Neonatal cephalic pustulosis.

Kansal N.K.
Department of Dermatology and Venereology
Government Medical College, Nainital, India.

Summary
A 20-day-old newborn was first observed due to the presence of erythematous, papular and pustular lesions of the face: the identification of a “spaghetti and meatballs” finding on fresh mycological examination of the pus led to diagnose neonatal cephalic pustulosis. According to some Authors the latter is a disease in its own right, while others classify this disorder as neonatal acne.

Key words
Rash; neonatal cephalic pustulosis; Malassezia species; neonatal acne.

According to some Authors neonatal cephalic pustulosis should be differentiated from neonatal acne and considered a disease in its own right. A 20-day-old newborn with erythematous, papular and pustular lesions of the face was reported: the identification of a “spaghetti and meatballs” finding on fresh mycological examination of the pus led to diagnose neonatal cephalic pustulosis.

Case report
A 20-day-old, full-term, otherwise healthy male neonate was brought by his anxious parents with an asymptomatic rash on the face for the last 5 days. There were no other cutaneous or systemic complaints. The neonate was delivered vaginally and weighed 2,400 g at birth. The child was healthy and unperturbed by the rash, having a sound sleep, while being photographed. On mucocutaneous examination, the rash consisted of erythematous papules and pustules on the cheeks and adjacent temporal regions bilaterally (Fig. 1).

Differential diagnoses of neonatal cephalic pustulosis, mainly candidiasis and neonatal acne were considered. A lesion was de-roofed and pustular material was sent for a 10% potassium hydroxide (KOH) examination for fungal elements; the latter put in evidence the classic “spaghetti and meatballs” appearance of Malassezia species. A diagnosis of neonatal cephalic pustulosis was made and the parents were counselled about the benign nature of the rash. A 2% ketoconazole cream was prescribed to be applied twice a day. At a follow up visit 10 days later, the lesions had healed completely without any sequela.

Discussion
After birth, the neonatal skin is known to be gradually colonized during first few months by the fungi of Malassezia species (1). This phenomenon is caused by the increased activity of neonatal sebaceous glands, which are stimulated by androgens from the testes in males and the adrenal cortex in females. At present, it has been widely accepted that fungi of Malassezia species,
especially *M. furfur* and *M. sympodialis* are the causative agent of an erythematous papulopustular rash, which may occur on the face and scalp in the neonates. This rash, though very similar to that of neonatal acne, has been delineated (2, 5) as neonatal cephalic pustulosis (NCP; also called *Malassezia* pustulosis).

The main differential diagnosis of NCP remains neonatal acne (acne neonatorum) with an etiopathological and nosological confusion, with many workers considering these to be same entities. However, neonatal acne is a relatively more common condition affecting up to 50% of otherwise healthy neonates. Distinguishing clinical feature of neonatal acne from NCP is the presence of at least a few comedones (4), which are not seen in NCP. The histopathological examination of the acne lesions will demonstrate hyperplastic sebaceous glands and keratin-plugged pilosebaceous orifices with neutrophilic or granulomatous inflammation (4). NCP is possibly less common with an incidence of about 10% (6); more than half of these cases are culture positive for either *Malassezia furfur* or *M. sympodialis* (3).

Other differential diagnoses of NCP include milia, erythema toxicum neonatorum, neonatal pustular melanosis, miliaria rubra, sebaceous hyperplasia, *Candida* infection, papulopustular eruption of hyper-IgE syndrome and acneiform/papulopustular eruptions due to maternal medications - e.g., lithium, phenytoin, glucocorticosteroids, etc. - (4). Smears of pustular contents in erythema toxicum neonatorum and neonatal pustular melanosis will respectively show eosinophils and neutrophils predominantly. Peri- and post-partum medication history of the mother, should also be carefully considered.

NCP has an excellent prognosis and responds well to topical antifungal agents e.g. ketoconazole cream (2, 5) and as in our case, lesions heal in 1-2 weeks without any scarring or recurrence. Parents should also be counselled about the benign nature of the condition to allay any undue anxiety.
References


