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DERMA TODAY

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Dear Doctor,

Greetings from Micro Labs. We are happy to bring you "Derma Today" which contains latest and interesting news in the field of Dermatology.

This issue contains:

Should you require any article or, medical information, please feel free to contact us medicalservices@microlabs.in

Looking forward to your valuable feedback.

Best Regards,

Medical Team, Micro Labs Limited.

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Overall and Specific Cancer Risks in Hidradenitis Suppurativa Patients

Introduction

Hidradenitis suppurativa (HS) is a chronic inflammatory disease which mainly affects skin-bearing apocrine gland. Hidradenitis suppurativa is one of the most severe dermatological disorders, and there has been detailed evidence of the relationship between HS and decreases in quality of life and psychosocial health.

Hidradenitis suppurativa is associated with severe comorbidities, which can lead to substantially reduced life expectancy. Although HS pathogenesis remains uncertain, multiple inflammatory cytokines, such as tumor necrosis factor (TNF), interferon-ÿ, interleukin (IL)-10, IL-12, IL-17, IL-23, and IL-32, as well as antimicrobial peptides LL-37, psoriasin, and β-defensins 2 and 3, may be factors in the progression of the disease.

Relevant genetic and environmental influences tend to lead to HS development and phenotype. The aberrant immune response and persistent HS inflammation, and the disease-related genetic and environmental factors may all be influences in cancer growth. The link between HS and cancer has been suggested: a review of 2119 Swedish patients showed that HS was linked with a rise in relative cancer risk of nearly 50 per cent. Cases of HS-complicating non-melanoma skin cancer have also been identified.

Patients with HS can grow vulvar, perianal, and perineal cancer. Recently, a correlation between HS and lymphoma was identified. Big, population-based epidemiological research on the risks of overall and particular cancers in HS patients are small. Thus, this population-based study was conducted to determine the overall and specific cancer risks in patients with HS compared with the risks in patients without HS in the Republic of Korea.

Methods

A nationwide population-based cohort study, using the Korean Health Insurance Review and Assessment Service database was conducted over a 2-year period from January 1, 2007, to December 31, 2008. Individuals in the control group who were never diagnosed with HS or cancer during the washout period were randomly extracted and matched by age, sex, index year, and insurance type at a case-control ratio of 1:8, and patients with newly diagnosed HS, were included. Follow-up data on incident cancer from January 1, 2009, to December 31, 2018, were included.

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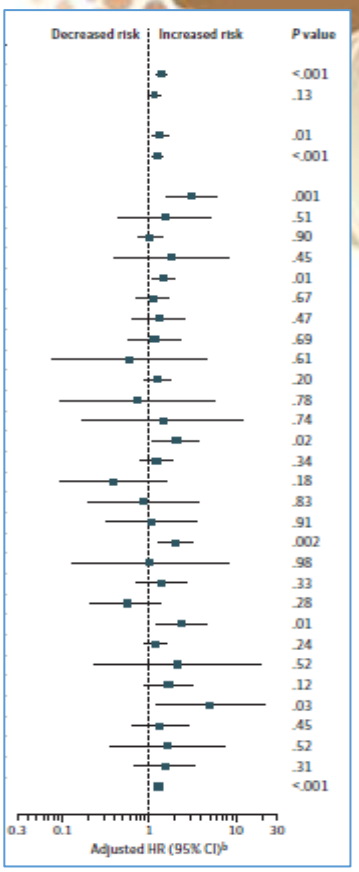
The overall and specific cancer incidence rates were calculated per 100 000 person-years in patients with HS and in the matched control cohort. The risk for cancers was assessed by multivariable Cox regression models in patients with HS compared with the matched control cohort.

Results

In total, 22 468 patients with HS and 179 734 matched controls were included in the study. The mean (SD) age was 33.63 (17.61) years and 63.7%of the participants in both groups were male. The adjusted hazard ratio (aHR) of overall cancer in patients with HS was 1.28 (95%CI, 1.15-1.42). Patients with HS had significantly higher risk for Hodgkin lymphoma, oral cavity and pharyngeal cancer, central nervous system cancer, non-melanoma skin cancer, prostate cancer, and colorectal cancer



- HS appeared to be associated with a significantly increased risk of overall cancer as well as several specific cancers.
- More intense cancer surveillance may be warranted in patients with hidradenitis suppurativa.

Conclusion

HS tends to be linked with an increased cancer incidence and many different cancers, including OCPC, non-melanoma skin cancer, CNS cancer, colorectal cancer and prostate cancer. This research indicates that extensive cancer screening of patients with HS may be needed. More rigorous histological test and a high degree of concern are needed for early detection of skin cancer. Modifications of behaviour of HS patients will be stressed to tackle habits such as smoking or drug consumption, or disorders such as obesity.

It is recommended that patients develop any signs or symptoms that suggest Hodgkin lymphoma, such as painless lymphadenopathy, persistent fatigue, unexplained fever, night sweats or unexplained weight loss, more aggressive laboratory testing, imaging studies, and histological examinations, especially in men with HS.

Source: Jung JM, et al. Assessment of Overall and Specific Cancer Risks in Patients With Hidradenitis Suppurativa. JAMA Dermatol. Published online May 27, 2020. doi:10.1001/jamadermatol.2020.1422

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A study of 6% gabapentin topical formulation for chronic kidney disease-associated pruritus: An RCT

Introduction

Chronic pruritus associated with the kidney disorder (CKD-AP), also known as uremic pruritus, is a frequent condition involving chronic kidney disease (CKD) patients. Reports also indicated that CKD-AP develops in about 30–50 per cent of hemodialysis (HD) patients. A global research performed by Pisoni et al. has recorded 42 percent of HD patients talking of mild to severe pruritus along with sleep disturbance, depression, impaired quality of life, and increased risk of mortality.

Gabapentin is an antiepileptic drug that decreases synaptic transmission by operating on channels gated by presynaptic voltage. While most widely known for its usage in neuropathic pain control, oral gabapentin has also been documented to decrease the CKD-AP severity. Increased risk of gabapentin usage in patients with CKD may therefore be possible because of the unusual removal of the renal. Using topical formulation is one potential option to counteract the renal impact of this medication. A study published in 2008 described the effectiveness of 6 percent topical gabapentin for treating vulvodynia without any systemic adverse event reports. Physically, gabapentin (171.23678 g / mol molecular weight) is an effective topical drug, since it complies with the 500 Dalton law. Thus, this research was performed with the goal of assessing the early effectiveness and protection of topical gabapentin in CKD-AP therapy.

Methods

The authors conducted a randomized, double-blind, vehicle-controlled study. The key inclusion criteria were:

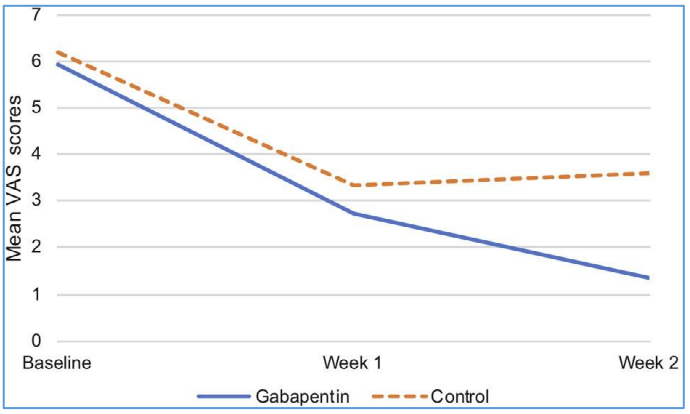
(i) Patients on hemodialysis for at least 8 weeks, and
(ii) A baseline visual analog scale (VAS) pruritus score ≥5.

Patients were randomized into two groups. Topical 6% gabapentin was used in the experimental group while plain permeation cream was used for the control group. The primary endpoint was the mean change in pruritus scores using the VAS (MCPS-VAS) from baseline after 1 and 2 weeks of once daily application.

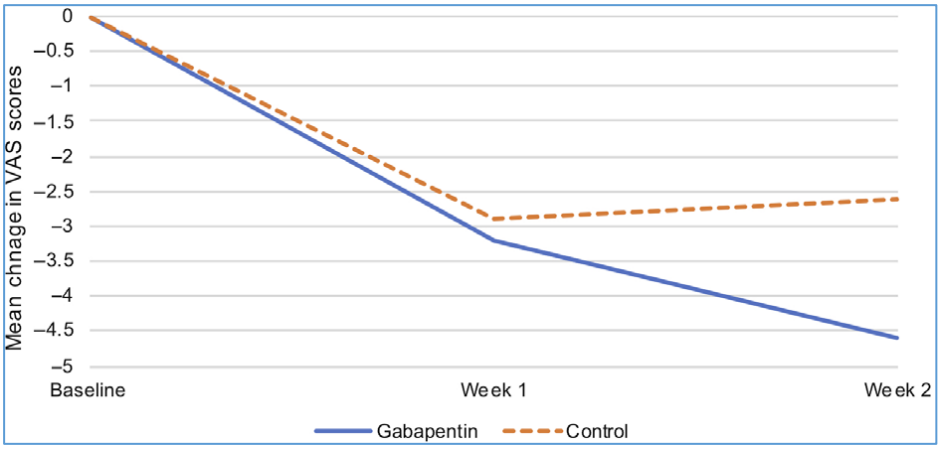
Results

Thirty patients (15 per group) were included in the analysis. Treatment with 6% topical gabapentin resulted in significantly decreased mean pruritus scores at 1 week (mean score 2.7; range 0–5; $P < 0.001$) and 2 weeks (mean score 1.3, range 0–5; $P < 0.001$) from baseline (mean score 5.9; range 5–8). The MCPS-VAS of the two groups were not significantly different ($P = 0.8$) after 1 week. However, the MCPS-VAS of the experimental group (mean change _4.6; range 0–7) was significantly greater

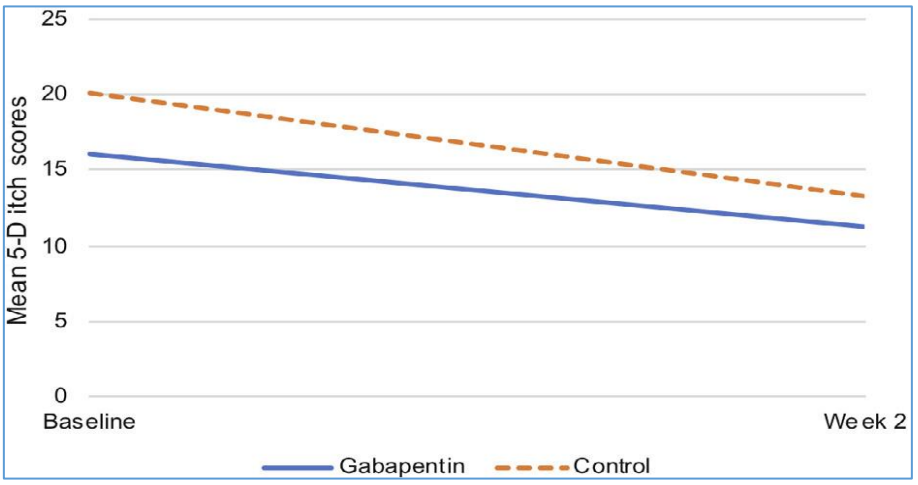
(P = 0.01) compared to control (mean change _2.6; range _1 to 5) after 2 weeks. There were no drug-related adverse events reported.



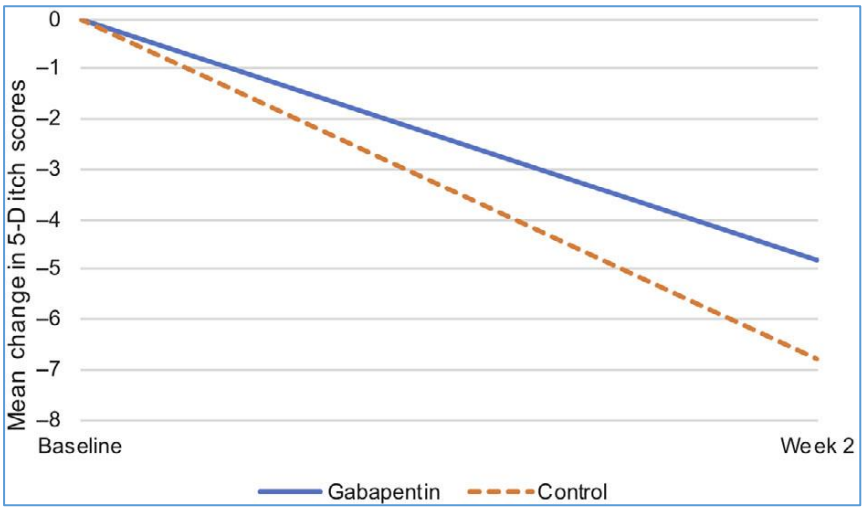
Mean VAS pruritus scores of both experimental and control groups.



Comparison of the mean change in VAS pruritus scores between groups.



5-D itch scale scores of both experimental and control groups.



Comparison of the change in 5-D itch scale scores between groups.

Conclusion

Short-term application of topical 6 percent gabapentin at 1 and 2 weeks vs. placebo was able to reduce VAS pruritus levels. Upon 2 weeks of topical gabapentin treatment, decrease in the VAS pruritus scores was substantially stronger relative to placebo automobiles. Acute, local or systemic adverse events were not reported. Longer follow-up could be required in a broader population of patients to better determine the long-term effectiveness and potential late toxicity of CKD-AP usage of topical gabapentin.

Source: Aquino TM, et al. A randomized controlled study of 6% gabapentin topical formulation for chronic kidney disease-associated pruritus. Int Jour Derm. May 2020 :1-7, Published online on May 2020 doi: 10.1111/ijd.14953

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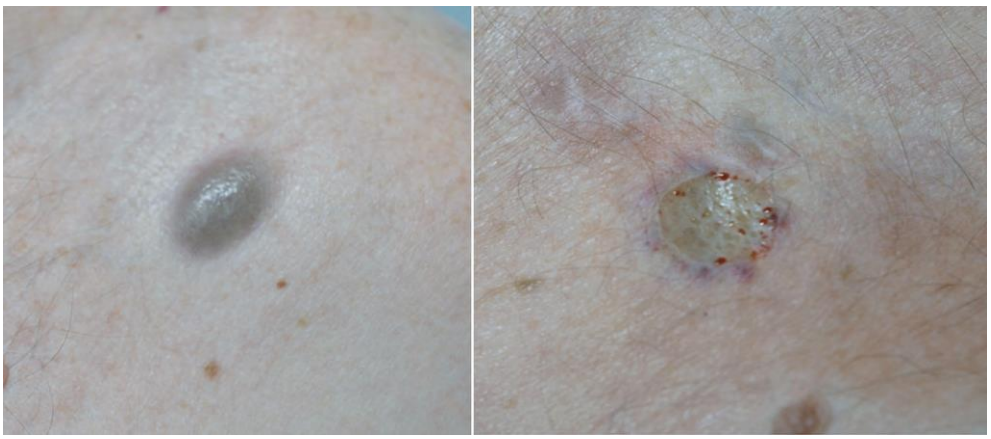
CASE STUDY

Green-Gray Nodules on the Chest that are asymptomatic

A 58-year-old man posed on the chest for examination of asymptomatic skin lesions that had been stable since the start four months ago. His medical background was notable for hyperlipidemia, family polyposis, and acutemyelogenous leukemia (AML), for which he had undergone a 13 months earlier allogeneic hematopoietic stem cell transplant. Cutaneous exam revealed green-gray nodules and plaques on the upper chest, left and right. Bilateral chains of the cervical, axillary, and inguinal lymph nodes were adenopathic negative. The individual has not sought interventions to relieve the nodules and rejected feeling causes or discomfort that aggravated them. Biopsies is done on skin lesions.

Diagnosis

Chloroma



A, Representative dusky, green-gray nodule located on the upper chest. B, A prominent green hue is present at the base of a lesion following shave biopsy.

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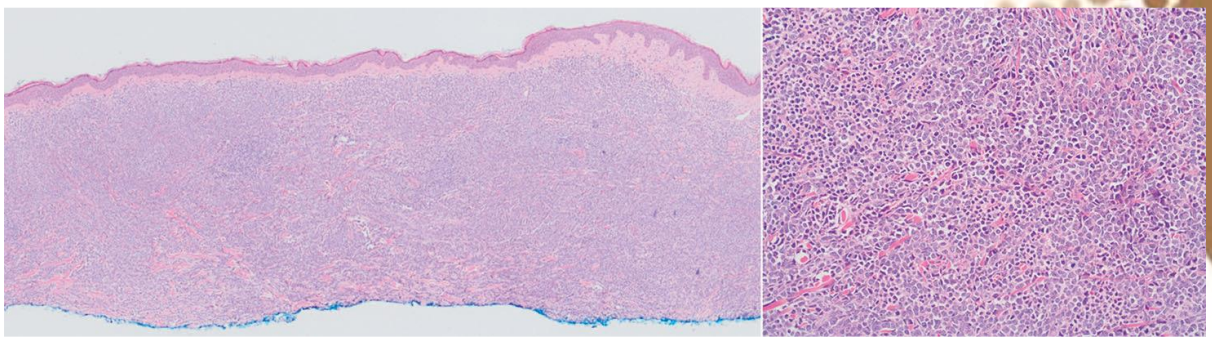

A, Diffuse infiltrate of mononuclear cells with a narrow grenz zone (hematoxylin-eosin, original magnification ×20). B, High-powermagnification demonstrates large mononuclear cells with irregular nuclei (hematoxylin-eosin, original magnification ×400).

Discussion

The histopathological findings included a diffuse mononuclear infiltrate with lysozymeandmyeloperoxidase (MPO) expression.

Additional immunohistochemical stain revealed CD34 expression and was negative for CD4, CD56 and CD123. A myeloid neoplasm sequencing panel was conducted on the tissue sample and revealed mutations in DNMT3A, IDH1, NPM1 (type A), NRAS, and STAG2, similar to those found on the original report from the patient's bone marrow biopsy specimen. These findings established a chloroma diagnosis, also named myeloid sarcoma. Myeloid sarcoma results from extramedullary leukemic blasts.

It is also known as chloroma as it appears in the eyes, owing to the green hue imparted by MPO's diffuse expression. Myeloid sarcoma develops in people with a history of AML or myelo-dysplastic syndromes, or with recurrent myeloid leukemia during the blast process. Skin lesions can occur on rare occasions without a previous history of systemic disease or association with bone marrow. The lesions may appear all over the body, including the skin and soft tissues. Studies also recorded that at least 1 location of myeloid sarcoma is present in up to 9 per cent of patients with AML. Additionally, the correlation between allogeneic hematopoietic stem cell transplant (HCT) and decreased occurrence of extramedullary relapse tends to be current. Extramedullary recurrence following HCT occurs more frequently within 12 months to 5 years' post-transplant. Histopathological specimens consist of myeloid cells with granulocytic or monocytic differentiation which invade varying degrees of the dermis and surrounding soft tissue. Release of lysozyme, MPO, and CD34 is usually shown by immunohistochemical examination. Many markers which can be articulated include CD117, CD43, and CD68.

Additional malignant hematolymphoid infiltrates, especially blastic plasmacytoid dendritic cell neoplasm (BPDCN), are included in the differential diagnosis for the present case. Often known are nice syndrome and strong tumors that are distinguished by atypical basophilic cells in the dermis, such as Merkel cell carcinoma. A myeloid-derived malignancy of dendritic cells, BPDCN that pose to diffuse plaques on the neck, limbs and trunk with a distinctive red-brown color and associated lymphadenopathy, with one to multiple nodular lesions. Morphologically, BPDCN is infiltrated with mononuclear plasmacytoid cells that may imitate myeloid sarcoma; neoplastic cells express CD4,

CD56, and CD123 and, unlike AML, are negative for MPO and lysozyme. Pleasant disease, also classified as severe febrile neutrophilic dermatosis, has the sudden appearance of numerous mild, edematous papules

And violent-colored nodules followed by fever, which sometimes occur in AML environment. The upper extremities and trunk are the most frequent locations of intervention and the lesions are sometimes soft, or accompanied with a burning feeling. Histological features include a strong neutrophil penetration in the superficial to deep dermis, with conspicuous papillary dermal edema. In the Nice syndrome histiocytoid type, the dermal infiltrate is distinguished by large epithelioid cells that mimic histiocytes, containing immature neutrophils.

Cutaneous findings in Merkel cell carcinoma include firm, non-tender, pink to bluish nodules that present with rapid growth in sun-exposed areas. Histological study reveals clusters and nests of basophilic nuclei with scattered chromatin with immunohistochemical expression that involve epithelial markers such as pan-cytokeratin and CK20 in a perinuclear dot line, and neuroendocrine markers such as chromogranin and synaptophysin. Myeloid sarcoma, also known as chloroma, includes extramedullary leukemic bursts that arise in persons with a history of myelodysplastic syndrome, AML, or chronicmyeloid leukemia, and reflects relapse of the condition. Cutaneous lesions can have a characteristic green-gray color imparted by the existence of MPO, which can give rise to clinical diagnostic skepticism. A myeloid sarcoma diagnosis will trigger restaging with mri tests and bone marrow biopsy to assess the site and severity of the relapse of the disease that will direct the therapeutic response.

Source: Amigo MA, Kaffenberger BH, Chung CG. Asymptomatic Green-Gray Nodules on the Chest. JAMA Dermatol. Published online May 27, 2020. doi:10.1001/jamadermatol.2020.131