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Resource stewardship in dermatology: An evidence-based list of recommendations

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Background: As health care costs soar, medicine must focus on cost-conscious health care delivery. This not only allocates appropriate resources to those who would truly benefit, it also protects patients from the impact of unnecessary tests, treatments and procedures. The need for resource stewardship training has been highlighted in recent years, with the goal to eliminate ineffective practices by developing lists of recommendations per specialty.

Methods: In collaboration with the Canadian Dermatology Association (CDA), a working group was formed which developed a preliminary list of recommendations through a review of the literature, inspiration from International Choosing Wisely lists, and in consultation with a task force of Canadian dermatologists selected for their expertise, geographical location, and type of practice. The proposed final Top Five list has since been approved by the CDA Board of Directors.

Results: The proposed recommendations have been approved by the Canadian Dermatology Association. One such recommendation presented is: "Don't routinely use topical antibiotics on surgical wounds," motivated by relative cost, risk of sensitization leading to contact dermatitis, and lack of evidence for its use in preventing wound infection. Each recommendation is accompanied by a detailed explanation of the rationale and a comprehensive list of evidence-based sources.

Conclusions: These recommendations have been developed to reinforce resource stewardship in dermatology. Future directions include distribution for increased accessibility and understanding and the development of easy-to-read patient materials for patients. We hope these recommendations will be of high clinical utility and trigger meaningful conversation among dermatologists nationally and internationally.

Commercial disclosure: None identified.

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Pseudomyogenic hemangioendothelioma: An aggressive case of a rare vascular tumor

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A 19-year-old otherwise healthy man presented with new painful necrotic lesions on the left fifth toe and heel for four months. Symptoms began months after stepping on a foreign object and progressed rapidly despite multiple antibiotic courses. Imaging showed indeterminate findings of osteomyelitis. Noninvasive vascular studies revealed mild peroneal artery insufficiency. The patient started Aspirin and daily wound care without relief. He was then referred to Dermatology and biopsies were obtained. Histologic sections from both lesions showed a dense dermal proliferation of epitheliod to spindled cells with admixed neutrophils and eosinophils. Several immunohistochemical stains were performed: AE1/AE3(+), ERG(+), HHV8(−), Melan A(−), SOX-10(−), INI-1 (retained). Laboratory work-up was unremarkable including CBC, CMP, ESR, CRP, PT, PTT, ANA, ANCA, urinalysis, and blood cultures. The diagnosis of pseudomyogenic hemangioendothelioma was made and staging was initiated. Imaging revealed multiple tumor foci in the left metatarsal, tibia, groin, and lungs. Treatment consisted of toe amputation, wide local excision of the heel, and systemic everolimus. Pseudomyogenic hemangioendotheliomas are rare vascular tumors of intermediate malignant potential which classically present as multifocal painful nodules on the lower extremities of young males. While concurrent bone involvement can be seen in 20% of cases, distant metastases are exceedingly rare. Treatment is predominately surgical though recent detection of SERPINE1-FOSB gene fusions has prompted the use of mTOR inhibitors in unresectable tumors given their shared signaling pathways. This case represents an aggressive presentation of pseudomyogenic hemangioendothelioma with novel use of mTOR inhibitors as treatment.

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Scattered yellow papules in a pediatric patient: Diagnostic importance of distinguishing juvenile xanthogranuloma from xanthelasmoid mastocytosis

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Mastocytosis encompasses a spectrum of conditions characterized by abnormal accumulation of mast cells in the skin or other internal organs. While urticaria pigmentosa is the most common clinical variant of mastocytosis, a rare presentation with yellowish lesions resembling xanthomas can also develop, and can be often misdiagnosed as juvenile xanthogranuloma (JXG). We present a case of a 6-year-old boy with a 4-year history of pruritic yellow to orange papules scattered over the scalp, neck, and trunk. These lesions are self-limiting and become hyperpigmented macular "scars" as they spontaneously resolve. There was no lymphadenopathy or hepatosplenomegaly on exam. He did not have systemic symptoms such as wheezing, shortness of breath, abdominal pain, diarrhea or bone pain. A shave biopsy demonstrated a large dermal collection of CD117+ and tryptase+ mast cells with inconspicuous eosinophils. Given mast cell infiltration on histology and the presence of scattered pruritic yellow papules, a diagnosis of xanthelasmoid mastocytosis was made. Additional work-up including complete blood count, liver function tests, lipid panel, serum tryptase and abdominal ultrasound was unremarkable. Other than the pruritic lesions, our patient was otherwise asymptomatic. Treatment is directed towards symptomatic relief with second-generation antihistamines and/or topical corticosteroids as well as avoidance of mast cell degranulating triggers. Given the clinical findings of yellowish xanthomatous scattered papules, it was important to distinguish JXG from cutaneous mastocytosis (CM) because JXG necessitates further ophthalmologic evaluation and CM requires workup to rule out systemic involvement of mastocytosis.

Commercial disclosure: None identified.

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Alternative and adjunct therapies for vitiligo

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Background: We systematically searched the literature and review the evidence for the use of nutritional supplements and diet in the management of vitiligo.

Methods: Searches for articles published before August 16, 2019, were conducted on Embase and PubMed. The PubMed searches were "vitiligo" and the following: "alpha lipoic acid, canthaxanthin, capsaicin, fatty acids, folic acid or folate, gingko biloba, gluten, phenylalanine, picrorhiza, polypodium leucotomos, vitamin B12, vitamin D, and vitamin E" and "diet or nutrition or food." The Embase search was "diet or nutrition" and "vitiligo." Additional filters were applied for controlled trials. We selected clinical studies that showed how diet or natural supplements can improve the symptoms of vitiligo in all of our searches.

Results: A total of 359 manuscripts resulted from the PubMed and Embase searches. The titles and abstracts were reviewed for relevance which yielded a total of 77 manuscripts excluding duplicates. The studies indicated that alterations in diet and the addition of natural supplements may be effective tools in helping to manage vitiligo. Some of the supplements reviewed include *Gingko biloba*, oral *Polypodium leucotomos*, alpha-lipoic acid, vitamins B12, D, and E, folic acid, phenylalanine, canthaxanthin, *Nigella sativa* oil, fish oil, and Vitilinex herbal bioactives. Overall the growing evidence is promising, but more studies are needed in this area to further explore the impact supplements and diet can have on vitiligo management.

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