



NEW SURGICAL TECHNIQUES HOLD PROMISE FOR TREATING VITILIGO

Dermatologist stresses early intervention as key to successful treatments

Information presented at American Academy of Dermatology's 70th Annual Meeting by Rebat M. Halder, MD, FAAD, professor and chair, department of dermatology, Howard University, Washington, D.C.

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OVERVIEW:

Vitiligo is a chronic skin condition that causes areas of the skin to become depigmented (or lose pigment). Considered an autoimmune disease, vitiligo is thought to occur when the body's immune system attacks and destroys melanocytes (the cells that produce pigment) – leaving the affected area of skin void of color. Vitiligo most often affects the face, elbows, knees, hands and feet, and the condition is more noticeable in people with darker skin tones.

The most common treatments for vitiligo include topical medications and light therapy that can be used in combination to restore pigment. Now, newer surgical techniques are being introduced that have shown to have a high success rate in restoring pigment to the affected areas.

NEW SURGICAL TECHNIQUES:

Skin Grafting

- Normal skin is used as donor tissue and then grafts are surgically transplanted on areas of vitiligo. The new skin grafts start producing pigment.
- Patients who are candidates for this procedure must have stable vitiligo, or vitiligo that has not changed for at least six months.
- This procedure can be used for patients with limited areas of vitiligo and also in those with more extensive disease. Patients can decide to use grafts on one area of the body (such as the face) and choose another therapy for other areas affected by vitiligo (such as the hands).
- Skin grafting has a high success rate – 80 to 90 percent in most patients.
- This in-office procedure is not widely used in the United States but is commonly used in other countries (particularly in South America, Europe, Southeast Asia, India and China).

Melanocyte Transplants

- In this procedure, melanocytes and keratinocytes (the cells of the top layer of skin) are obtained surgically under local anesthesia from the patient and then grown in a culture in the lab overnight. Once grown, the cells are then placed or applied on the skin's vitiligo patches.
- This therapy is administered in-office and best used in areas of limited vitiligo where the vitiligo has been stable for at least six months.
- Melanocyte transplants have a very high success rate of 95 percent.
- Few dermatologic centers in the U.S. are offering this specialized procedure, but Dr. Halder expects that it will be available to more patients in the future.

Maintenance Following Surgery

- Phototherapy often is used after both skin grafting and melanocyte transplants to stimulate cells to make new pigment faster in treated areas.

News Release

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TOPICAL THERAPIES:

While results vary from patient to patient, Dr. Halder noted that on average 45 to 50 percent of patients have an acceptable response using topical therapies to restore pigmentation. The duration of treatment is approximately four to six months, but patients may need maintenance therapy if pigmentation is lost following the course of treatment.

Topical Corticosteroids

- In cases where less than 20 percent of the skin surface is affected by vitiligo, different strengths of topical corticosteroids can be applied to nearly any part of the skin where vitiligo is present, including the face. However, a weaker concentration may be prescribed for the face, as some concentrations may be too strong.
- One of the main side effects of long-term topical corticosteroid use is thinning of the skin. For this reason, this therapy must be monitored carefully in children.

Topical Immunomodulators

- Topical immunomodulators, or calcineurin inhibitors, can regulate the local immune response of the skin. Two therapies used to treat vitiligo are tacrolimus and pimecrolimus.
- In adults, one advantage of using topical immunomodulators is that these therapies can be used on areas of the skin where topical corticosteroids cannot be tolerated – even in weaker strengths – such as the face.
- In children, one advantage is that these medications are safer to use than topical corticosteroids for longer periods of time.
- Dr. Halder noted that all prescriptions for topical immunomodulators contain a black box warning from the U.S. Food and Drug Administration (FDA). Because of the warning, it's important to see your dermatologist regularly if you are using a topical immunomodulator.

LIGHT THERAPIES:

There are several types of laser and light therapies that can help treat vitiligo, and a few require the patient to be exposed to a controlled dose of ultraviolet (UV) light. It is important to note that these therapies are not used for intentional tanning, like a tanning bed, and need to be administered carefully by a dermatologist to ensure the patient is treated safely and monitored for skin cancer.

PUVA (Psoralen + UVA) Therapy

- This light therapy is used when less than 20 percent of the skin surface is affected by vitiligo.
- UVA light is used with the topical medication psoralen, which is applied to areas of vitiligo prior to light treatment. Psoralen sensitizes the skin to the UVA light, so the light treatment works specifically on areas of the skin affected by vitiligo.
- While there are different ways to administer this treatment, only a small dose of UVA is delivered to the skin.
- For best results, PUVA treatments are administered weekly for up to six months.
- Most patients will see a 50 to 55 percent improvement in four to six months.
- Maintenance therapy may be required with either additional PUVA treatments or in combination with topical medications.

Narrowband UVB

- This light therapy is used in vitiligo patients with more extensive disease or in cases where more than 20 percent of the skin surface is affected by vitiligo.
- A specific wavelength (311 nanometers) is administered to the entire surface of the skin to treat areas of vitiligo.
- On average, patients will experience a 60 to 65 percent improvement after 12 to 18 months of therapy.

Targeted Phototherapy

- The excimer laser (308 nanometer wavelength) is used with this therapy, and only the areas of skin affected by vitiligo receive the laser energy.
- This therapy works well for the face.
- Dermatologists can tell within the first four weeks of treatment whether or not the therapy is working.
- The duration of treatment is two to six months, and the average rate of improvement is 70 percent.
- To maintain results, topical medications can be used following treatment.

DEPIGMENTATION:

Stripping the Skin of Color

- For very extensive vitiligo in which more than 50 percent of the skin surface is affected or if the condition results in facial disfiguration, some patients opt for depigmentation (a form of bleaching the skin) to blend the remaining pigmented skin with areas of vitiligo.
- This extreme form of treatment uses the strong topical medication monobenzone to strip the skin of all remaining pigment.
- About 15 percent of patients develop contact dermatitis from using monobenzone and are unable to complete treatment.
- The duration of treatment is six to 12 months.
- After successful treatment, patients have to be very careful in the sun and practice lifelong sun avoidance since depigmented skin is at a higher risk for skin cancer.

LINK TO OTHER AUTOIMMUNE DISEASES:

Vitiligo is associated with other autoimmune diseases, and Dr. Halder advises patients to be aware of the symptoms of these diseases and undergo appropriate testing. These associated diseases include:

- Thyroid disease
- Diabetes
- Pernicious anemia (vitamin B12 deficiency)
- Addison's disease (disorder of the adrenal glands)

AMERICAN ACADEMY OF DERMATOLOGY EXPERT ADVICE:

"It is important for anyone who notices any unusual changes in the pigmentation of their skin to see a dermatologist, as vitiligo treatments are more successful the earlier they are started," said Dr. Halder. "The newest surgical grafting techniques and transplant procedures hold a lot of promise for successfully treating vitiligo, and I think we'll see more dermatologists offering these cutting-edge procedures in this country in the future."

STATISTICS AND FACTS:

- While not considered a genetic disorder, 25 percent of patients with vitiligo will have a family member that also has vitiligo.
- Approximately 2 to 3 percent of the U.S. population is affected by vitiligo, and the condition can occur in adults and children of any skin tone or racial or ethnic background.
- Genes that are associated with autoimmune diseases have been found in higher frequency in vitiligo patients.

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