Congenital Miliaria Crystallina Associated With Right-Sided Diaphragmatic Eventration: A Rare Case Report

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Case Report

Abstract: Miliaria crystallina (MC) is a transient, self-limiting, superficial obstruction of the eccrine sweat ducts resulting in rapidly surfacing, tiny, clear, noninflammatory vesicle,which is frequently seen in hot, humid, tropical climates. Congenital occurrence is rare but appearance in the neonatal period is most likely due to lack of maturation of the sweat duct. Here we report a case of congenital MC in a baby with right sided diaphragmatic eventration.

Key words*:* Miliaria crystallina , Diaphragmatic eventration.

Introduction

Miliaria is a common disorder of the eccrine sweat glands thought to be caused by blockage of the sweat ducts, which results in the leakage of eccrine sweat into the epidermis or dermis [1], [2]. Out of three types ,only miliaria crystallina occurs rarely, congenitaly with ductal obstruction being most superficial, in the stratum corneum layer [2]. Its appearance in the neonatal period is most likely due to lack of maturation of the sweat duct. One survey revealed that congenital miliaria crystallina was present in 4.5% of the neonates, with a mean age of 1 week [3]. Here we present a case report of congenital miliaria crystallina with right sided eventration of diaphragm which is usually not found. Eventration of diaphragm on right side is a rare entity, due to an abnormal elevation of the dome of diaphragm and again complete type is relatively rare. This displaced hemidiaphragm can compromise breathing in newborn.

Case Report

A newborn preterm female baby delivered by cesarean section was admitted in intensive care unit for pustular lesion all over the body and severe respiratory distress. She didnot cry immediately after birth and required resuscitation . There was no history of maternal infection. On examination baby was grunting ,cyanosed, respiratory distress score being 7 with HR-160/min, RR-82/min,Spo2-78% . Head to toe examination revealed white clear superficial vesicles of size 1-2 mm in diameter without any surrounding erythema over head ,neck and upper part of trunk. Respiratory system revealed nasal flaring,decreased movement on rt side, intercostal chest indrawing on bothside with abscence of breath sound below the third intercostal space and Cardiovascular system being normal. Abdomen appears to be scaphoid with impalpable liver.

Fig-1. white clear superficial vesicles of size 1-2 mm in diameter without any surrounding erythema

Investigation revealed a normal sepsis screen with normal range electrolytes. Cytological examination of vesicular content fails to show any inflammatory cell. Chest X-ray showed a homogenous opacity in the right middle and lower zone with sharp upper margin on anterioposteriorview.

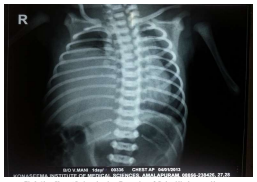

Fig-2 Chest X-ray AP view showing Eventration of Rt hemidiaphragm with a homogenous opacity in the right middle and lower zone with sharp upper margin

Ultrasonography of the chest revealed the homogenous opacity is liver below right hemidiaphragm without herniation into the thoracic cavity.

Discussion

Miliaria crystallina is a common condition that occurs in neonates and in individuals who are febrile or those who recently moved to a hot, humid climate. Miliaria crystallina is generally an asymptomatic self-limited condition that resolves without complications over a period of days [4]. Lesions are 1-2 mm in diameter, clear, superficial vesicles occur in crops and often confluent, without any surrounding erythema, on the head, neck, and upper part of the trunk. Lesions are ruptured easily,

containing clear fluid material and resolved with superficial branny desquamation [5]. The cytologic examination of the vesicular content fails to reveal inflammatory cells or multinucleated giant cells (as would be expected in herpes vesicles) .It should be considered in the differential diagnosis of vesiculobullous eruptions in newborns. Eventration of the diaphragm is a condition in which all or part of the diaphragm is largely composed of fibrous tissue with only a few or no interspersed muscle fibers. It is usually congenital but may be acquired [6]. congenital eventration can be partial or complete [7]. In the former, the defect is localized; whereas, in the latter, the diaphragm consists of a thin, membrane that is attached peripherally to normal muscle. Complete eventration of diaphragm invariably occurs on the left side but partial eventration of the diaphragm occurs virtually on the right side [8]. In this case, the complete eventration of diaphragm was seen on the right side which is a rarity. Congenital eventrations can be isolated, although they sometimes are associated with other developmental defects such as cleft palate, congenital heart disease, situs inversus, or undescended testicle [9]. The diagnosis of diaphragmatic eventration can usually be made on standard PA and lateral chest films [10]. In the PA projection, the elevated diaphragm forms a round unbroken line arching from the mediastinum to the costal arch. Ultrasonography can help in establishing the diagnosis of partial eventration and in distinguishing it from diaphragmatic nerve interruption. The diaphragm can be seen as a continuous thin layer above the elevated abdominal viscera [11]. Asymptomatic patients are managed conservatively but patients with symptoms require surgery.

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