Topical Corticosteroid Documentation in Atopic Dermatitis Pre- and Post-Implementation of an EMR Tool

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BACKGROUND

- Topical corticosteroids (TCS) are universally used as an efficient and effective treatment for atopic dermatitis (AD)[1]
- Despite the efficacy of TCS, patients may experience adverse effects that are often overlooked
- Research has shown that electronic medical records (EMR) have the potential to improve the quality of health care services to patients[2]
- EMR use to monitor TCS use may help curb excessive medication use and prevent unfavorable side effects

Study Purpose

- Compare visits for patients with AD treated with TCS before and after implementation of an EMR tool
- Examine whether regular and detailed documentation of TCS using an EMR tool led to meaningful changes in clinical practice

METHODS

- A standardized EMR template was developed for patient encounters with a diagnosis of AD to facilitate better tracking of their disease course

Participants

- 132 encounters unique to 21 patients were analyzed before implementation of the EMR tool
- 47 encounters unique to 21 patients were analyzed after implementation of the tool

Data collection

- Measures:
  - TCS potency
  - Per-day usage of TCS
  - Per-week usage of TCS
  - Presence or lack of side effects
  - Whether or not interventions were taken
  - Patient counseling
  - Patient satisfaction

Analysis

- Descriptive statistics pre- and post-intervention
- Chi-square, t-test and Mann-Whitney test to compare the pre- and post-intervention groups

Table 1. Patient Characteristics

	Pre-Intervention (n=21)	Post-Intervention (n=21)	p-value
Gender: Male	11 (52.4%)	10 (47.6%)	0.7576
Female	10 (47.6%)	11 (52.4%)	
Age at initial encounter	34.1 ± 22.1 (31.0)	36.9 ± 22.5 (31.4)	0.7452
Number of Encounters	6.3 ± 8.0 (3.0)	2.2 ± 1.4 (2.0)	0.1634

* Continuous data reported as mean ± standard deviation (median); Categorical data reported as frequency (percent).

Table 2. Pre- vs. Post-Intervention comparisons, not taking into account correlated data

	Pre-Intervention (132 encounters)	Post-Intervention (47 encounters)	p-value*
BSA	6 (4.6%)	47 (100.0%)	<0.0001
Potency	39 (29.6%)	47 (100.0%)	<0.0001
Usage per Day	27 (20.5%)	47 (100.0%)	<0.0001
Usage per Week	17 (12.9%)	47 (100.0%)	<0.0001
Side Effects	11 (8.3%)	45 (95.7%)	<0.0001
Interventions for CS burden	3 (2.3%)	41 (87.2%)	<0.0001
Patient Counseled	6 (4.6%)	38 (80.9%)	<0.0001
Patient Satisfaction	3 (2.3%)	37 (78.7%)	<0.0001

**Analyses based on the chi-square test, assuming each encounter is unique.*

RESULTS

- There were no significant differences between the pre- and post- intervention groups for gender, age, or number of encounters
- After implementation of the EMR tool, patients were more likely to be asked about all measures by their clinician, compared to the pre-intervention stage

CONCLUSIONS

Our findings:

- Support the use of a standardized EMR tool as a useful tool to monitor the treatment course of AD patients on TCS
- Help address the need for reducing the steroid burden for AD patients treated with TCS
- May help clinicians identify patients in need of intervention and counseling regarding excessive TCS use

DISCLOSURE

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