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Abnormal clavicles in a neonate with partial monosomy 21 by Wang and Aftimos, New Zealand

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Sir,
I read with great interest the case report "Abnormal clavicles in a neonate with partial monosomy 21" by Wang and Aftimos [1] from New Zealand. In addition to being

short, broad, and thick, the clavicles show interruption of continuity likely representing congenital pseudarthrosis, which is bilateral, with overriding of the fragments. This is not mentioned in the article, which otherwise is an important addition to the literature. Congenital pseudarthrosis of the clavicles (CPC) is a lesion well established at birth, as in the case reported by Wang and Aftimos [1], and results from failure of normal ossification, as described by Alldred [2], an orthopedic surgeon, also from New Zealand.

CPC is bilateral in only 4–10% of cases [3]. Of seven cases reported by Kohler et al. [4], six were right-sided and only one was bilateral. After a review of the English and French literature, I found no case of CPC associated with monosomy 21.

References

1. Wang SH, Aftimos S (1999) Abnormal clavicles in a neonate with partial monosomy 21. *Pediatr Radiol* 29: 221–222
2. Alldred AJ (1963) Congenital pseudarthrosis of the clavicle. *J Bone Joint Surg Br* 45: 312–319
3. March HC (1982) Congenital pseudarthrosis of the clavicle. *J Can Assoc Radiol* 33: 35–36
4. Kohler R, Chappuis JP, Daudet P (1980) Pseudarthrose congénitale de la clavicule. *Chir Pédiatr* 21: 201–207

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Occult hyperextension "toddler's" fracture by Swischuk, et al.

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Sir,
I read with interest the excellent paper by Swischuk et al. describing an occult hyperextension "toddler's" fracture [1]. I have noted similar fractures in abused infants and children [2]. The authors describe 16 patients with this fracture in whom a

history of traumatic event was reported in only 5. The authors propose a hyperextension mechanism of injury and indicate that symptoms can be elicited by grasping the leg and producing hyperextension at the knee. In abused children, the fracture may be entirely metaphyseal in location; however, physeal disruption that extends to the tibial tubercle cartilage can occur. This may result in an anterior tilt of the proximal tibial epiphysis similar to that described by Swischuk et al. I agree with Swischuk et al. that these fractures are most often accidental injuries, but it should be noted that they can be inflicted as well. In particular, when this injury is encountered in a non-ambulatory infant, child abuse should be considered.

References

1. Swischuk LE, John SD, Tschoepe EJ (1999) Upper tibial hyperextension fractures in infants: another occult toddler's fracture. *Pediatr Radiol* 29: 6–9
2. Kleinman PK (1998) Diagnostic imaging of child abuse, chap 3. Mosby Yearbook, St Louis

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