

Plane Warts: An Overview

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Abstract

Objectives: to thoroughly examine the causes, prevalence, and treatment options for plane warts. **Background:** Plane warts, produced by human papillomavirus (HPV), are often seen on the faces, hands, necks, and legs of children and young adults. They are numerous, slightly raised, smooth papules. The information was gathered by researching aircraft warts in the Medline databases, namely Pub Med and Medscape. **Choosing a course of study:** The inclusion of all research was determined by separate evaluations. They were considered for inclusion if they met the following requirements: Articles on aircraft warts that have been published in peer-reviewed journals and written in English. **Information extraction:** Research was deemed ineligible if it failed to meet the specified requirements. **Ethical permission, clearly stated eligibility criteria, suitable controls, sufficient information, and well-defined evaluation methods** were all factors in determining the study's quality. We used a data collecting form to independently extract information relevant to our research results from all qualifying studies. **Conclusion:** There are many treatment options available for plane warts, which are a common form of wart.

Key Words: plane warts, pathogenesis.

1. Introduction

Cutaneous Infection with the human papillomavirus is the root cause of viral warts (HPV), Common (verruca vulgaris), flat (plane or plantar), mosaic (filiform), periungual (venereal or condylomaacuminata), anogenital (anogenitalium), oral (oral warts), and respiratory papillomas are some of the many shapes that warts may take (1).

Plane warts, caused by human papillomavirus (HPV), often manifest as many smooth papules that are slightly raised and most commonly seen on the hands, neck, legs, and face of children and young adults. They may be brown or skin-colored, round or polygonal, and 1–5 mm in diameter or larger; they can also be seen in clusters or arranged in a linear fashion, suggesting a trauma-related function (autoinoculation) (2).

There are several treatment strategies available, including destructive treatments, antiviral medications, antiproliferative therapies, and immunological therapies. Considerations such as budget, lesion kind, patient desire, immune system state, and prior treatments all play a role in therapy selection. Low clearance rates, high recurrence rates, and unpleasant effects are characteristics of conventional therapy techniques (3, 4).

Although topical retinoids are effective in treating plane warts, they may cause redness, peeling, and irritation to the skin if not used properly (5). Women using systemic isotretinoin run the risk of developing cheilitis, xerosis, and monthly irregularities (6). Although anti-mitotic medications and immune-modulating formulations are effective against plane warts, they carry the risk of causing a local hypersensitive response (7).

Refractory, thick, and widespread wart lesions may be treated with the ablative carbon dioxide laser. Since water is evenly distributed throughout tissues, this laser is able to target just those tissues (8).

One advantage of carbon dioxide ablation is that it is a painless technique. Another advantage is that it increases the clearance rate while decreasing discomfort and negative effects (9). On the other hand, it takes longer for the body to recover, the fumes may be harmful to both patients and doctors, and the recurrence incidence is considerable (10).

2. What we used and how we did it:

Resources for the Data: By scouring PubMed and Medscape, two of the most prominent medical databases, and looking into the function of pulsed dye lasers and ablative carbon dioxide lasers in treating plane warts up to the year 2023.

Study Selection: Each study was carefully reviewed by experts in the field to ensure its inclusion. They were considered for inclusion if they met the following requirements: With an English language publication, Examine the function of pulsed dye laser and ablative carbon dioxide laser in the management of plane warts in articles published in publications that are subject to peer review.

Data Extraction: Research was deemed ineligible if it failed to meet the specified requirements. **Ethical permission, clearly stated eligibility criteria, suitable controls, sufficient information, and well-defined evaluation methods** were all factors in determining the study's quality. We used a data collecting form to independently extract information relevant to our research results from all qualifying studies.

Warts: a literature review

The skin-based symptoms of the human papillomavirus are known as warts (HPV).

Among children, it ranks third, and among adults, it is likely much more frequent (11).

◆ **Pathogenesis**

- HPV (DNA viruses infect epithelial cells (the cells that line the inside of the body or the outer layer of the skin), of which 80 kinds have been identified so far with many more reported (12). A warty papule or plaque becomes clinically apparent when the viral replication process occurs exclusively in completely differentiated epithelium and the following proliferation (13).
- Warning signals
- The clinical presentation of warts might differ depending on the specific type of HPV and the specific location on the body. Additionally, HPV may lie latent within epithelial cells and cause no outward symptoms at all. While some forms of HPV are more likely to target certain anatomical areas, every epithelial surface is vulnerable. The hands and feet are the most prevalent sites of HPV type 2 infections. Common warts are also often infected with HPV strains 1, 4, 27, and 57. (13).
- Some warts are unpleasant (on the bottoms of feet or close to the nails, for example), while others are considered socially undesirable (on the hands or face, for example) (14).
- Usually, ordinary warts don't cause any discomfort. They could feel sensitive in certain places, like the palms of your hands. While periungual and subungual warts might impede nailcomgrowth, plantar and mosaic warts can cause significant pain. Conjunctivitis or keratitis are two possible causes of warts that appear on the eyelids (14).
- Complications
- Squamous cell carcinomas and premalignancies of the skin are both linked to papillomavirus infection. Enhanced vulvar varicosity (EV) is associated with an increased risk of squamous cell carcinoma in early adulthood and a moderate immunodeficiency, both of which cause a hereditary predisposition to scaly and flat wart-like keratotic lesions in adolescence (15).
- Types of human papillomavirus (HPV) that cause plane warts and other subgroups of beta-papillomaviruses are more common among immunocompromised

persons, especially those who have been on organ transplant waiting lists (15).

- Extremely severe or long-lasting warts may raise concerns about a potential immune deficiency since they might be the first sign of less severe immunosuppressed conditions including lymphoma, idiopathic CD4 lymphocytopenia, or HIV infection (16).
- Treatment
- Several potential therapies are being explored (13).
- Common warts that have been present for less than a year may be treated with first-line medications. These treatments may be used at home with or without a prescription and often remove the lesions with little pain and little chance of side effects or scarring (17).
- Second-line: Cryotherapy is a potential second-line treatment option if primary therapies have not been successful or are not appropriate (20). Cantharidin, 5-fluorouracil, silver nitrate, podophyllin, formaldehyde, and podophyllotoxin are some other chemicals that are sometimes used topically (18).
- Third-line: There are a number of different treatment alternatives available as third-line therapy for lesions that are either difficult to treat or reoccur. As a last resort, patients with very resistant warts may be subjected to more invasive and potentially dangerous "third line" therapies, such as intralesional bleomycin injections, surgical excision, curettage, or cautery, or topical or systemic immunotherapy (13).
- Treatment of warts may be achieved by the use of laser therapy, namely carbon dioxide laser, pulsed dye laser, and nd-yag laser (19).
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4. Conclusion

Plane Many different methods exist for removing warts, which are a common kind of skin growth that may show up wherever on the body.

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