

LETTER TO THE EDITORS

Pediatric Emergency Department Access Related to Skin Disorders

To the Editors:

The prevalence of skin disorders in the pediatric emergency department (PED) has a wide range among studies, from 4% to 40%.¹⁻⁴ The spectrum of dermatological findings varies between the PED setting and the outpatient clinic setting, as the latest usually deals with chronic dermatological disorders, such as atopic dermatitis, vitiligo, and psoriasis.⁵⁻⁷

The aim of our study was to evaluate the frequency, spectrum, and outcome of skin disorders seen in a PED over a 1-year period. Therefore, we performed a retrospective analysis of all the accesses to the PED from the university teaching, tertiary children's hospital, Institute for Maternal and Child Health IRCCS Burlo Garofolo of Trieste, Italy, from January 2016 to December 2016.

We collected the medical records of all children with a nursing triage category or a discharge diagnosis suggestive of a dermatological condition as the chief complaint.

Based on previous studies,⁶ we stratified patients by age (infants <1 year, preschool children 1-5 years, and school children and adolescents 6-17 years) and identified the following categories of dermatological findings: allergic-inflammatory reactions, infections, physically induced lesions, and other conditions.

We excluded trauma-induced skin lesions as well as neonatal jaundice, anaphylactic shock, nail disorders, and dental abscesses.

During the study period, a total of 23,603 patients attended the PED. Dermatological complaints were the primary cause of the visit for 1535 patients (6.5%). Of these, 834 (54.3%) were male. Mean age was 6 (SD, 3.1) years. Hospitalization was required in 15 cases (1%).

As reported by previous studies,^{2,4,6} we found a broad spectrum of skin conditions, of which the majority were inflammatory/allergic and infectious in nature, with parainfective urticaria being the most frequently collected diagnosis (Table 1). The main skin disorder resulting in hospitalization was cellulitis/erysipelas, followed by Henoch-Schönlein purpura, chickenpox, drug-induced dermatitis, herpes zoster, lymphangitis, and erythema nodosum.

To our knowledge, only 1 study investigated the prevalence and spectrum of skin

TABLE 1. Etiology of Dermatological Findings in the PED of the Institute for Maternal and Child Health IRCCS Burlo Garofolo of Trieste, Italy, from January 2016 to December 2016 and Main Diagnoses According to Age

	<1 y (134)	1-6 y (760)	>6 y (641)	Total (1535)
Etiology				
Allergic/inflammatory reaction	77 (57.5%)	313 (41.2%)	379 (59.1%)	769 (50.1%)
Skin infection	47 (35.1%)	420 (55.3%)	203 (31.7%)	670 (43.6%)
Bacterial	0 (0%)	138 (18.2%)	60 (9.4%)	198 (12.9%)
Viral	15 (11.2%)	151 (19.9%)	88 (13.7%)	254 (16.6%)
Fungal	13 (9.7%)	8 (1%)	10 (1.6%)	31 (20.2%)
Parasitic	19 (14.2%)	123 (16.2%)	45 (7%)	187 (12.2%)
Physical	1 (0.7%)	14 (1.8%)	28 (4.4%)	43 (2.8%)
Others	9 (6.7%)	13 (1.7%)	31 (4.8%)	53 (3.5%)
Main diagnoses				
Urticaria	18 (13.4%)	136 (17.9%)	153 (23.9%)	307 (20%)
Dermatitis	51 (38.1%)	100 (13.2%)	98 (15.3%)	249 (16.2%)
Rash	14 (10.5%)	40 (5.2%)	35 (5.5%)	89 (5.8%)
Viral exanthema	7 (5.2%)	25 (3.3%)	11 (1.7%)	43 (2.8%)
Chickenpox	8 (6.0%)	100 (13.2%)	34 (5.3%)	142 (9.2%)
Herpes zoster	0 (0%)	3 (0.4%)	17 (2.6%)	20 (1.3%)
Molluscum contagiosum	0 (0%)	5 (0.7%)	19 (3%)	24 (1.6%)
Scarlatina	0 (0%)	106 (14%)	21 (3.3%)	127 (8.3%)
Erysipela	0 (0%)	33 (4.3%)	32 (5%)	65 (4.2%)
Mycosis	13 (9.7%)	13 (1.7%)	15 (2.3%)	41 (2.7%)
Insect sting	18 (13.4%)	109 (14.3%)	82 (12.8%)	209 (13.6%)
Insect bite	3 (2.2%)	39 (5.1%)	33 (5.1%)	75 (4.9%)
Angioedema	0 (0%)	15 (2%)	15 (2.3%)	30 (2%)
Others	2 (1.5%)	36 (4.7%)	76 (11.9%)	114 (7.4%)

disorder during a 1-year period, therefore avoiding the seasonal influence on the prevalence of skin disorders.⁴ We found a frequency of skin disorders of 6.5%, similar to that reported by the aforementioned study of 9.2%. In contrast, we had a considerably lower frequency of hospitalization (1% vs 8.2%), but these data may reflect the very low rate of hospitalization for any cause at our PED.⁸

The main limitation of our study was that the reported diagnoses were clinically established by the PED physicians, without the confirmation of a dermatologist. Being a retrospective study, we were not able to investigate the accuracy of diagnoses, and considering the reported low concordance between paediatricians and dermatologists,⁹ we cannot exclude that some diagnoses could have been inaccurate.

Our study confirms that skin disorders are a common cause of PED visits, and we highlighted which findings are more frequently reported.

We suggest that our findings could be useful to guide a specific dermatological training for PED physicians.

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*Disclosure: The authors declare no
conflict of interest.*

*The authors take full responsibility for
the manuscript.*

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