**Table EV1.** Clinical findings of patients (n.a.= not applicable)

| | Patient 1 | Patient 2<br>24DG0698 | Patient 3 (published in PMID: 30214071)<br>17DG0680 | AJHG 87: 40-51, 2010 | AJHG 87: 40-51, 2010 | AJHG 87: 40-51, 2010 | Frontiers in Genetics 13:1052915, 2023 | Clin Genet 2013: 83: 446-451 | Nat. genet 2010 | Nat. genet 43: 23-26, 2010 | Nat. genet 43: 23-26, 2010 | Nat. genet 43: 23-26, 2010 | Nat. genet 43: 23-26, 2010 | Nat. genet 43: 23-26, 2010 | Nat. genet 43: 23-26, 2010 | Nat. genet 43: 23-26, 2010 | Apem 28: 225-230, 2023 | Apem 28: 225-230, 2023 | Glob Med Genet 11: 20-24, 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sex** | M | F | M | F | M | F | M | M | M | F | M | F | M | F | M | M | F | F | M |
| **Mutation1** | p.Trp105* | p.Gln32Pro | p.Gln32Pro | p.Gln265Pro | p.Gln265Pro | p.Gln265Pro | p.Arg354* | p.Asn1226del | c.261+1G>C | c.261+1G>C | c.261+1G>C | c.261+1G>C | c.261+1G>C | p.Tyr678* | c.261+1G>C | p.Lys667Arg | p.Trp105Ter | p.Trp105Ter | p.Tyr678Ter |
| **Mutation2** | p.Lys897* | p.Gln32Pro | p.Gln32Pro | p.Gln265Pro | p.Gln265Pro | p.Arg987Ter | c.1414-14A>G | p.Leu1050Pro | c.261+1G>C | c.261+1G>C | c.261+1G>C | c.261+1G>C | c.261+1G>C | c.2694+1G>T | c.261+1G>C | p.Arg1404Asfs*14 | p.Tyr678Ter | p.Tyr678Ter | p.Ser1323Ter |
| **Height (cm)** | 74.5 cm at 1.75-year-old | 40 cm at birth | N.A | N.A | N.A | N.A | 93 cm at 7-year-old | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | 130.6 cm at 11-year-old | 108.7 cm at 6-year-old | 112.0 cm at 5-year-old |
| **Short Stature (<-2SD)** | -3.0 SD at 1.75-year-old | -5.0 SD at birth | (+) | (-) | (-) | (-) | <-3 SD | N.A | -8/-9 SD at 10-year-old | -4/-5 SD at 8-year-old | -6/-7 SD at 20-year-old | -7/-8 SD at 5.5-year-old | -5/-6 SD at 5-year-old | -2.3 SD at birth | -5/-6 SD at 7-year-old | -3/-4 SD at 13.5-year-old | -2.28 SD | -1.66 SD | +1.0 SD |
| **Head Circumference (cm)** | 37.0 cm at 1.75-year-old | 23.5cm at birth | 36cm at 7-year-old | 45-46 cm at 10.5-year-old | 45-46 cm at 7.5-year-old | 44-45 cm at 18-year-old | 31 cm at 7-year-old | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | 47 cm at 11-year-old | 43 cm at 6-year-old | 49.6cm at 5-year-old |
| **Microcephaly (<-2SD)** | -8.1 SD | -7.7 SD | -12 SD | <-2 SD | <-2 SD | <-2 SD | <-3 SD | -13 SD at 24-year-old | -7/-8 SD at 10-year-old | -7/-8 SD at 8-year-old | -10/-11 SD at 20-year-old | -5/-6 SD at birth | -8 SD at 5-year-old | -3.6 SD at birth | -11 SD at 38-year-old | -6/-7 SD at 13.5-year-old | <-3 SD | <-3 SD | -1.0 SD |
| **Developmental Delay** | (+) | (+) | (+) | (-) | (-) | (-) | N.A | (-) | (+) | (+) | (+) | (+) | (+) | (+) | (+) | (+) | (-) | (-) | N.A. |
| **Intellectual Disability** | (+) | N.A | (+) | (-) | (-) | (-) | (+) | (-), speak complete sentences | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | Borderline | N.A. | N.A. |
| **Developmental Disorders** | (+) | Dear | N.A | (-) | (-) | (+), Moderate cognitive movement | N.A | Self injuries | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | (+), Cognitive disorder, Behavioral disorder, Attention disorder | (+), Cognitive disorder, Behavioral disorder | N.A. |
| **Brain MRI** | simplified gyri | simplified gyri. Delayed cerebral sulcation for gestational age. The gyral pattern is simplified with anterior to posterior gradient. There is a large left para midline CSF filled interhemispheric cyst noted in the posterior aspect of the flax cerebri displacing the adjacent occipital lobe. There is underdeveloped Sylvian opercultisation. There is lack of development of the frontal horn. Severe hypogenesis of the corpus callosum. | MRI performed at 7 days of age: simplified gyri, polymicrogyria, severe callosal hypogenesis, lateral ventricle dilatation, small right cerebellar hemisphere and inferior vermis, hypoplastic pons MRI performed at 28 months old: large medial and dorsal cyst communicating with the third and left lateral ventricles and causing enlargement of the left cerebellar hemicranium with also right lateral ventricle dilatation. Significant interval increase of the cyst size and ventricular dilatation is noted. The cortex is slightly thick in both frontotemporal regions mainly left with few small gyri and likely polymicrogyria on the left medial side. Small posterior fossa is noted with mainly small right cerebellar hemisphere and inferior vermis as well as hypoplastic pons. | N.A | N.A | No major abnormalities | No abnormalities | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | No abnormalities | (+), Hypothalamic hamartoma | (+), High signal in the white matter area of the frontal–parietal lobe, Periventricular white matter area of the bilateral parietal lobe, Loss of the right anterior cerebral artery on magnetic resonance angiography |
| **Epilepsy** | (+) | (-) | (-) | (-) | (-) | (-) | (-) | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A. | (+) |
| **Facial Dysmorphism** | (+) | (-) | (+) | (+) | (+) | (+) | (+) | (-) | (+) | (+) | (+) | (+) | (+) | (+) | (+) | (+) | (+) | (+) | N.A. |
| **Visual Impairment** | (-) | (+) | (+) | (-) | (-) | (-) | (-) | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A. |
| **Hearing Impairment** | (+) | (-) | (-) | (-) | (-) | (-) | (-) | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A | N.A. |
| **Cleft Palate** | (+) | (-) | (-) | N.A | N.A | N.A | N.A | N.A | (-) | (-) | (-) | (+) | (-) | (-) | (-) | (-) | N.A | N.A | N.A. |
| **Tooth Abnormalities** | (+) | N.A | (-) | N.A. | N.A. | N.A. | (+), Selective tooth agenesis | N.A | (+), Selective tooth agenesis, Enamel | (+), Selective tooth agenesis, | (+), Selective tooth agenesis, | (+), Selective tooth agenesis, | (+), Selective tooth agenesis | N.A | N.A | (-) | N.A | N.A | N.A. |
| **Limb Abnormalities** | (+), fifth finger clinodactyly | N.A | (-) | N.A. | N.A. | N.A. | (+), Fifth finger clinodactyly, Pes planus | N.A | (+), Fifth finger clinodactyly, Pes planus | (+),Hypoplasia of the middle phalanx of the fifth digit | (+), fifth finger clinodactyly, hypoplasia of the middle phalanx of the fifth | (+), Fifth finger clinodactyly | (+), Fifth finger clinodactyly | (+), Fifth finger clinodactyly | N.A | (+), Fifth finger clinodactyly | N.A | N.A | N.A. |
| **Skeletal Abnormalities** | (+), scoliosis | N.A | (+), scoliosis | N.A | N.A | N.A | N.A | N.A | (+), Eleven ribs, Delayed bone age, Pes planus | (+), Eleven ribs, Pes planus | (+), Eleven ribs, Pes planus | (+), Eleven ribs, Delayed bone age | (+), Eleven ribs, Delayed bone age | (+), Delayed bone age | N.A | (+), Pes planus, Scoliosis | (+), Scolosis | (+), Right-slipped capital femoral epiphysis, Accelerated bone age | N.A. |


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