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Declining reimbursement for wound care: A time-series analysis of Medicare reimbursement rates from 2015 to 2019

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Background: The treatment of wounds accounts for significant costs to the United States health care system. However, there is a paucity of literature evaluating trends in Medicare reimbursement rates for wound care.

Methods: The Centers for Medicare and Medicaid Services Physician Fee Schedule Look-Up Tool was queried for a sample of 8 common wound-care Current Procedural Terminology codes: 97597, 97598, 11042-11047. Reimbursement rates for each procedure were compiled and averaged for the years 2015 to 2019. For uniformity, analysis was limited to reimbursement in a facility setting. For each procedure, reimbursement rates were averaged across all geographic iterations. All reimbursement rates were adjusted for inflation to 2019-dollar values using the Consumer Price Index. Annualized changes in reimbursement were calculated for all procedures and averaged to estimate overall trends.

Results: After adjusting for inflation, average Medicare reimbursement for wound care declined by 9% from 2015 to 2019. Average Medicare reimbursement for wound care has declined linearly by 2.32% each year ($r^2 = 0.90$). Debridement of wounds involving bone (CPT: 11044) had the greatest inflation-adjusted decline in Medicare reimbursement at an average of 2.86% annually and 11% overall from 2015 to 2019.

Conclusions: Medicare reimbursement rates for wound care have consistently declined with respect to inflation from 2015 to 2019. At the same time, providers face increasing operating costs. Taken together, these increased financial pressures may perversely incentivize overutilization, or, on the other hand, limit access to necessary treatment for wound care.

Commercial disclosure: None identified.

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Afuresertib stimulates p16 and apoptotic pathway activation to suppress Merkel cell carcinoma growth

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Merkel cell carcinoma (MCC) is an aggressive neuroendocrine skin cancer caused by the Merkel cell polyomavirus in 80% of cases. In particular, T antigens encoded by polyomaviruses have been implicated in malignant transformation and unregulated cell growth through activation of the AKT/mTOR pathway, although the possibility of targeting this pathway for the treatment of MCCs has not been fully explored. In the current study, we identify the novel AKT inhibitor, Afuresertib, as a potent agent capable of stimulating pro-apoptotic pathways in MCCs. Our data revealed that treatment of virus-positive MCC cells (MKL-1 cell line) with afuresertib resulted in marked dephosphorylation (and thus increased activation) of the Bcl-2 associated death promoter and caspase-9. In addition to activation of the intrinsic apoptotic pathway, afuresertib treatment also led to the up-regulation of p16, a key molecule that preferentially associates with cyclin dependent kinase 4 to halt cell cycle progression. Subsequently, we show that treatment of MCC cells with afuresertib led to robust inhibition of cell growth, with 45% reduction at 5 μmol/L and 80% reduction at 10 μmol/L. Overall, our findings demonstrate that the AKT inhibitor afuresertib induces activation of pro-apoptotic signaling pathways that culminate in increased p16 activity and marked reduction of MCC cell proliferation. As AKT inhibitors have shown promising results in the treatment of other solid organ tumors, our findings raise intriguing new considerations for the use of afuresertib in the future management of MCC and suggest a further need to delineate the effect and mechanism of AKT inhibition in this cancer.

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Psoriasis in racial minorities: Morphology, clinical presentation, and treatment differences

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Psoriasis is a chronic inflammatory skin disease affecting 2%-3% of people worldwide. The majority of clinical data and teaching is in Caucasian ethnicities with limited data and teaching in racial minorities. We present a case series of representative psoriasis patients presenting to an urban and racially diverse hospital-based dermatology clinic in Toronto, Canada to illustrate our perspective on differences in psoriasis patients of racial minorities compared with patients of Caucasian race. Using qualitative data, we also provide selected patient quotes that support the findings and share the patient perspective. Patients of racial minorities have been found at our center to have differences in morphology including lesions that are more violaceous in colour, less noticeable inflammation, and more post-inflammatory hypo/hyperpigmentation changes. These differences are supported by previous literature. Patients of racial minorities present with greater body surface area involvement, greater PASI scores, and greater DLQI scores. We present qualitative data acknowledging the stigma that may exist in psoriasis patients of racial minorities to help explain why patients present differently clinically. Current literature shows no efficacy difference in psoriasis treatments in patients of racial minorities, however preferences and under-recognition to certain treatments do exist. This data highlights the importance of early diagnoses, treatment considerations, and education in dermatology training programs regarding psoriasis in patients of racial minorities.

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High prevalence of cholinergic urticaria in posttraumatic stress disorder (PTSD) patients

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Background: Psychological stress is known to precipitate cholinergic urticaria (CU), however, to our knowledge there are no studies of CU in specific psychiatric disorders (Konstantinou GN, 2019). Worldwide the prevalence of CU ranges from 5% to 20%.

Objective: Examine the prevalence of CU in posttraumatic stress disorder (PTSD), a psychiatric condition that is caused by extreme and overwhelming psychological stress.

Methods: 40 consenting civilian PTSD patients (38 female; mean $\pm$ SD age: 44.60 $\pm$ 12.73 years; 39 white, 1 Native Canadian; all patients of senior author MAG); mean $\pm$ SD PTSD Checklist for DSM-5 (PCL-5) score 40.40 $\pm$ 18.80 (PCL-5 >33 is cutoff to screen for PTSD), underwent a psychiatric and dermatologic evaluation as part of a larger study of psychosomatic factors in PTSD.

Results: 17/40 or 42.5% of patients were noted to have CU at the time of the initial assessment or during a follow-up appointment. The CU presented as small pruritic papules with surrounding erythematous flare, and was observed mainly on the forearms and trunk. Most lesions subsided within 1-2 hours. In several patients the CU was first observed during abreactions and states of heightened sympathetic arousal associated with psychotherapeutic processing of traumatic memories.

Conclusions: PTSD is associated with a high prevalence of CU, a finding that has not been previously reported. Exacerbations of PTSD which are associated with high levels of sympathetic activation, most likely directly affect the skin where the efferent innervation is mainly cholinergic sympathetic. The high cutaneous cholinergic tone likely contributes to CU which is produced by the action of acetylcholine on mast cells.

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