

Diaper Rash Among Infants in Tikrit City

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Abstract:

Background: Diaper rash is a common problem among infants.

Objectives: Is to shed the light on the it's etiopathogenesis of napkin rash and its frequency among Iraqi infants.

Patients and method: A cross sectional study carried out in Tikrit teaching hospital in a period of 3 month. It involved one thousand infants under one year of age attending the departments of dermatology and pediatric. A full history and clinical examination were performed for each infant with a problems related to diaper area.

Result: Of one thousand infant only 311 infants (31.1%) were have had diaper rash and divided according to the type of the rash to: one hundred twenty eight (128) infants (41.15%) infant had irritant contact dermatitis, ninty one infants (29.26%) had infantile seborrheic dermatitis, eighty seven infants (27.97%) had candida napkin dermatitis, three infants (0.96%) had psoriasis, the remaining two infants (0.66%) had acrodermatitis enteropathica.

Conclusion: Diaper rash is a common problem a among infants in Tikrit city and dermatitis is the commonest cause.

Keywords: diaper rash, irritant contact dermatitis, dermatitis.

Introduction:

Diaper rash or diaper dermatitis (nappy rash), is an inflammation of the skin covered by nappy. It manifests as an erythematous rash occurring on the convex surfaces of skin under the nappy^[1]. Most infants develop a diaper rash at some time or another; some even arrive home from the hospital with a slight rash. Diaper rash may be more common after solid foods are added to your baby's diet or when your baby is taking antibiotics. Diaper rashes can occur intermittently, anytime while your child wears diapers, but they're more common in babies during their first 15 months, especially between 8 and 10 months of age. Diaper rash can alarm parents and annoy babies, but fortunately most cases disappear after a few days with simple home treatments^[2]. Diaper rash is one of the most common skin disorders in infants. The humid, moist environment under the diaper makes the skin more susceptible to injury from exposure to irritants particularly related to urine and feces^[3]. Such eruptions can be subdivided into primary diaper dermatitis, an acute inflammation of the skin in the diaper area with an ill defined and multifactorial etiology, and secondary diaper dermatitis, a term which encompasses eruptions in the diaper area with defined etiologies^[4]. So there are different patterns of diaper rash, although there is overlap between these patterns. Recognition of the different types will help management^[5].

Patients and methods:

A cross sectional study conducted in the pediatrics and dermatology departments in Tikrit teaching hospital, one thousand infants aged between 1 week to 1 year of life attending these departments were studied in the period of 3 month. These infants were examined regarding the diaper area and in addition to the full history and clinical

examination were performed regarding the original complaint. Those who have had a rash in the diaper area were three hundred eleven infants. Statistical analysis had done to and find out the percentage of each disease and it's distribution through out the community.

Results:

One thousands infants were examined, 56.4 of them were male (Table.1). Three hundred eleven infants (31.1%) were had diaper, 30.5% of male infants had diaper rash in comparison to 31.9% of female infants, $p\text{ value}=0.6$ (Table.2). Irritant contact dermatitis found in 128 (41.15%)infants, ninety one infants (29.26%) had infantile seborrheic dermatitis, eighty seven infants (27.97%) had candida napkin dermatitis, three infants (0.96%) had psoriasis, and the remaining two infants (0.66%) had others e.g. acrodermatitis enteropathica (Figure.1).

Table 1. distribution of the sample by child sex

	Number	Percent
Male	564	56.4
Female	436	43.6
Total	1000	100

Table 2. distribution of diaper rash according to child sex.

	Male		Female	
	Number	Percent	Number	Percent
Diaper rash	172	30.5	139	31.9
No rash	392	69.5	297	68.1
Total	564	100	436	100

$p\text{ value}=0.6$

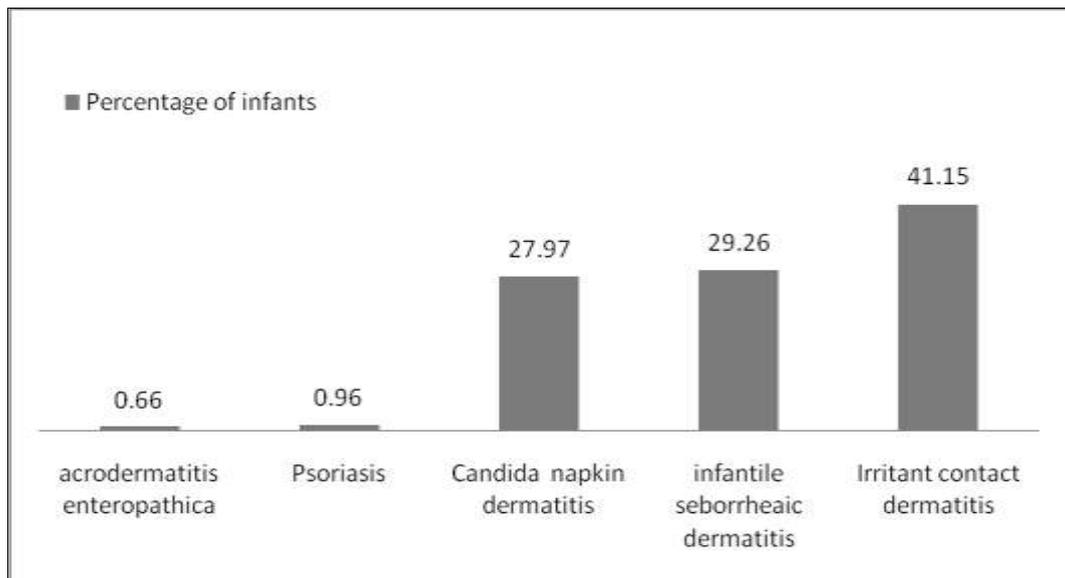


Figure 1. The distribution of the type of rash among 311 infants and its percentage.

Discussion:

Diaper rash is a general term describing any of a number of inflammatory skin conditions that can occur in the diaper area. These disorders can be conceptually divided into 3 categories:

1. Rashes that are directly or indirectly caused by the wearing of diapers and includes dermatoses, as irritant contact dermatitis, miliaria, intertrigo, candidal diaper dermatitis, and granuloma gluteal infantum.
2. Rashes that appear elsewhere but can be exaggerated in the groin area due to the irritating effects of wearing a diaper and includes atopic dermatitis, seborrheic dermatitis, and psoriasis.
3. Rashes that appear in the diaper area irrespective of diaper use and includes rashes associated with bullous impetigo, langerhans cell histiocytosis, a rare and potentially fatal disorder of the reticuloendothelial system, acrodermatitis enteropathica, congenital syphilis, scabies, and HIV^[5].

In this study, 31.1% of infants involved in the study had diaper rash. However, one study performed in Italy showed a prevalence of 15.2%, and a peak incidence of 19.4% in those aged 3-6 months. One large British study reported diaper rash in 25% of children aged 1 month. A Nigerian study conducted in 1995-1996 identified diaper rash in 7% of children. A study in Kuwait noted that diaper rash occurs in 4% of pediatric dermatology cases. These studies do not distinguish between common or generic diaper dermatitis and secondary diaper dermatitis^[6]. There was non significant association between sex and diaper rash, and this agree with A Antoine Kazzi who found that there is no sexual predilection^[6]. In this study, the most common cause of diaper rash *irritant contact diaper dermatitis*, and present

as red, scaly, eroded, painful plaques occur on the convex surfaces, while the creases are spared^[7]. This agree with Girish Patel, and Caroline Mills who stated that irritant contact diaper dermatitis is the most common cause of diaper rash^[8]. In this study, the 2nd most common cause of diaper rash is infantile seborrheic dermatitis, the term used to describe a clinical presentation, which may reflect a variety of different skin disorders such as cradle cap, intertriginous lesions, intertrigo, infantile psoriasis and Leiner's syndrome.

In this study, candidal diaper dermatitis constitute 27.97% of cases in comparison to what states by A Antoine Kazzi that Between 40% and 75% of diaper rashes that last for more than 3 days are colonized with *Candida albican*. Painful-parents often report severe crying during diaper changes or with urination and defecation and may follow recent antibiotic use^[6]. Flexural and guttate psoriasis is most common in children and diaper psoriasis is the most frequent form of psoriasis in infants and 80% of patients suffering from infantile psoriasis presented the first signs in the gluteal region^[9,10]. The clinical appearance of diaper rash is well known, but the same affected area is not immune to other dermatological conditions. Patients with systemic signs such as failure to thrive, fever, or lymphadenopathy should be evaluated for more serious conditions such as immunodeficiency, histiocytosis X, or acrodermatitis enteropathica^[11, 12]. Acrodermatitis enteropathica is an autosomal recessively inherited disease caused by a decreased intestinal zinc resorption and characterized by severe dermatitis (preferably hands, feet, mouth, genital region), chronic diarrhoea, retardation of growth and development, alopecia and increased proneness to infections^[13].

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التهاب الحفاض بين الأطفال دون السنة من العمر في مدينة تكريت

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المخلص:

الخلفية: التهاب الحفاض من الأمراض الشائعة عند الأطفال دون السنة من العمر.

الأهداف: ومن اجل تسليط الضوء على أسبابها المرضية وترددتها بين الأطفال دون السنة من العمر في مدينة تكريت.

المرضى والطرق: أجريت هذه الدراسة المقطعية في مستشفى تكريت التعليمي وشملت ألفا من الأطفال دون السنة من العمر الذين راجعوا قسمي أمراض الأطفال والأمراض الجلدية خلال ثلاثة أشهر وهي فترة إجراء الدراسة. وتم اخذ التاريخ المرضي وإجراء الفحص السريري التام لكل طفل كان يعاني من التهاب الحفاض.

النتائج: من مجموع الألف طفل، كان هناك ثلاثمائة واحد عشر طفلا (31.1%) كان لديهم التهاب الحفاض وتم تقسيمهم اعتمادا على نوع الالتهاب وكالتالي: مئة وثمان وعشرون طفلا (41.15%) كان لديهم اكزيما التماس التخريشي، وواحد وتسعون طفلا (29.26%) كان عندهم التهاب الجلد الزهمي، سبعة وثمانون طفلا (27.97%) كان عندهم التهاب الحفاض الناجم عن المبيضات، ثلاثة أطفال (0.96%) كان لديهم (صدفية حفاضية)، الأطفال الاتنين الباقين (0.66%) كان لديهم لالتهاب الجلد بعوز الزنك.

الاستنتاجات: التهاب الحفاض من الأمراض الشائعة عند الأطفال دون السنة من العمر في مدينة تكريت و أكزيما التماس التخريشي هو الأكثر شيوعا.

الكلمات الدالة: التهاب الحفاض، اكزيما التماس التخريشي، اكزيما.