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Epidemiologic studies of herpes simplex virus infections of type 1 and type 2 in Korea: A retrospective single-center study

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Herpes simplex virus (HSV) type 1 is a main cause of orofacial infection, while HSV-2 is usually associated with genital infection. HSV-2 tends to have more frequent recurrence and severe symptoms compared with HSV-1. However, recent studies reported the incidence of HSV-1 infection has growing up to about 50% in genital area in USA. The aim of this study was to estimate the proportion of HSV-1 and HSV-2 according to diverse factors such as infection site, age, sex, and underlying disease of patients in Korea. We performed a retrospective study of 220 Korean patients diagnosed as recurrent HSV infections confirmed by HSV PCR of skin from 2016 to 2018. The prevalence of infection with HSV-1 and HSV-2 was compared according to the site of infection, sex and age. Of the 220 participants, 124 had infections with HSV-1 and 96 with HSV-2. HSV-1 was a main cause of orofacial herpes (95.97%, $P < .001$) and HSV-2 showed 88.54% of genital herpes. Female patients showed more prevalence in both HSV-1 and HSV-2 infections than male, while HSV-2 infection showed significant female dominance ($P < .02$). Significant increasing trends of HSV-2 infections by age in comparison with HSV-1 have been revealed ($P = .005$). HSV-2 was still a major cause of genital herpes in our study. Further large-scale Korean epidemiologic studies are needed, for the recurrence of HSV infection could have negative influence on patients' quality of life.

Commercial disclosure: None identified.



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Lichen sclerosus et atrophicus vulva: An appraisal from 180 cases

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Background: Lichen sclerosus et atrophicus (LSA) is a common inflammatory dermatosis of the vulva with potential for atrophy, destructive scarring, malignant transformation and decreased quality of life due to sexual dysfunction. This study highlights the importance of diagnosing LSA as it is associated with morbidity.

Objective: Evaluation of the demographic, clinical, histopathologic features of LSA, progression of the disease, to look for systemic associations, and risk of malignancies of LSA in this part of India.

Methods: All the patients attended to our OPD with LSA vulva during 2016-2019 were recruited. A detailed history of pruritus vulva, dysuria, dyspareunia and constipation were recorded. Biopsy was taken in all cases to confirm the diagnosis. Systemic associations such as diabetes, thyroid and other autoimmune disease were noted.

Results: A total of 180 cases of LSA vulva were seen during 2016-19. Majority of the patients presented were between 50-60 years (48%) and 13% were in the prepubertal age group. Hypopigmentation was present in all cases (100%), followed by pruritus vulva (90.6%), dysuria (32.5%), constipation (21.9%), and dyspareunia (21.3%). Only introitus was involved in 45% of cases, extension up to anal orifice was seen in 26%, and resorption of labia in 11%. Squamous cell carcinoma was seen in 3 cases and carcinoma in situ in 2 cases.

Conclusions: Early diagnosis and treatment particularly in prepubertal girls helps in preventing long term sequelae, and in older age groups to prevent the progression to carcinoma in situ or SCC. Regular and steady surveillance is needed in all cases.

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Ex vivo human skin model as a tool for atopic dermatitis assessment

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Atopic dermatitis (AD) is a chronically relapsing inflammatory disease associated with genetic predisposition and environmental factors. Altered immune response and skin barrier dysfunction are the mainly responsible for skin lesion onset characterized by severe itching. Affected patients are highly sensitized to house dust mite, such as *Dermatophagoides farinae* (DF), which is considered a common environmental allergen causing AD. Among the abnormalities in epidermal barrier, changes in lipid profile of stratum corneum are highlighted, and the most notable feature is the decrease in ceramide levels. In addition, there is a reduction in the levels of envelope proteins filaggrin, involucrin and loricrin. Ex vivo AD model was developed using skin fragments obtained from elective plastic surgery and submitted to epidermal barrier disruption with 4% sodium lauryl sulfate. Complementary, skin was exposed to DF extract for two consecutive days. Skin fragments were collected, fixed and cryopreserved for immunofluorescence evaluation of filaggrin, involucrin, loricrin and sphingomyelin synthase. Our results revealed that human experimental AD model was able to satisfactorily mimic skin characteristics of AD by significantly reducing the filaggrin, involucrin and loricrin labeling when compared with control group. Labeling for sphingomyelin synthase, which is directly related to ceramide synthesis, also dropped considerably. Fragments of ex vivo human skin constitute the experimental model that most closely approximates the real conditions to evaluate the efficacy and safety of products applied topically. These findings strongly suggest that this model can be useful not only for elucidating DA pathogenesis but also for the evaluating novel therapeutic agents.

Commercial disclosure: None identified.



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