

**CLINICAL IMAGE**

# Congenital primary cutis verticis gyrata

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Congenital cutis verticis gyrata (CCVG) affects 1 in 100 000 males and 0.026 in 100 000 females. Characterized by thick skin folds and grooves on the scalp resembling the outer surface of the brain (1), CCVG can present in primary and secondary forms (2). The inheritance of this condition remains controversial (3). While primary CCVG has been associated with chromosomal abnormalities as Noonan and Turner syndromes, there are no many reports of CCVG in a patient with Trisomy 21 (4). Timely recognition of CCVG is important as this condition is linked to serious neurological and ophthalmological anomalies.

Our patient was born to a healthy 36-year-old primigravida Asian mother. The pregnancy was uneventful until 29 weeks of gestational age when she went to spontaneous labour and delivered by unassisted vaginal delivery a 1150-gm male infant. On initial assessment, among typical features of trisomy 21 (flat occiput, flattened facial appearance, small brachycephalic head and epicanthal folds), deep cerebriform folds and wrinkles over the entire scalp more prominent in the parietal-occipital region were noted (Fig. 1). On palpation the area was spongy, with no erythema, infiltration or skin defects. Cranial and abdominal sonography, ophthalmological assessment were normal. Genetics and dermatology were consulted, and the condition was diagnosed as CCVG. Diagnosis of trisomy 21 was confirmed by microarray. The infant had an uneventful hospital course and was discharged to home after 6 weeks. No further investigations or interventions for this condition were required. At his 12-month assessment there has been no progression of the condition noted.

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**CONFLICT OF INTEREST**

None declared.



Figure 1: Patient at the first week of life showing the asymmetrical skin folds extending from the occiput to the scalp.

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**ETHICAL APPROVAL**

Not required.

**CONSENT**

Confirmation of written consent from patient/guardian: parental consent provided.

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## REFERENCES

1. Harish V, Clarke F. Isolated cutis verticis gyrata or the glabella and nasal bridge: a case report and review of the literature. *J Plast Reconstr Aesthet Surg* 2013;**66**:1421-3.
2. Larsen F, Birchall N. Cutis verticis gyrata: three cases with different aetiologies that demonstrate the classification system. *Australa J Dermatol* 2007;**48**:91-4.
3. Snyder MC, Johnson PJ. Congenital primary cutis verticis gyrata. *Plast Reconstr Surg*. 2002;**110**:818-21.
4. Hernandez JF, et al. Cutis verticis gyrata in adult male institutionalized population in Colombia. Case series. *Acta Neurol Colomb [online]* 2015;**31-4**:404-411. Available from: <[http://www.scielo.org.co/scielo.php?script=sci\\_arttext&pid=S0120-87482015000400008&lng=en&nrm=iso](http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0120-87482015000400008&lng=en&nrm=iso)>. ISSN 0120-8748.