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16 – 14 cases (47%), type 31 – 5 cases (17%), and other types did not exceed 14%. For women with LSIL, the prevalence was: type 16 – 64 cases (29%), type 31 – 20 cases (9%), and other types did not exceed 5%.

Conclusions: The study revealed that HPV types 16 and 31 are the most prevalent. The systemic approach using combined PDT treatment proved to be a highly effective and organ-preserving method for managing HPV-associated dysplasia. It surpasses traditional therapeutic methods and contributes to the full medical and social rehabilitation of women.

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460 Poster

Photodynamic Inactivation in the Control of *Candida auris*: Overcoming Resistance with Photodynamic Inactivation

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Significance: Fungal infections, including *Candida auris*, are a growing threat, causing significant mortality, particularly in immunocompromised patients. *C. auris* exhibits resistance to antifungals like amphotericin B and fluconazole and forms biofilms that reduce drug effectiveness. Photodynamic inactivation (PDI), which generates reactive oxygen species (ROS) through light-activated photosensitizers, has shown potential in treating resistant fungal strains by damaging both yeast and hyphal forms, including biofilm-embedded cells.

Approach: This study evaluated PDI's ability to enhance antifungal efficacy using low doses of amphotericin B and fluconazole.

Results: Results indicate that combining PDI with low-dose antifungals significantly improves antifungal effectiveness while reducing toxicity. High doses of antifungals can cause nephrotoxicity and hepatotoxicity, especially in systemic infections.

Conclusion: Integrating PDI with low-dose antifungals offers a promising strategy to overcome resistance and minimize adverse effects, providing a safer and more effective approach for treating systemic fungal infection

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462 oral

Observation on the Efficacy of Surgery Combined with Photodynamic Therapy for Vulvar cancer

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Objective: To observe the efficacy and safety of 5-aminolevulinic acid photodynamic therapy (ALA-PDT) combined with surgical treatment for vulvar cancer. Method: A total of 20 cases of female patients with vulvar skin cancer treated with 5-aminolevulinic acid photodynamic therapy (ALA-PDT) combined with surgery in our hospital from 2020 to 2024 were collected. The clinical efficacy, healing status, cosmetic effect, complications, and recurrence were observed through follow-up.

Results: 19 cases have shown no recurrence so far, and 1 case recurred due to involvement of lymph nodes at the time of admission. The wound healing was good, the function of the urethral orifice and the appearance of the vaginal orifice were well preserved, and complications were few.

Conclusion: ALA-PDT combined with surgical treatment for vulvar non-metastatic cancer has definite efficacy, high healing rate, good cosmetic effect, and can reduce the incidence of complications and recurrence rate, making it safe and reliable.

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464 Poster Highlight Presentation

Long term follow up for Bowen disease after Photodynamic Therapy

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Significance: Bowen's disease (BD) represents the in situ form of cutaneous squamous cell carcinoma; although it has an excellent prognosis, 3–5% of lesions progress to invasive cutaneous squamous cell carcinoma.

Approach: Photodynamic Therapy (PDT) can be a treatment option mainly for large extension lesions, providing an excellent rates of recurrence free follow up. Patients with an histological diagnostic of BD from 2017 to 2020 were treated with red light PDT in a single visit protocol. The clinical evaluation was performed 30 days after PDT, and every 6 months thereafter until December 2024.

Results: The area of the initial lesions ranged from 5 to 75 mm, with a mean of 26.2mm. Considering that these large area lesions would be treated with surgical procedure, the PDT treatment showed 80.4% of 5 years recurrence free follow-up.

Conclusion: This study shows an important contribution of PDT treatment of large area lesions, avoiding surgeries of big reconstructions in old patients with comorbidities.

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465 oral

Photooxidative effects on *S. aureus* after photodynamic inactivation cycles

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Significance: Fighting antibiotic resistance is one of the greatest challenges of the 21st century. Photodynamic inactivation (PDI) cycles at subtherapeutic doses, in addition to eliminating both antibiotic-sensitive and -resistant bacterial cells, can enhance the action of antibiotics.

Approach: In this study, curcumin at 10 µM and 450 nm irradiation with a fluence of 10 J/cm² are applied to methicillin-resistant *Staphylococcus aureus* (MRSA) cultures at 8-hour intervals. After each cycle, the minimum inhibitory concentration (MIC) of the antibiotic is determined.

Results: Over the course of the PDI treatments, the MIC of MRSA decreases significantly, altering its phenotypic classification from resistant to sensitive.

Conclusions: Thus, photo-oxidative action may represent a promising strategy for combined treatment with antibiotic therapy in bacterial infections

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