Cutaneous viral infections and viral mediated eruptions are among the most common complaints of patients visiting dermatologists, and warts probably top the list. Although warts account for a great deal of dermatology office visits, there is rarely ever an easy solution for them. A number of potentially useful therapies are available, and many cases require trials of multiple interventions, either singly or in combination. Yet recent changes in coding for wart therapies discourages dermatologists from exploring the variety of therapies often necessary for successful management. Despite the challenges, it is essential that dermatologists and researchers continue to explore potentially successful new therapies as well as emphasize patient education and encourage compliance and with existing therapies.

Physicians and patients have attempted a variety of measures to eradicate warts. One such therapy is occlusion, i.e. duct tape. A popular method for several years, recent reports suggest that occlusion therapy may not be as successful as previously thought. While physicians continue to debate the efficacy of occlusion therapy, Dr. Johnson suggests that it is one of many approaches for suffocating or irritating the skin. “Duct tape may not be the most successful therapy for treating warts, but there is no harm in doing it and there is little added expense for the patient,” she says. For this reason, Dr. Johnson sees no problem with informing patients about the therapy with the hope that it may suppress the wart over time.

This approach is consistent with one of Dr. Johnson’s principles of treating warts. “Anything that a patient can do to irritate the virus is beneficial, and suffocating the skin fulfills that duty,” she says. Dr. Johnson sometimes advises her patients to apply clear nail polish, tape, or band-aids on the warts to suffocate the virus. Although this differs from the common medical advice to not touch or irritate warts, Dr. Johnson notes that such advice only applies in specific cases such as shaving flat warts. “Warts can koebnerize, so you do not want to shave flat warts on the legs because you may spread them,” she observes. “But locally irritating a hand or foot wart will help the body to fight off the virus.”

Positive Irritation

“Warts are caused by the human papillomavirus (HPV), which is ubiquitous,” says Sandra Marchese Johnson, MD, a dermatologist practicing in Fort Smith, AK (www.johnsondermatology.com) and co-author of many studies on wart management. “There are more than 80 types of the virus.” While one could make the claim that warts emerge from the same category of viral disease, types of these viral diseases vary and etiological factors are often difficult to determine.
Viral Infections

Among in-office interventions, no one therapeutic regimen can effectively be used for all patients, as various studies over the years have indicated. Therefore, according to Coyle S. Connolly, DO, Assistant Clinical Professor of Dermatology at the Philadelphia College of Osteopathic Medicine and a private practitioner in Linwood, NJ, choosing from the myriad of treatments based upon age, occupation, and social status of the patient is the hallmark of the specialty. “Knowing what method to employ in what patient demographic means the difference between success and failure,” he says. “One therapy may work for a child but may not be aggressive enough for an adult, therefore it is important to know all the various methods available in order to have flexibility in devising the treatment regimen,” he adds.

Dr. Johnson notes that the first-line at-home treatment she recommends is salicylic acid. However, the first-line in-office treatment is liquid nitrogen, which requires (on average) four treatments approximately every three weeks.

It is also important to keep up with the literature, since new studies and reports may offer insight, according to Dr. Connolly. A recent study incorporated the use of 5-FU creams to warts, while another in which Dr. Johnson participated advocates the use of Candida skin test antigen injections. “My research of injecting warts with Candida skin test antigen has really contributed to the repertoire of treatments,” she notes. According to Dr. Johnson, this is the first approach to essentially “trick the body” from the inside to fight off warts on the outside. “The body uses Type IV delayed type hypersensitivity to fight and destroy the wart virus. By injecting something that the body uses to fight and destroy the wart virus, you can essentially stimulate the body to destroy the virus,” she observes.

Dr. Connolly says that he employs topical immune modulators in combination with topical retinoids and aggressive liquid nitrogen therapy. “The diverse methods available speak to the fact that there is not one best method currently available but rather a cornucopia of therapeutic agents that will elicit a sufficient clinical outcome if applied properly,” he says.

Effective Communication

Since there are no perfect therapies for wart management, an essential component of successful therapy is communication; more specifically, the physician’s ability to identify what therapies may be most conducive to a patient’s lifestyle and daily activities.

Careful assessment of the patient at the time of the office visit will lead the practitioner to the appropriate method for initial treatment, says Dr. Connolly. A teenager actively participating in sports may not desire aggressive liquid nitrogen therapy due to possible hindrance of performance. A middle-age cocktail server may not want to wear bandages after therapy while at work due to customer perception about hygiene. A five-year-old will not tolerate liquid nitrogen but will respond well to a topical blistering agent combined with a topical exfoliant.

Discuss the many treatment options available before initiating treatment. “A patient will not be compliant or follow-up if the therapy selected causes undue pain or social or physical handicaps,” Dr. Connolly observes. “Many times in our office, initial therapy may consist simply of patient education, a test area with liquid nitrogen with only a light freeze-thaw cycle, and the initiation of at-home therapy.” He notes that at the follow-up office visit, the patient will relate his or her response to therapy, and these initial results direct how aggressive the next treatment should be. This process is crucial to successful wart management, not just because of the lack of one overall successful therapy, but also because warts affect patients so differently.

Genital Warts and HSV

Herpes Simplex Virus (HSV). One of the most common of all viral infections is herpes simplex virus. Residing in the nerves, HSVs are highly contagious via skin contact and do not respond well to topical treatment, according to Dr. Johnson. Due to ease of spreading over the body and to other people, the best forms of treatment are those that prevent spread of the virus.

One of the more popular therapies is valacyclovir (Valtrex, GlaxoSmithKline), which treats initial outbreaks of genital herpes and prevents further outbreaks. Valtrex is also beneficial for preventing the spread of the virus, even if it may not be visible on the skin, according to Dr. Johnson. “Once you have the virus, you can shed it even if you do not have lesions. Taking Valtrex decreases the shedding of the virus,” she notes. Another effective treatment, according to Dr. Johnson, is acyclovir (Zovirax, GlaxoSmithKline), which also effectively treats herpes zoster, she says.

According to Dr. Johnson, dermatologists should play an active role in the treatment of sexually transmitted diseases, in particular HSVs. “Oftentimes, STDs ‘bring their friends,’ so having one STD—including genital warts or genital herpes—makes an individual at higher risk for other STDs,” she says. That is why the dermatologist plays a crucial role not just in treating HSVs, but in educating patients to prevent spreading.

Human Papilloma Virus (HPV). As opposed to HSV that reside latent in the nerves, HPV lives in the epidermis, resulting in common warts as well as the more serious cervical cancer. HPV is most commonly manifest in the dermatology office as the chief complaint of a male with “bumps” on the genitalia, says Dr. Connolly. “Condyloma are easily treated with various methods, but the emotional ramifications and shame of these lesions cannot be overlooked,” he notes. Patient education at the time of initial presentation is critical. “Ensuring that the patient understands the chronic, recalc-
trant, and contagious nature of the disease is extremely important,” says Dr. Connolly.

Reiterate the role of barrier protection and partner evaluation to prevent the risk of transmission and cervical cancer in females upon each return office visit, according to Dr. Connolly. “Taking the time to answer patient questions and establish a trust whereby the patients do not feel you are judging them will allow you to effectively communicate the many unfortunate sequelae to this common and insidious disease,” he observes. Regarding the specific role of the dermatologist in the diagnosis and management of HPV, Dr. Connolly advises that keys to successful treatment include early detection, diagnosis and treatment coupled with comprehensive patient education.

The HPV vaccine (Gardasil, Merck) has seen its share of controversy, especially in the mainstream media, specifically surrounding state legislation mandating vaccination for the prevention of cervical cancer. While much of the controversy seems to stem from issues of ethics, some remain skeptical as to the vaccine’s effects or, more specifically, its reported effects. According to Dr. Johnson, the vaccine is certainly effective, but it’s far from perfect. “The HPV vaccine only accounts for four of the high risk strains,” she explains. Regardless of conjecture regarding the legal issues and social implications, she notes that recent data show the vaccine itself may not be the lifesaver it’s often described as.

One study found that the vaccine is highly effective in women who have never been infected with the four vaccine strains, but less so in a more exposed population. Nevertheless, researchers concluded that the vaccine displays great efficacy against HPV types that cause life-threatening disease. While Dr. Johnson acknowledges the importance of Gardasil, she notes that the media attention surrounding it may have led to misconceived notions about the vaccine itself. “Lost among all the frenzy over the vaccine is a great impetus to know much about it,” she says, which has given some people a false sense of security about the vaccine. Patients who do receive the vaccine must understand that they will not be protected from all strains of HPV and are still at risk for infection, including genital warts.

Addressing the Truth

Viral infections of all types—whether due to HPV or HSV—remain a treatment challenge, despite the common patient expectation for treatment to be as straightforward as diagnosis. “Many patients present to the dermatologist frustrated and potentially scarred either from home therapy, self-surgery, or therapies rendered by the primary care physician,” notes Dr. Connolly. “The patient comes to the dermatologist with the expectation of a ready, reliable and instant cure,” Dr. Johnson adds.

“Indeed, we are the ‘experts’ and the onus is upon us to ‘cure’ the patient when other treatments have failed,” says Dr. Connolly. However, patients must recognize that successful treatment takes time. There is no single appropriate regimen, and successful treatment may depend upon individual cases and patient comfort/pain levels. Therefore, Dr. Connolly and Dr. Johnson agree that honest communication is often equally important as the therapy rendered.

Tips for Managing Warts in Children

A child that presents with multiple warts is a challenge. The most difficult aspect is patient compliance at home and overcoming the child’s fear of pain caused by treatment. One golden rule to follow: never initiate painful therapies at the first visit. Instead, spend a few moments establishing a rapport with the parent and child and determining the least invasive method that will allow introduction to the treatment course. Often, starting with a blistering agent and topical retinoid will establish trust because painful therapies are not thrust upon the child.

At the initial visit, educate the parent about topical anesthetics and their use before future visits. The application of topical lidocaine cream under occlusion a few hours prior to a visit will numb the treatment area and allow the use of potentially more aggressive therapies. Key to managing pediatric patients is to establish trust and set realistic at-home therapeutic plans: keep the regimen uncomplicated and have frequent follow-ups with the same practitioner. Emphasize realistic expectations about the time to therapeutic improvement and cure with the parent or guardian. Compliance in many cases is based upon simplicity of treatment and parental understanding of the purpose of repeated treatments.

— Coyle S. Connolly, MD