- Ohdo S, Madokoro H, Hayakawa K. Interstital deletion of the long arm of chromosome 5: 46,XX,del(5)(q13q22). *J Med Genet* 1982;19:479.
   Palmer CG, Coburn S, Leikoff E. 46,XY,del (5)(pter to q21::q23 to qter). In: Borgaonkar DS. Lillard DR, eds. *Repository of chromosomal variants and anomalies in man*. Fifth listing. Denton: North Texas University, 1978:56.
   Pescia GA, Gaide C, Juillard E. Syndrome dysmorphique debilite mentale et doltric interstition and new large large dyna dyna generge 5. *Au* Court 1075;
- deletion interstitielle des bras longs d'un chromosome 5. Ann Genet 1978; 21:161-3
- Rolewald A, Zankl M, Sitzmann FC, Zang KD. Interstitial *de novo* deletion of the long arm of chromosome 5: mapping of 5q bands associated with particular malformations. *Clin Genet* 1982;22:226-30.
   Rivera H, Rolan A, Sanchez-Corona J, Cantu JM. *De novo* t(4;5)(q3100;
- Ardera H, Garcia AS, Salticz-Perola J, Carta JM. *Biometry* (15) (q1500, q2200) with del (5)(q1500q2200). Tentative delineation of a 5q monosomy syndrome and assignment of critical segment. *Clin Genet* 1985;27:105-109.
   Rivera H, Garcia-Esquivel L, Moller M, Cantu JM. Constitutional del (5)(q23.3q31.1). *Ann Genet* 1987;30:91-3.
- Rivera H, Simi P, Rossi S, Pardeli L, Di Paolo CM. A constitutional 5q23 deletion. *J Med Genet* 1990;27:267-8.
   Silengo MC, Luzzatti L, Centerwall WR, Costello JM, Parslow M. Interstitial deletion of the long arm of chromosome no 5 in two unrelated children
- with congenital anomalies and mental retardation. Clin Genet 1981;19:174-
- 31 Stoll C, Levy JM, Roth MP. Interstitial deletion of the long arm of chromo-some 5 in a deformed boy: 46,XY, del(5)(q13q15). J Med Genet 1980;17: 486 - 7
- 32 Peifer M, Sweeton D, Casey M, Weischaus E. Wingless signal and Zeste-white 3 kinase trigger opposing changes in the intracellular distribu-tion of Armadillo. Development 1994;120:369-80.
  Schinzel A. In: Baraitser M, Winter RM, eds. The human cytogenetics database. Oxford: Oxford University Press, 1996. 33
- 34
- Wells D. Mutation analysis of the adenomatous polyposis coli gene. PhD thesis, University of London, 1998:198-207.

## 7 Med Genet 2000;37:145

Hypoparathyroidism, retarded growth and development, and dysmorphism or Sanjad-Sakati syndrome: an Arab disease reminiscent of Kenny-Caffey syndrome

EDITOR-In the December 1998 issue of Journal of Medical Genetics, four letters discussed whether or not Kenny-Caffey syndrome (KCS) is a part of CATCH 22.1-4 These were based on a report of four Bedouin sibs with an unusual form of KCS that includes the additional features of marked IUGR, severe psychomotor retardation, and microcephaly. Two of the affected sibs and their phenotypically normal mother were found to have microdeletion 22q11.<sup>5</sup> The same authors subsequently suggested that this entity represents the Arab variant of KCS and because of some clinical resemblance to DiGeorge syndrome (DGS) they suggested that the phenotype is the result of 22q11 microdeletion or some abnormality of chromosome 10p where a second locus for DGS lies.<sup>6</sup>

This entity was originally described by Sanjad *et al*<sup>7 s</sup> in 1988 and 1991 as a new syndrome consisting of congenital hypoparathyroidism, seizures, growth and developmental retardation, and dysmorphic features in a group of Arab children of consanguineous parents. Several other reports followed.9-14 All were Arabs, particularly Bedouin, with several sets of multiple affected sibs. The children have recognisable identical facies with deep set eyes, depressed nasal bridge with a beaked nose, long philtrum, thin upper lip, micrognathia, and large, floppy ear lobes. Medullary stenosis and other skeletal defects were found in most of them. This, together with the hypocalcaemia, hyperphosphataemia, and low concentration of immunoreactive parathyroid hormone in some of them, makes the phenotype similar to KCS. Recently the syndrome was localised to 1q42-43 by three independent groups.<sup>15-17</sup> Although they have a similar phenotype, different locus names have been given, namely HRD for hypoparathyroidism, retarded growth and development, and dysmorphism,<sup>14</sup> KCS for autosomal recessive KCS,<sup>15</sup> and SSS for Sanjad-Sakati syndrome.<sup>17</sup> The name of the syndrome in OMIM is hypoparathyroidism-retardationdysmorphism and is given the number 241410 with autosomal recessive inheritance considered certain. The acronym Sanjad-Sakati syndrome is shown as an alternative.

It is also listed among the Arab diseases in our text book Genetic disorders among Arab populations.<sup>18</sup>

With regard to the family with 22q11 microdeletion, the association is probably fortuitous or as a remote possibility it might be the cause in a subset of patients with this Arab disease. This issue should be easily resolved at the molecular level.

I believe that it is important for us (practitioners and scientists) to decide on one term for this disorder. For convenience and in order to credit the original authors, I suggest the acronym "Sanjad-Sakati" for the syndrome and HRD for the locus, an abbreviation which refers to the components of the syndrome.

## AHMAD S TEEBI

Division of Clinical Genetics, The Hospital for Sick Children and University of Toronto, 555 University Avenue, Toronto, Ontario M5G 1X8, Canada

- Yorifuji T, Muroi J, Uematsu A. Kenny-Caffey syndrome without the CATCH 22 deletion. *J Med Genet* 1998;35:1054.
   Goodship J. Kenny-Caffey syndrome is part of the CATCH 22 haploinsufficiency cluster. *J Med Genet* 1998;35:1054.
   Kirk J. Kenny-Caffey syndrome is part of the CATCH 22 haploinsufficiency cluster. *J Med Genet* 1998;35:1054.
   Sabry MA, Zaki M, Shaltout A. Genotypic/phenotypic heterogeneity of Kenny-Caffey syndrome. *J Med Genet* 1998;35:1054-5.
   Sabry MA. Zaki M. Abul Heeros St. *et al. Kenny* Caffey and demonsion of the formation of the

- Sabry MA, Zaki M, Abul Hassan SJ, et al. Kenny-Caffey syndrome is part of the CATCH 22 haploinsufficiency cluster. J Med Genet 1998;35:31-6.
   Sabry MA, Shaltout A, Zaki M, et al. Kenny-Caffey syndrome: an Arab vari-ant. Am J Hum Genet Suppl 1998;63:A118.
- ant. Am J Hum Genet Suppl 1998;63:A118.
  7 Sanjad S, Sakati N, Abu-Osba Y. Congenital hypoparathyroidism with dysmorphic features: a new syndrome. Pediatr Res 1998;23:A419.
  8 Sanjad SA, Sakati NA, Abu-Osba YK, Kaddora R, Milner RDG. A new sydrome of congenital hypoparathyroism, seizure, growth failure and dysmorphic features. Arch Dis Child 1991;66:193-6.
  9 Richardson RJ, Kirk JMW. Short stature, mental retardation and hypoparathyroidism: a new syndrome. J Med Genet 1990;65:1113-17.
  10 Kalam MA, Hafeez W. Congenital hypoparathyroidism, seizure, sarker me growth failure with developmental delay and dysmorphic features-another case of this new syndrome. Clin Genet 1992;42:110-13.
  11 Marsden D, Nykan WI, Sakati NA, Syndrome of hypoparathyroidism

- Marsden D, Nyhan WI, Sakati NA. Syndrome of hypoparathyroidism, growth hormone dificulty and multiple minor anomalies. *Am J Med Genet* 1994;52:334-8.
- 12 Hershkovitz E, Shaltitin S, Levy J, et al. The new syndrome of congenital hypoparathyroidism associated with dysmorphism, growth retardation, and developmental delay: a report of 6 patients. *Israel J Med Sci* 1995;**31**:293-7.
- 13 Khan KTS, Uma R, Usha R, et al. Kenny-Caffey syndrome in six bedouin sibships: autosomal recessive inheritance confirmed. Am J Med Genet 1997;69:126-32. 14 Al-Gazali LI, Dawodu A. The syndrome of hypoparathyroidism, severe
- growth failure, developmental delay and distinctive facies. Clin Dysmorphol 1997; 6:233-7.
- 15 Parvari R. Hershkovitz E, Kanis A, et al. Homozygosity and linkage disequi-13 Au tart te recentione by Rains Age and Honology Sity and Initiage Bisedul-librium mapping of the syndrome of congenital hypoparathyroidism, growth and mental retardation, and dysmorphism to a 1-cM interval on chromosome 1q42-3 Am J Hum Genet 1998;63:163-9.
  16 Gelb BD, Khan KTS, Diaz GA. The autosomal recessive Kenny-Caffey syndrome locus maps to chromosome 1q42-43. Am J Hum Genet Suppl 1998;63:A290.
- 17 Ali F, Diaz GA, Sakati N, et al. Localization of the gene for the Sanjad-Sakati syndrome to 1q43. Am J Hum Genet Suppl 1998;63:A279. 18 Teebi AS. Introduction. In: Teebi AS, Farag TI, eds. Genetic disorders among
- Arab populations. Oxford: Oxford University Press, 1997:1-26