

Survey of Common Cutaneous Lesions in Healthy Infants at the Well Baby Clinic

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Objective: Survey the prevalence of cutaneous disorders in infants at the well baby clinic.

Material and Method: This prospective study was conducted on 500 infants, aged between 1 month and 1 year old.

Results: Mongolian spot and nevus simplex were the two most common congenital lesions in the present study. Seborrheic dermatitis was the most frequent skin findings arisen in infancy (apart from the neonatal period) and was on the third rank in overall cutaneous lesions.

Conclusion: Skin infections especially tinea versicolor were easily missed.

Keyword: Cutaneous lesions, Infants, Well baby clinic

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Infancy period is generally regarded as the whole first year of life. Many skin manifestations are commonly found in this period. Some of these arise from the newborn period and some appear after that time. The frequency has been varied among studies and different racial groups. Some dermatologic findings are physiologic and transient. Some need attention and long-term follow-up such as giant congenital melanocytic nevi. Some have genetic implications such as incontinentia pigmenti. The authors would like to evaluate the prevalence and impact of cutaneous lesions in infants at the well baby clinic.

Material and Method

A prospective study of infants, aged 1-12 months who attended the well baby clinic at King Chulalongkorn Memorial Hospital during the years 2004-2007 was examined single time regarding all skin lesions. Data on sex, maturity, type of delivery and skin findings were recorded in the data record form.

Statistical analysis was descriptive (average, standard deviation, frequency). [SPSS 11.5 for windows]

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Results

All 500 infants were aged between 1 month to 1 year old (average 5.4 ± 3.3 months) with a birth weight of 680-4,600 grams (average $2,911.3 \pm 638.6$ grams). Other demographic data of the study subjects is in Table 1.

Details of dermatological findings are in Table 2. Forty-nine subjects (9.8%) were free of any cutaneous lesions. Approximately one third of subjects exhibited more than one type of lesion. The most common skin finding was the Mongolian spot (82.8%), which was mostly present on the buttock (96.0%), followed by back, arm, leg and chest wall 6.0%, 5.4%, 5.1% and 0.3% respectively. Approximately one tenth of patients (11.2%) had more than one site.

The second common lesion was nevus simplex (salmon patch; 18.0%), found on occiput and upper eyelid by 97.8% and 5.6% correspondingly. More than one lesion and site was observed in some patients.

Seborrheic dermatitis (13.2%) was commonly found at the age of 2 months (53.0%) with the lowest and highest age at 1 and 9 months respectively. More than one site, most frequent on cheek and postauricular area (63.6%), was found in nearly 35.0%. Others were on scalp (34.8%), glabella (16.7%), and trunk (10.6%).

Café-au-lait spot (10.4%) was observed in every part of the body: leg (36.5%), arm (26.9%), face (11.5%), trunk and abdomen (7.7% each) including buttock and back

(5.8% each). Most of them were small (< 5mm) and usually found 1-3 lesions.

Congenital melanocytic nevus was mostly found only one lesion and located in every part of the body. The most common site was on the neck (25.0%) followed by scalp and arm (18.8% each), leg and back (12.5% each), as well as face, abdomen, and trunk (6.3% each).

Table 1. Demographic data of 500 subjects

Data	Number
Male:Female	279:211
Term:Preterm	435:65
Single:Twins	475:25
Type of delivery	
Normal labor	281
Cesarean section	198
Forceps extraction	16
Vacuum extraction	5

Discussion

The present study surveyed skin lesions in the infancy period because numerous skin lesions persist from the neonatal period and there are some disorders such as seborrheic dermatitis, atopic dermatitis happening in this period (except from neonatal period). Most of the previous studies were done in the

Table 2. Details of dermatologic findings (n = 500)

Findings	Percent	Number	Size
Mongolian spot	82.8	1-3 lesions	3-150 mm
Nevus simplex	18.0	1-3 lesions	2-40 mm
Seborrheic dermatitis	13.2	1-3 sites	
Café-au-lait spot	10.4	1-3 lesions	2-70 mm
Miliaria rubra	5.2		
Insect bite reaction	4.2		
Congenital melanocytic nevus	3.2	1-2 lesions	1-60 mm
Eczema			
Unclassified	2.6		
Atopic dermatitis	0.4		
Diaper dermatitis	0.6		
Infection			
Candidiasis	2.2		
Tinea versicolor	0.8		
Tinea faciei	0.2		
Impetigo	0.2		
Capillary hemangioma	1.4		
Nevus flammeus	0.4		
Others			
Postinflammatory hyperpigmentation	3.8		
Dry skin	0.8		
Nevus depigmentosus	0.8		
Intertrigo	0.4		
Acropustulosis of infancy	0.4		
Postinflammatory hypopigmentation	0.2		
Maculopapular rash	0.2		
Urticaria	0.2		
Milia	0.2		
Leukonychia	0.2		
Cutis aplasia	0.2		
Acne	0.2		
Sebaceous cyst	0.2		
Urticaria pigmentosa	0.2		
Epidermal nevus	0.2		

newborn period⁽¹⁻³⁾ or specified to some lesions such as Mongolian spot^(4,5). Mongolian spot was the most common skin manifestation in the present study. This finding was supported by many studies that Mongolian spot is a very common pigmented lesion in children of Asian or African ancestry⁽⁶⁾. The prevalence of Mongolian spot in the present study was not different from China (86.3%)⁽⁷⁾, Japan (81.5%)⁽³⁾ and Nigeria (74.8%)⁽⁴⁾.

Vascular lesions (nevus simplex) were the second most common lesions. The prevalence of nevus simplex was slightly less than the other studies whose incidences varied from 22.3-26.2%^(1,3,7). The study from Israel⁽⁶⁾, furthermore, showed female preponderance in vascular lesions (nevus simplex and port wine stain), whilst male was slightly predominant by 1.07:1 in this study. Regarding capillary hemangioma in the present study, all of them were girls (preterm: term 4:3) with the prevalence of 1.4%. Nevertheless, the number of infants with hemangioma in the present study might be small to detect the actual ratio of female: male because Wananukul S's⁽⁸⁾ study of hemangiomas in 197 patients from 1991 to 2000 at Pediatric Dermatology clinic, King Chulalongkorn Memorial Hospital found a female: male ratio of 2.1:1.

Congenital melanocytic nevus was found not differently from previous studies^(2,3,7) but café-au-lait spot was found significantly higher than other studies even from Asian countries^(3,7). This might be explained by the difference in the study population, methodology and the racial groups.

Miliaria rubra and insect bite reaction were also common because of the warm and wet climates.

The cutaneous finding that happened in infancy period, apart from the newborn period, was seborrheic dermatitis, which was the third rank within the present study. This finding supported Singleton JK's study that seborrheic dermatitis was the three most common inflammatory dermatoses in infancy apart from atopic dermatitis and diaper dermatitis⁽⁹⁾. In the present study, it was common at the age of 2 months, whereas the lowest age was observed at 1 month of life.

Hidano A et al summarized that neonatal skin infections were extremely rare aside from candidiasis⁽³⁾. In the present study, skin infections in the infancy period were increasingly found in tinea versicolor, tinea faciei and impetigo apart from candidiasis. All these skin infections should be carefully looked for because they are easily missed and not difficult to treat. The

authors, in addition, observed urticaria pigmentosa in a 1-year-old girl and acropustulosis of infancy in a 1-year-old boy.

Surprisingly the authors did not notice any nevus sebaceous and cavernous hemangioma in the present study. The possible explanation of this finding was some of those with nevus sebaceous or cavernous hemangioma might have attended a skin clinic and received long-term follow-up there.

The authors did not observe the difference of cutaneous lesions regarding type of delivery and number of cases per delivery. In addition, in the case of twins, they did not have similar skin lesions even in identical twins.

In conclusion, Mongolian spots, nevus simplex from the newborn period and seborrheic dermatitis from infancy period were the three most frequent cutaneous disorders found in the infancy period. Skin infections especially tinea versicolor were easily missed.

References

1. Moosavi Z, Hosseini T. One-year survey of cutaneous lesions in 1000 consecutive Iranian newborns. *Pediatr Dermatol* 2006; 23: 61-3.
2. Karvonen SL, Vaajalahti P, Marenk M, Janas M, Kuokkanen K. Birthmarks in 4346 Finnish newborns. *Acta Derm Venereol* 1992; 72: 55-7.
3. Hidano A, Purwoko R, Jitsukawa K. Statistical survey of skin changes in Japanese neonates. *Pediatr Dermatol* 1986; 3: 140-4.
4. Onayemi O, Adejuyigbe EA, Torimiro SE, Oyelami O, Jegede OA. Prevalence of Mongolian spots in Nigerian children in Ile-Ife, Nigeria. *Niger J Med* 2001; 10: 121-3.
5. Leung AK. Mongolian spots in Chinese children. *Int J Dermatol* 1988; 27: 106-8.
6. Kahana M, Feldman M, Abudi Z, Yurman S. The incidence of birthmarks in Israeli neonates. *Int J Dermatol* 1995; 34: 704-6.
7. Tsai FJ, Tsai CH. Birthmarks and congenital skin lesions in Chinese newborns. *J Formos Med Assoc* 1993; 92: 838-41.
8. Wananukul S. Clinical manifestation and management of hemangiomas of infancy. *J Med Assoc Thai* 2002; 85 (Suppl 1): S280-5.
9. Singleton JK. Pediatric dermatoses: three common skin disruptions in infancy. *Nurse Pract* 1997; 22: 32-3,37,43-4.

ผื่นผิวหนังที่พบบ่อยในเด็กวัยเตาะแตะที่คลินิกเด็กดี

สุชีรา ฉัตรเพริตพราย, ศิริวรรณ วนานุกูล

การศึกษานี้ต้องการสำรวจความชุกของผื่นผิวหนังชนิดต่าง ๆ ทั้งที่เป็นมาแต่กำเนิด และเกิดภายหลังในเด็กวัยเตาะแตะ โดยได้สำรวจในเด็กที่มีอายุระหว่าง 1 เดือนถึง 1 ปี ในคลินิกเด็กดี โรงพยาบาลจุฬาลงกรณ์ จำนวน 500 ราย พบว่าผื่นผิวหนังแต่กำเนิดชนิด Mongolian spot พบมากที่สุด รองลงมา คือ nevus simplex และ seborrheic dermatitis ตามลำดับโดย seborrheic dermatitis เป็นผื่นผิวหนังซึ่งเกิดภายหลังที่พบบ่อยที่สุด โดยเริ่มพบตั้งแต่วัยทารก
