratify risk based on history of diabetes, obesity, alcohol consumption. (Reviewer-David L. Swanson, MD).

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Keywords: Liver Fibrosis

Print Tag: Refer to original journal article
Bleach Bath Improves Atopic Dermatitis in Atopic Children

Treatment of Staphylococcus aureus Colonization in Atopic Dermatitis Decreases Disease Severity.

Huang JT, Abrams M, et al:

Pediatrics 2009; 123 (May): e808-e814

Bathing in diluted bleach may be an effective therapy for children with staph-infected atopic dermatitis.

**Background:** Atopic dermatitis sufferers are frequently colonized and intermittently become infected with *Staphylococcus aureus*. Given the high prevalence of community-acquired methicillin-resistant *S aureus* (MRSA), clinicians have sought effective ways to eradicate this pathogen from atopic patients. Intranasal mupirocin is a commonly used method for reducing *S aureus* colonization of the nares with the presumption that skin infection would also be decreased. Bathing in dilute bleach (hypochlorite) has been recommended by some clinicians as a way to eradicate *S aureus* from the skin, but clear proof of its effectiveness has been lacking.

**Objective:** To determine the effect of treating staph-infected atopic children with the combination of intranasal mupirocin and bleach baths.

**Participants:** 31 children with moderate-to-severe atopic dermatitis and clinical evidence of secondary bacterial infection.

**Methods:** All participants received cefalexin for 2 weeks. Subjects were randomized into 2 arms. One arm received intranasal mupirocin applied twice daily for 5 consecutive days per month and bleach baths twice weekly. The placebo arm received intranasal petrolatum and water baths. Subjects were seen at 1 month and 3 months. **Results:** None of the 14 patients assigned to bleach baths discontinued the study because of intolerance to the bleach. Most of the participants grew methicillin-sensitive *S aureus* from their skin and nares. The intervention of bleach baths and mupirocin did not eradicate staph colonization in most patients. However, in the treatment group, skin disease burden as quantified by the Eczema Area and Severity Index (EASI) declined from an initial value of 21 to 11 after 1 month and further decreased to 5 after 3 months. In the control group, the EASI only declined about 4 points for the entire 3 months.

**Conclusions:** The combination of intranasal mupirocin and bleach bath improves dermatitis in atopic children with clinical evidence of superinfection.

**Reviewer's Comments:** Since all subjects in the treatment arm received both bleach baths and mupirocin, it is not entirely clear which intervention is providing the benefit. However, areas that were not exposed to the bleach (head and neck) did not show improvement, suggesting that the bleach baths were the more important of the 2 interventions. Most of the atopic children in this study grew methicillin-sensitive *S aureus*, suggesting that atopics are not particularly sensitive to MRSA. Surprisingly, the intervention did not eradicate staph from the skin or the nares of most participants. The authors suggest that bacterial load may have been reduced, but they did not do quantitative cultures to demonstrate this. A further study of bleach baths without intranasal antibiotics would be a useful follow-up to this interesting study. (Reviewer-Michael S. Kolodney, MD, PhD).

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**Keywords:** *Staphylococcus aureus* Colonization

**Print Tag:** Refer to original journal article
Background: Physicians treating actinic keratoses (AKs) with topical 5-fluorouracil (5-FU) should be careful to prepare their patients for a moderate-to-severe cutaneous reaction of erythema, crusting, and erosions. After inflammation resolves, patients often forget their anger about the initial cutaneous reaction and comment about cosmetic improvements resulting from the AK treatment. It has never been clear if the perceived cosmetic improvement is due to AK destruction or if there is also some smoothing of the skin's texture due to 5-FU.

Objective: To determine the esthetic effect of 5-FU on photodamaged skin.

Design: Uncontrolled clinical study.

Participants: 21 participants with facial AKs and photo damage.

Methods: All subjects applied 5% 5-FU cream to the face twice daily for 2 weeks. Improvement in AKs and skin appearance was measured through photography, clinical observations, patient questionnaires, and molecular studies of biopsy specimens.

Results: An examining dermatologist rated all patients on wrinkling, tactile roughness, lentigines, hyperpigmentation, and sallowness (a yellow hue associated with aged skin) on a 0 to 9 scale. Modest but progressive and statistically significant improvement in all of these parameters was observed throughout the 24-week observation period following the 2-week treatment. During 5-FU treatment, mRNAs associated with epidermal injury including matrix metalloproteinases were increased. Procollagen mRNA was increased 2 weeks after stopping 5-FU and remained elevated 24 weeks following treatment. Patient questionnaires showed that, although a majority of patients experienced discomfort during treatment, most patients (89%) would be willing to undergo the 5-FU treatment again based solely on the cosmetic improvement.

Conclusions: The authors suggest that the inflammatory reaction associated with 5-FU treatment of sun-damaged skin initiates a wound healing response that may produce cosmetic improvement in addition to destruction of AKs.

Reviewer's Comments: Cosmetic changes and patterns of mRNA expression induced by 5-FU treatment resemble those seen following laser resurfacing procedures. 5-FU may be somewhat unique in that it preferentially targets photodamaged skin and has medical as well as cosmetic benefits. Based on this paper, I will mention cosmetic benefits of 5-FU in an effort to achieve better adherence to 5-FU regimens. This study was sponsored by the makers of Efudex brand of 5-FU. (Reviewer-Michael S. Kolodney, MD, PhD).

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Keywords: 5-Fluorouracil

Print Tag: Refer to original journal article
Itchy Psoriasis Patients Need More Light

*Itch and Scratching as Predictors of Time to Clearance of Psoriasis With Narrow-Band Ultraviolet B Therapy.*

Evers AW, Kleinpenning MM, et al:

Br J Dermatol 2009; April 20 (epub ahead of print):

Itchy psoriasis patients need more UVB sessions to clear their disease.

**Background:** Many treatment options are available for psoriasis patients, and some patients clearly respond better to specific treatment modalities. Narrow-band ultraviolet B (UVB) is one of the safest therapeutic options but requires a substantial time commitment before results are realized. Thus, it would be useful to identify the patients who will respond well to UVB before initiating this option.

**Objective:** To determine if itchy psoriasis patients respond differently to UVB than those who do not itch.

**Participants:** Subjects with psoriasis participating in a double-blind trial comparing 2 different UVB regimens.

**Methods:** Subjects were randomized into either an erythematogenic or suberythematogenic UVB regimen. Itching and scratching were quantified at baseline using a numerical scale.

**Results:** The average Psoriasis Area and Severity Index (PASI) at the start of the study was 9.2, indicating that most participants had mild-to-moderate disease. Clearance was defined as 90% reduction in initial PASI score. Subjects required an average of 22 sessions to achieve clearance; those randomized to the erythematogenic regimen required fewer sessions. Those patients scoring higher on the itching or scratching scale at the start of the study required, on average, more sessions to achieve clearance. Initial PASI score, skin type, smoking habits, and alcohol use did not predict time to clearance.

**Conclusions:** The authors conclude that itchy psoriasis patients require more light treatment to clear their skin disease.

**Reviewer’s Comments:** This paper provides useful information to enable physicians to individualize psoriasis treatment for specific subsets of psoriasis patients. However, the results are presented as correlation coefficients between itching and days to clearance. The more clinically relevant information of how many fewer treatments were needed to achieve clearance is not included. Thus, it is unclear from the paper if this difference in sensitivity to UVB is of great enough magnitude to help dictate the treatment modality. (Reviewer-Michael S. Kolodney, MD, PhD).

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Keywords: Ultraviolet B Therapy

Print Tag: Refer to original journal article
Despite the multitude of new lasers, the "old standby" CO\(_2\) laser is an effective, predictable method of wrinkle control.

**Background:** The CO\(_2\) laser burst into esthetic surgery in the mid-1990s. It fell out of favor because of the long recovery period and bad publicity over complications. Other less effective lasers were introduced, but none has performed to the level of the CO\(_2\) laser.

**Objective:** To summarize current use of the CO\(_2\) laser. **Discussion:** The CO\(_2\) laser energy is absorbed by water. The heated water vaporizes the tissue. Heat is generated in the process, which appears to be necessary for long-term wrinkle eradication. Up to 100 μm of tissue is removed and up to 50 μm of remaining tissue is heated. The Ultrapulse CO\(_2\) laser uses a 1000-ms pulse, allowing cooling between pulses. The authors use it for Fitzpatrick types 1 through 3. They describe complications including scarring, erythema, pigment changes, herpetic infections, dermatitis, acne, and milia. Benefits include a 70% to 80% wrinkle removal rate. The authors describe their technique, using perioperative antiviral drugs, preoperative tretinoin, and postoperative hydroquinone. The Ultrapulse Encore CO\(_2\) laser is set at 70 to 80 mJ fluence (energy applied to surface area) and an energy level of 40 to 60 W. The density of the pattern is typically set at 5. The density is lessened in the periphery and fluence is decreased by 10 to 20 mJ, to decrease a line of demarcation. This setting is also used for a second pass over deeper wrinkles. The authors describe their confusing technique of combining chemical peels with CO\(_2\) laser procedures. They stress that chemicals are applied first and this is followed by laser. If dermabrasion is performed, it is performed last. They also describe lasering with simultaneous facelifting. The authors dress wounds with an occlusive silicone-based dressing for 3 to 4 days, followed by ointment. After healing, sunscreens and topical steroids are used.

**Reviewer's Comments:** This paper breathes new life into CO\(_2\) lasering. Practicing clinicians are faced with a daunting number of creams, lasers, peels, fillers, and other techniques to reduce wrinkles and improve the quality of facial skin. With glitzy booths at meetings, it would seem that the more expensive the technique, the more effective it is. Newer lasers have promised less down time, but their results are not uniformly impressive. With high costs involved, patients will feel "burned" if their wrinkles persist. The CO\(_2\) laser has stood the test of time. While this paper tackled an important topic and raised interesting points, it was a "how I do it" paper disguised as a scholarly article. Personal techniques, unbacked by science, have no place in peer-reviewed literature. It lacked a scientific approach to laser resurfacing and repeatedly made anecdotal statements. Organized esthetic surgery needs to eliminate publications such as this, replacing it with better-written, more authoritative papers. (Reviewer-Arthur W. Perry, MD).

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Keywords: CO\(_2\)Laser Skin Resurfacing

Print Tag: Refer to original journal article
Free Cartilage Grafts Do Not Always Require Skin Flap Cover

Background: Free cartilage grafts as a method of structural support in nasal reconstruction for nonmelanoma skin cancer traditionally have been covered by local rotation flaps to ensure complete graft coverage.

Objective: To demonstrate how the associated cutaneous nasal defect over the cartilage graft is not reconstructed, but rather is allowed to heal by secondary intention.

Design: Retrospective review.

Methods: 13 cases of nasal alar defects measuring 10 to 20 mm in diameter with intact nasal lining were included. Patients were treated with partially buried conchal cartilage free grafts with perichondrium adherent to their exposed surfaces. Grafts were sutured to the underlying nasal lining. Open wounds were dressed with ointment and nonadherent overlying dressings designed to maintain a moist environment judged optimal for secondary healing. Patients changed the dressings daily.

Results: All patients achieved complete re-epithelialization in 4 to 6 weeks, with most achieving favorable esthetic and functional results. Photographs of the defects, surgery, and results of 2 selected cases are presented.

Conclusions: While wounds in some nasal areas heal secondarily with good results, wounds in proximity to the alar margins or internal valve may be problematic. Exposed cartilage does not invariably require skin flap cover. When that exposed cartilage is a free graft, it may not require flap coverage provided that the graft is partially buried. Preservation of perichondrium on exposed cartilage grafts may help resist desiccation and provide a superior surface for re-epithelization. Reconstruction with a free cartilage graft from the auricular concha and secondary healing offers the additional advantage of being a 1-stage reconstruction.

Reviewer's Comments: Nasal reconstruction is a complex, significant, and gratifying area. A reflex response to the patient who presents with a Mohs' nasal defect is to envision flap choices. Subtleties and complexities of flap selection and design are interesting and titillating. Furthermore, the prospect of exposed cartilage graft suggests flap cover to many. However, in the proper circumstances, one reasonable choice of flap can be no flap! Any defect of the nasal sidewall within 5 mm of the free alar margin should have a non-anatomical cartilage batten graft placed in the free alar margin to prevent alar retraction and/or external valve collapse. Grafts can be harvested from the concha with the perichondrium left adherent to the convex (to be exposed) surface. Grafts should be designed to be significantly larger than the overlying skin defect. This permits a significant amount of cartilage to underlie the adjacent intact skin. Grafts should be suture fixed to the caudal alar cartilage to support the free alar margin. Wound dressing and care should be carefully designed to prevent desiccation and excessive crusting. (Reviewer-Norman V. Godfrey, MD).

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Keywords: Free Cartilage Grafts

Print Tag: Refer to original journal article