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Increasing emergency department visits for cellulitis in the United States, 2006-2013

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Background: Previous work has demonstrated declining emergency department (ED) visits from 2009-2014 for skin and soft tissue infections (SSTIs) attributed to the decline in methicillin-resistant *Staphylococcus Aureus* (MRSA) infections. We evaluated national trends in cellulitis-specific ED visits using the largest and most nationally representative dataset for ED visits.

Methods: The 2006-2013 Nationwide Emergency Department Sample (NEDS) datasets were queried for all International Classification of Diseases, Ninth Revision, Clinical Modification codes for cellulitis, which also included abscess. SSTI codes not including cellulitis were excluded. Total nationwide visits and cellulitis-specific visits each year were estimated. Trends in insurance status and hospital charges were assessed for cellulitis visits. 2006-2013 charges were inflation adjusted to December 2018 dollars.

Results: Nationwide ED visits increased 12% from 120 million in 2006 to 135 million in 2013. Approximately 2% of visits each year had a primary diagnosis of cellulitis. Cellulitis visits increased 14% from 2.5 million in 2006 to 2.9 million in 2013. Cellulitis patients with public insurance increased 43% from 2006-2013. Per-patient charges for cellulitis visits increased 68% from \$1085 in 2006 to \$1832 in 2013. Total annualized ED spending for cellulitis in 2013 (\$5.3 billion) was nearly double that of 2006 (\$2.7 billion).

Conclusions: ED visits for cellulitis increased from 2006-2013 likely due to expanded access to care and insurance enrollment, despite prior work showing a decrease in ED visits for SSTIs and a decline in MRSA infections. Future work should evaluate the root cause of increasing per-visit costs.

Commercial disclosure: None identified.



18509

Nodular primary cutaneous melanoma is associated with PD-L1 expression

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In previous studies, stage III patients with melanomas expressing PD-L1 in more than 5% of their cells had improved recurrence-free survival with anti-PD1 adjuvant therapy. In this context, we examined PD-L1 expression in primary cutaneous melanomas in the vertical growth phase to identify a possible biomarker. This was a retrospective study including 66 patients with invasive primary cutaneous melanomas. We assessed patient clinical and histopathologic data and performed immunohistochemical assays with melanoma specimens from the patients to evaluate PD-L1, PD-1, CD3, CD8 and FoxP3 expression. We observed PD-L1 expression in 21% (14/66) of our samples, and this expression correlated with increased melanoma thickness ($P = .002$) and nodular-type melanoma ($P = .001$). After adjusting for tumor thickness using a logistic regression test, the association of PD-L1 with nodular-type melanoma persisted. Nodular-type melanoma was 6.48 times more likely to be positive for PD-L1 than other histologic types ($P = .014$; 95% CI 1.46-28.82). As expected, PD-L1 expression correlated with the number of PD-1-expressing cells in the tumor-infiltrating lymphocyte population ($P = .04$). No correlation with PD-L1 was observed for age, sex, primary site, skin phototype, ulceration status, sentinel lymph node status, metastasis development or survival. Regarding the immune profile of the tumor-infiltrating lymphocytes, no significant differences were observed in the numbers of CD3+, CD8+FoxP3-, CD8-FoxP3+ and CD8+FoxP3+ cells by immunohistochemistry. Nodular-type melanoma is associated with PD-L1 expression and may be a suitable candidate for adjuvant therapy of primary melanomas in future studies.

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The association of frontal fibrosing alopecia with a history of facial surgical procedures

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Introduction: Frontal fibrosing alopecia (FFA) is characterized by scarring hair loss of the frontal hairline. Despite an increasing prevalence of FFA worldwide, the exact pathogenic mechanism remains unknown. Anecdotal reports describe alopecia occurring in an FFA pattern following facial surgical procedures, but this potential link remains unexplored.

Objective: To determine if a significant association exists between FFA development and a history of facial surgical procedures.

Methods: A retrospective study was conducted in outpatient dermatologic clinics at a single, tertiary medical center. Data on demographics, duration of alopecia, and previous facial surgical procedures from hair loss patients with FFA and androgenetic alopecia (AGA) were compared.

Results: Data from FFA patients ($n = 53$) were compared with age-matched AGA patients ($n = 51$). 49.1% of FFA patients reported a history of facial surgical procedures (including but not limited to rhytidectomy, blepharoplasty and browlift) compared with 7.8% of AGA (OR 5.7 [95% CI 2.0-19.1, $P = .002$]). The average time between procedure and onset of FFA was 8.7 ± 9.8 years.

Conclusions: A significant association exists between FFA and a history of facial surgery. There was no significant association noted between sunscreen use and FFA development.

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18513

High percentage of skin lesions in pediatric primary care attention could be managed by teledermatology

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Background: Teledermatology is a tool that provides accurate diagnosis and has been gaining more emphasis over time. It can be used for triage in primary care attention to address skin conditions improving access and reducing time to treatment for surgical, severe or even lethal diseases.

Objective: Our main goal was to evaluate the proportion of pediatric patient's lesions that could be managed using teledermatology in primary care attention. Second, we wanted to assess the ten most frequent skin conditions, the most common treatments and the referrals made by the teledermatologists to biopsy, in-presence dermatologist, or kept at primary care attention.

Methods: A cross-sectional retrospective study involving 6879 individuals and 10,126 lesions was conducted by store-and-forward teledermatology during one year in the city of São Paulo, Brazil. If the photographs taken had enough quality, teledermatologist would diagnose, treat and orient each lesion (if possible), and choose 1 of 3 options for referral: direct to biopsy, in-presence dermatologist or kept at primary care attention.

Results: Teledermatology managed 62% of the lesions to be kept at primary care attention, 37% were referred to dermatologists and 1% to biopsy. In patients 0-2 years old, lesions related to eczema and benign congenital lesions predominated. From 3 to 12 years of age, eczema was still a major cause of complaint, as well as warts and molluscum. From 13 to 19 years of age, acne was the most significant problem, followed by atopic dermatitis, nevi and warts. The most frequent treatment was emollient.

Commercial disclosure: None identified.

