

Clinical and Therapeutic Study with Jacquet's Erosive Napkin Dermatitis Its Prevalence in Iraqi Infants

Khudair K. Al-Kayalli * MBChB, DDV, FICMS

Abstract

Objectives : Primary irritant contact napkin dermatitis is an inflammatory skin eruption of the napkin area , most commonly seen in the infants between 7th and 12th month of age , and is relatively a common skin disease all over the world , and many aetiological factors are implicated , the Jacquet's erosive napkin dermatitis is a rare variant form of this disease , which is an erosive form affecting the napkin area . This study was done to describe the clinical features , possible aetiological factors , treatment and the prevalence of the jacquet's erosive napkin dermatitis in Iraqi infants .

Methods : A total number of 18034 patients with different skin diseases was seen in a private and outpatient clinic of Baquba Teaching Hospital for the period Jan. 2004 to Nov. 2006 . 127 infants out of this total number had primary irritant contact napkin dermatitis , and 29 infants out of this number had erosive type , they were 15 males and 14 females , their ages ranged from 4 months to 18 month . They were complained of a rash on the napkin area , which was diagnosed clinically as Jacquet's erosive napkin dermatitis , and they were treated by topical clotrimazol cream three times daily for 2-3 weeks with discontinuation of wearing diapers and using of topical corticosteroids , and followed up for 3 weeks .

Results : The study showed that both the primary irritant contact napkin dermatitis and the Jacquet's erosive type were a relatively rare among Iraqi patients with a different skin diseases (0.7% and 0.16% respectively) , and in those with different types of eczema and dermatitis (3.5% and 0.7% respectively) , but the Jacquet's erosive type was a relatively common among Iraqi infants with primary irritant contacts napkin dermatitis (22.8) , and both sex were equally affected by both types . We thought that Jacquet's erosive napkin dermatitis was developed as one of the complications of rather than as a variant form of primary irritant napkin dermatitis, as a results of using topical corticosteroids and secondary infections. The clinical features were characteristic of that of Jacquet's erosive napkin dermatitis with presence of friable crust. The disease was cured with

* College of Medicine \ Diyala University \ Iraq

in 2-3 weeks of treatment by topical clotrimazol and discontinuation of wearing of diapers and using of topical corticosteroids.

Conclusion: It was concluded that Jacquet's erosive napkin dermatitis was a relatively common among Iraqi infants with primary irritant contact napkin dermatitis and it was a complication, rather than a variant form of this disease , and could be arise as a result of using topical corticosteroids and secondary infections i.e. there was a close relation to the infantile gluteal granuloma .

Key words:Jacquet's , Napkin dermatitis , Gluteal granuloma , Clotrimazol , Corticosteroids .

Introduction

The term napkin dermatitis implies an inflammatory eruption of the napkin area, and the term primary irritant contact napkin dermatitis should be preferred [1,2] . Although the precise aetiology of this disease remain unestablished , but many factors have been implicated , which in summery include [1,2,3,4,5,6,7] :

- a. Maceration and friction appear to be important in breaking of epidermal barrier .
- b. Faecal proteolytic and lipolytic enzymes appear able to act as irritant in skin whose barrier function is impaired , particularly if the ambient PH is high . The increasing PH results from the action of faecal urease on urine and the infant's diet.
- c. Secondary invasion by candida albicans appears to be a risk when this organism is present in the faeces.

The histological picture is that of primary irritant dermatitis with epidermal spongiosis and mild inflammatory changes in the dermis [1].

Clinically the primary irritant contact napkin dermatitis is not seen during the first 3 weeks of life , and the peak prevalence is seen between the 7th and 12th months , and the same condition has been reported in older children and adults who are incontinent of urine [1,2,5,8,9,10,11] . There is evidence that some 50% of infants are affected to some degree at some stage , in one survey in UK it account for some 20% of all skin consultations in children aged under 5 years , both sexes and all races appear to be equally affected [1,5,12] .

The most common form of primary irritant contact napkin dermatitis comprises confluent erythema of the convex surfaces in closest contact with the diaper , i.e. the buttocks , the genitalia , the lower abdomen , the pubic area and the upper thighs , the deeper parts of the groin flexures are generally spared [1,2] .

Jacquet's napkin dermatitis is uncommon variant erosive form of the primary irritant contact napkin dermatitis, seen occasionally, in which a small vesicles and erosions may develop into rather characteristic, shallow, round ulcers with raised crater-like edges. In the differential diagnosis of this condition, the bullous and erosive type of congenital syphilis, erosive type of acrodermatitis enteropathica, Langerhan's cell histiocytosis, erosive herpes simplex and herpes zoster infections of the napkin area should be put in mind [1,2].

The Successful Treatment Of Napkin Dermatitis In General Involved The Recognition Of The relevant aetiological factors in the individual infant and controlling its, which involve the attention to the napkin (disposable versus washable cloth napkins, frequent napkin changes), routine skin care in the napkin area and the specific therapy, which consist of week topical corticosteroids and antifungal therapy if candida albicans infections was suspected [1,2]. The aim of the present study is to describe the clinical features, the possible aetiological factors, the treatment and the prevalence of Jacquet's erosive napkin dermatitis in Iraqi infants.

Patients and Methods

This across-sectional study was done in a private and outpatient clinic of Baquba Teaching Hospital for the period from Jan. 2004 to Nov. 2006. A total number of 18034 patients with a different skin diseases was seen and examined, out of this total number 3534 patients had different types of eczema and dermatitis, out of them 127 infants had primary irritant contact napkin dermatitis, and twenty nine of those 127 had erosive type of napkin dermatitis. They were 15 males and 14 females, their ages ranged from four to eighteen months, with a mean age of teen months.

Their mothers were fully interviewed about their infants regarding the age, sex, address, complain, the type of diaper (clothes or disposable), duration of the rash, previous similar rash, any other skin and systemic diseases and the use of topical medications (e.g. Corticosteroids). The infants were fully examined and the lesions were diagnosed clinically as Jacquet's erosive napkin dermatitis. All of them wore diapers and had none erosive primary irritant contact napkin dermatitis, treated by topical corticosteroids preparations for about 2-4 weeks before the development of erosive lesions, which result in resolution of the non erosive lesions in most of the infants.

All 29 infants were treated by topical clotrimazol cream (antifungal), 3 times daily for 2-3 weeks, with discontinuation of wearing of diapers and using of topical corticosteroids therapy, and followed up for 3 weeks.

Ch:- square was done as test of significancy using $P \leq 0.05$.

Results

The study showed that both primary irritant contact napkin dermatitis and Jacquet's erosive type were relatively rare among Iraqi patients with different skin diseases (0.7% and 0.16% respectively) and those with different types of eczema and dermatitis (3.5% and 0.7% respectively) , while the Jacquet's erosive type was a relatively common among Iraqi infants with primary irritant contact napkin dermatitis (22.8%) (table-1) .

All infants with Jacquet's erosive napkin dermatitis seen in this study had a non-erosive primary irritant contact napkin dermatitis of a different duration before the development

of erosive type , and they were treated by topical corticosteroids preparations for a period of 2-4 weeks , and in most of the infants the non-erosive type was clear at the time of presentation (table – 2) .

Clinically the lesions of Jacquet's type were consisted of multiple rounded or oval shallow ulcerations of about 1-3cm in diameter with a raised crater-like edges , and some time covered by yellow friable crust with secondary infections (bacterial or candidal) . The lesions were located on the napkin area , and predominantly on the gluteal region , the labia majora and the scrotum . Both sexes were affected equally .

The disease was cleared completely in all infants with in 2-3 weeks of treatment with topical clotrimazol cream , 3 times daily , and discontinuation of both , the wearing of diaper and using of topical corticosteroids . Two infants developed scaring and hyperpigmentation after healing of the ulcers (6.8%) .

Table(1): The distribution of eczema , napkin dermatitis and Jacquet's napkin dermatitis according to the age and gender of patients.

	Males		Females		Percentage			Total No. of patients
	No.	%	No.	%	of total No. of patients	of patients with eczema	of infants with PICND	
Patients with eczema and dermatitis	1730	49	1804	51	19.6%	100%	—	3534

Infants with primary irritant napkin dermatitis	61	48	66	52	0.7%	3.5%	100%	127
Infants with Jacquet's napkin dermatitis	15	52	14	48	0.16%	0.7%	22.8%	29
Total number of patients	9056	51	8978	49	100%	—	—	18034

PICND : primary irritant contact napkin dermatitis .

Table (2) : The criteria of Jacquet's napkin dermatitis according to the clinical presentation .

	Males		Females		Percentage	Total
	No.	%	No.	%		
Jacquet's napkin dermatitis	15	51.7	14	48.3	100%	29
Jacquet's start as non erosive napkin dermatitis	15	51.7	14	48.3	100%	29
Napkin dermatitis treated by corticosteroids before development of Jacquet's	15	51.7	14	48.3	100%	29
Jacquet's wore diaper	15	51.7	14	48.3	100%	29
Jacquet's cured by clotrimazol	15	51.7	14	48.3	100%	29
Jacquet's healed by scaring and hyperpigmentation	1	50	1	50	6.8%	2

Discussion

The study revealed that both primary irritant contact napkin dermatitis in general and Jacquet's erosive type were a relatively rare among Iraqi patients with different skin diseases (0.7% and 0.16% respectively) and those with different types of eczema and dermatitis (3.5% and 0.7% respectively) , while the Jacquet's type was a relatively common among Iraqi infants with primary irritant contact napkin dermatitis (22.8%) (table – 1) . These results were not coordinated with that seen in other

studies in the world (e.g. UK) [1,5,12] , most probably due to cultural , social and life style (e.g. type of pant , haphazard use topical therapy like corticosteroids without medical supervision) .

All of the infants with Jacquet's napkin dermatitis seen in this study wore a diaper frequently , and a topical corticosteroids were used for the treatment of non-erosive primary irritant napkin dermatitis , which was cured in most of the infants at the time of presentation , the presence of yellow friable crust and the cure of the disease by topical clotrimazol (indicate secondary infections) (table-2) . All these evidences gave rise to the possibility of the aetiological roles of these factors in the development of Jacquet's napkin dermatitis , which represent one of the complications of primary irritant contact napkin dermatitis , rather than a variant form as reported in the literatures [1,5] .

The clinical features and the sex distribution of the Jacquet's erosive napkin dermatitis seen in this study were consisted with that seen in other studies , but the presence of yellow friable crust suggests the presence of secondary infections [1,5,12] .

It was concluded that the Jacquet's erosive napkin dermatitis was a relatively common skin problem among Iraqi infants with primary irritant contact napkin dermatitis , as a complication of using topical corticosteroids and secondary infections , rather than as a variant form of this disease , but rare among Iraqi patients with different skin diseases and those with eczema and dermatitis in general i.e. it is a disease of infancy rather than of adults with a close relation to the infantile gluteal granuloma .

We recommended to do another more detail and bacteriological study to confirm that the Jacquet's erosive napkin dermatitis was one of the complications of using topical corticosteroids (particularly the potent varieties) and secondary infections (particularly candida albicans) , of the primary irritant contact napkin dermatitis , rather than as a variant form .





Figure (1):Scar of Jacquet's with post inflammatory hyperpigmentation



Figure (2):Scar of Jacquet's with post inflammatory hyperpigmentation

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