

# CONGENITAL NON-LANGERHAN CELL HISTIOCYTOSIS PRESENTING AS BLUEBERRY MUFFIN BABY



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## INTRODUCTION

- 'Blueberry muffin baby' is a term representing dermal erythropoiesis at birth<sup>1</sup>
- Morphology includes blue-red macules and firm dome-shaped papules<sup>1</sup>
- The most common causes are congenital infections, hemolytic disease of newborn, langerhan cell histiocytosis, neuroblastoma and congenital leukemia<sup>1</sup>
- We report a rare case of congenital non-langerhan cell histiocytosis (NLCH) presenting as blueberry muffin baby

## CASE DESCRIPTION

- A 25 day old newborn girl born at term to healthy Indian parents presented with purpuric rash for the past 10 days
- The neonate had multiple blue-red macules and papules over face, scalp, trunk & upper limbs
- There was no lymphadenopathy or organomegaly and no café-au-lait macules

Fig a



Fig b



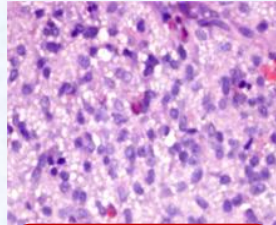
Fig c



**Fig a & b:** Multiple blue-red non-blanching macules and papules over face (a) and upper limb (b)

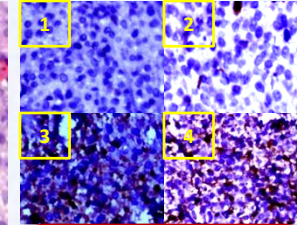
**Fig c:** Single red brown lobulated plaque of size 2x2cm over vertex of scalp

Fig d



**Fig d(40x):** Monomorphic infiltrates with vesicular nucleus, vacuolated cytoplasm and few eosinophils

Fig e



**Fig e1 & e2:** CD1a & S100 IHC stain negative  
**Fig e3 & e4:** CD68 & CD14 IHC stains positive

- Hemogram, TORCH serologies, chest X-ray, abdominal and fontanellar echoes and ophthalmological evaluation were normal
- Hence, we made a diagnosis of congenital NLCH

## DISCUSSION

- Congenital NLCH has been reported to manifest as either juvenile xanthogranuloma (JXG) or benign cephalic histiocytosis (BCH)<sup>2</sup>
- A phenotypic overlap was apparent between these two disorders<sup>2</sup>
- Xanthomatization and touton giant cells were rarely encountered in BCH<sup>2</sup>
- However, in early JXG histology can be indistinguishable from BCH<sup>2</sup>
- Immature lesions may lack xanthomatization and their typical yellow colour<sup>3</sup>

## CONCLUSION

- NLCH should be considered in the differentials of blueberry muffin syndrome
- Absence of typical yellow colour can be misleading

## REFERENCES

1. Mehta V, Balachandran C, Lonkar V. Blueberry muffin baby: A pictorial differential diagnosis. *Dermatology Online Journal*. 2008;14(2). <https://escholarship.org/uc/item/53q852nc>. Accessed November 6, 2019.
2. Kolivras A, Theunis A, de Saint-Aubain N, et al. Congenital disseminated juvenile xanthogranuloma with unusual skin presentation and renal involvement. *J Cutan Pathol*. 2009;36(6):684-688. doi:10.1111/j.1600-0560.2008.01101.x
3. Mudambi K, Berquist W. "Blueberry Muffin" Rash and Neonatal Cholestatic Liver Failure. *Dig Dis Sci*. 2018;63(7):1747-1750. doi:10.1007/s10620-017-4810-9