

Recent Advances on Molecular Pathogenesis of Verruca Vulgaris

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Verruca Vulgaris occurs due to infection caused by Human Papilloma Virus (HPV). Replication of HPV is closely associated with epithelial differentiation. More than 200 genotypes of HPV having tissue tropism are involved in development of a moderate range of benign tumors affecting the skin and they occasionally lead to the development of malignant tumors particularly Squamous Cell carcinoma. Benign Neoplasia mainly associated with HPV-2, HPV-4, and HPV-40 genotypes. Episomal viral genome (ds DNA) enters the nuclei of multiplying basal cells and the infected progeny promote the neoplastic proliferation during keratinocyte differentiation. Integrin receptors, syndecan-1 and TRAPPIII complex are involved at the entry portal of the viruses particularly in basal cells. Later viral assembly and release mainly occurs by L1,L2,E4 gene often crosstalk with the Hippo pathway signaling molecules and EGFR with up regulation of IL6, IL8, IL10 and down regulation of IL1- β , IL18, IL2, TNF- α and γ -IFN are also found. Due to restricted growth clinically Verruca Vulgaris is characterized by hyperkeratotic, exophytic, dome shaped papules or nodules. The lesions are sessile, verrucous and with distinct borders. HPV-16 is notorious for development of skin cancers due to expression of viral oncoproteins E6 and E7 by activation of E genes and evade protective roles of oncogenes. Genital warts are mainly caused by HPV-11 and HPV-6 without any specificity of their lineages and sublineages although HPV-11 A2 variant is most frequently associated with genital warts.

Biography:

Prof. Satadal Das is a Research Scientist in St. Xavier's University, Kolkata and Principal Investigator, Virology Laboratory, Regional Research Institute, CCRH, Kolkata, is one of India's renowned medical Microbiologist. He has published 104 papers in peer-reviewed journals and presented 232 papers in different conferences. He is member of 12 National and International associations. He has seven patents on microbiological products and processes and he has published one book on medical microbiology. At present seven PhD students are working under his guidance in different universities. He has delivered lectures at Royal Holloway, London University and at Rutgers University on microbiology related topics. He was president of Indian Association of Medical Microbiologists, West Bengal Chapter.