P–26; **HUMAN PAPILLOMAVIRUS (HPV) PROFILES OF VULVAR LESIONS: POSSIBLE IMPLICATIONS FOR THE CLASSIFICATION OF VULVAR SQUAMOUS CELL CARCINOMA PRECURSORS AND FOR THE EFFICACY OF PROPHYLACTIC HPV VACCINATION**

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Background: The term vulvar intraepithelial neoplasia (VIN) was introduced by the International Society for the Study of Vulvovaginal Disease (ISSVD) in 1986 and incorporates three grades of usual VIN (u-VIN I-III) and the differentiated VIN (d-VIN). While u-VIN is associated with the human papillomavirus (HPV) infection, d-VIN belongs to the HPV negative pathway of vulvar carcinogenesis. In the revised ISSVD 2004 classification, the u-VIN I category was abandoned and u-VIN II and III were merged. Further, an alternative Bethesda-like terminology presenting the term vulvar intraepithelial lesion (VIL) was proposed. To analyze the validity of the newly introduced classifications of vulvar precancerous lesions and to assess the presumable efficacy of the prophylactic HPV vaccination, we correlated histopathological features and HPV profiles of various vulvar non-neoplastic, precancerous and neoplastic lesions.

Materials and Methods: The total of 269 vulvar excisions representing lichen sclerosus (n=35), lichen simplex chronicus (n=14), condylomata accuminata (CoA; n=57), d-VIN (n=12), all grades of u-VIN (n=82) and squamous cell carcinomas (SCC; n=69) were subjected to the HPV typing by use of GP5+/6+ PCR and reverse line blot hybridization. Detected HPV types were stratified into low-risk (LR), high-risk (HR), probably high-risk and undetermined-risk groups. Histopathological categorization of vulvar lesions was correlated with their HPV profiles.

Results: High prevalence of HPV DNA was found in CoA (94.7%) and u-VIN (98.8%) being lower in SCCs (42%). While LR-HPV types prevailed in the HPV positive CoA (96.3%), HR-HPV types (especially HPV 16, 33 and 45) were detected in the majority of the HPV positive u-VIN (97.6%) and SCCs (93.1%). A tendency to the multiple-type HPV infection was observed in CoA (17.5%) and u-VIN II (41.7%). Importantly, our results showed differing HPV profiles, as well as the frequency of multiple-type HPV infection and the age structure in patients with u-VIN II and III. The biological heterogeneity within the u-VIN II group was also demonstrated. U-VIN I was distinguished as a rare disorder associated with HR-HPV.

Conclusions: The ISSVD 1986 terminology seems to be optimal for the classification of vulvar precancerous lesions. The spectrum of HPV types found in vulvar SCCs indicates that the efficacy of HPV vaccination in the prevention of vulvar cancer might be decreased in the studied population, because prophylactic vaccines are targeted against a limited number of HPV types.

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