Medical Therapies for Scarring Alopecia

Presented by Lynne Goldberg, MD

Dr. Goldberg began her Saturday morning presentation by reminding the audience of the basics of scarring alopecia.

Scarring alopecia is not a single disease. Therapy and treatment options must be tailored to the disease and the individual; and be within the physician's comfort range. Therapies and treatment options will consider the rapidity of hair loss, severity of symptoms and the emotional state of the patient. Most often, goals of the treatment plan are to stop the hair loss, alleviate symptoms, encourage health of the hair that remains and offer support and reassurance.

There are few studies on treatments for cicatricial alopecia and no individual treatment has been proven to work consistently. Each provider has a different approach. Dr. Goldberg reviewed the medications used for patients with cicatricial alopecia. We have highlighted each below and provided some of the key points for each treatment.

Topical Steroids have many different names (clobetasol, fluocinolone, mometasone) with many different strengths from ultra-high potency to low potency. There are side effects to topical steroids, but it depends on the potency of the product, area of the body, and duration of use. Topical steroids treat many different diseases, data is sometimes lacking. Topical steroids can be delivered by several vehicles from ointments, creams, lotions and foams.

Injectable Steroids or Intralesional Steroid Injections can be used instead of, or with, topical steroids. They enable the steroid to be placed under the skin at the site of inflammation. It avoids side effects to the epidermis. Issues include pain, temporary indentation. There is no data as to safety, strength, amount, length of use, etc., for cicatricial alopecia patients.

Topical calcineurin inhibitors include tacrolimus (Protopic) or pimecromlimus (Elidel), which are immunosuppressants approved to treat chronic eczema. These can also be used in a wide variety of other skin conditions. Most common side affects include burning, itching, redness. There was a boxed warning about cancer added in 2008. They are available as an ointment and cream.

Minoxidil is for high blood pressure when used orally. It prolongs the growing phase of hair follicles and limits miniaturization. There is no effect on scarred hair follicles. It can be used to promote growth of unaffected follicles in the area of scarring. It is especially helpful if a co-existent pattern hair loss is suspected. It is available over the counter and in 2% and 5% formulations.

Antibiotics, specifically from the tetracycline family, are from chlortetracycline which grow in soil. Minocycline and doxycycline are synthetic variants. They are broad-spectrum agents and have a good safety profile. They can be used to treat a wide variety of infections, including many skin disorders. They are often used for their anti-inflammatory properties. Tetracyclines interfere with several mediators of inflammation. They inhibit the enzymes that create mediators and inhibit inflammatory cells from making mediators. They can also inhibit these mediators once made and reduce tissue destruction.

Systemic antibiotics have been used for treating neutrophilic scarring alopecia for a long time and recently have been used for lymphocytic scarring alopecia, too. In 2007, the Cleveland Clinic studied the treatment of 29 LPP patients and the use of various treatment options.

	# of Patients	Good Result	Fair Result	Worse
Topical Steroids	24	29%	54%	4%
Intralesional Steroids	20	40%	50%	10%
Tetracycline	11	55%	36%	9%
Antibiotics	4	25%	50%	25%
Antimalarials	1	100%		

Veasco, Bergfled, Remzi et all, Cleveland Clinic – JAAD 2007

For neutrophilic scarring alopecia, like folliculitis decalvans, or dissecting cellulitis of the scalp, antibiotics are the mainstay therapy and can be given orally or topically. They are often treated with topical or injectable steroids. They can be used with other oral treatments like isotretinoin and biologics.

Non-tetracycline antibiotics can be used for neutrophilic scarring alopecia and are guided by culture results. These antibiotics include cephalosporins, ciprofloxacin, sulfamethoxazole and trimethoprim, erythromycin, rifampin (used in combination with clindamycin). Clindamycin and erythromycin are available as gels and solutions. Mupirocin is an anti-staphylococcal ointment. These topical antibiotics can be used for localized areas of neutrophilic scarring or limited disease. It is helpful for patients who want to avoid systematic antibiotics.

Isotretinoin is another treatment option. It is widely used for severe nodulocystic acne, but some have also considered isotretinoin as a treatment for dissecting cellulitis. Patients generally improve within three months. There are some significant side effects to isotretinoin, including high risk of birth defects, issues with night vision, elevated blood lipids, severe skin dryness. Patients on isotretinoin require monthly visits with their physician and lab monitoring.

TNF Alpha Inhibitors are a type of biologic, meaning the drug is made from a living organism. They are indicated for inflammatory disease and cancer therapy. However, infliximab and adalimumab are used in dissecting cellulitis with variable success. These cannot be taken orally and are expensive. Side effects include infection, increased risk of malignancy and reactions at the site of injection.

For patients with lymphocytic cicatricial alopecia, the first line of oral medications is usually hydroxychloroquine, doxycycline and finasteride.

Hydroxychloroquine or Plaquenil is an antimalarial drug derived from quinine, found on the bark of cinchona tree. It has been used in many preceding compounds, including chloroquine. Today, it is widely used by rheumatologists and dermatologists.

Chloroquine analogs are FDA approved for malaria, lupus erythematosus and rheumatoid arthritis. Unapproved uses include metabolic diseases, infections and other skin diseases like sarcoidosis, polymorphous light eruption, granuloma annulare, necrobiosis lipoidica, chronic actinic dermatitis and lymphocytic scarring alopecia. It was first used for sun-induced and nail disease caused by cutaneous lichen planus. First reports of hydroxychloroquine being used as a treatment for lymphocytic scarring alopecia were from the early to mid-2000s. The efficacy of the drug ranges to 0% (France) to 84% (Israel, which included partial and complete responders).

There are several side effects of hydroxychloroquine, which are usually related to dose and duration of treatment. These antibiotics are very well-tolerated. Common side effects include gastrointestinal issues, headaches, muscle pain, fatigue, skin pigmentation. Patients will be monitored by labs for blood counts and liver function. The biggest fear is eye toxicity, particularly the retina. The chances for this increase after 5 to 7 years of use and with cumulative doses of 200-1000 grams. Chances of eye toxicity also increases with high daily doses, which depends on the patient's body weight.

Finasteride was first approved in a 5 mg dose for enlarged prostate glands in men in 1992. It was subsequently approved in a 1 mg dose for male pattern hair loss in 1997. In 2004, case reports started appearing on use in women for female pattern hair loss. Then, in 2013, it was reported useful for frontal fibrosing alopecia. In 2014, there was a study of 120 FFA patients who were treated with finasteride or dutasteride. All 120 patients in the study improved or stabilized, no one worsened. However, researchers are still unsure as to why these results occurred.

It is hypothesized that a decrease in estrogens could play a role in the cause of FFA in women. In one study, there was a high incidence rate of early menopause in FFA patients as compared to the general population (14% vs. 6%). A considerable number of women in the study had undergone a hysterectomy. Estrogen may influence the hair cycle. Hormone imbalance may trigger inflammation.

There are side effects to finasteride, however until recently, they were only known in men. Side effects include dizziness, sexual dysfunction, weakness, swelling, drowsiness, rash, enlargement or tenderness of the breast and shortness of breath.

In 2016, authors of a study published in the Journal of Drugs in Dermatology reviewed 20 articles on the use of finasteride and dutasteride in women and looked specifically for side effects. Nine of the 20 mentioned side effects in women, but 7 out of the 20 articles said side effects were absent. In many of the articles, side effects were not listed. Only two patients reported a change in libido, and both were taking 5 mg of finasteride. Under reporting of the side effects in women is a problem. Many physicians will not prescribe these medications to women if there is a personal or family history of breast cancer.

The second tier of oral treatments for scarring alopecia include pioglitazone; immunosuppressive medications like prednisone, cyclosporine, mycophenolate mofetil; acitretin and methotrexate.

Pioglitazone is a medication for diabetes. The peroxisome proliferator-activated receptor-gamma has a background in cicatricial alopecia as research has shown that this is decreased in LPP patients and could trigger cicatricial alopecia. Soon after this study, reports surfaced of treatment of LPP with medications that increased the PPAR-gamma. Relapse usually occurs with discontinuation, but some patients experienced a prolonged remission.

In 2009, Drs. Paradi Mirmirani and Pratima Karnik treated a 47-year-old man who failed multiple treatments. He took pioglitazone for 8 months and saw a decrease in itching in the first month. He was symptom free one year later. Since then, there have been studies with variable response rates. In 2012, 50% of the patients studied saw improvement, with 20% in remission. In 2013, 14% of the patients studied responded to treatment. In 2015, 73% of patients had marked improvement.

As with other medications, there are adverse and side effects to pioglitazone. It can cause or worsen the chance of heart failure. There is a potential for increased risk of bladder cancer. Liver function should also be monitored. These adverse events are linked to long-term use (1 year), cumulative doses and individual susceptibility. Side effects include swelling, fractures, respiratory infections, lowering of blood sugar.