Genetics inMedicine | CORRECTION

Correction: "Congenital hyperinsulinism as the presenting feature of Kabuki syndrome: clinical and molecular characterization of 10 affected individuals"

Kai Lee Yap, PhD[1,14], Amy E. Knight Johnson, MSc[1], David Fischer, BSc[1], Priscilla Kandikatla, MSc[1], Jacea Deml, BSc[1], Viswateja Nelakuditi, MSc[1], Sara Halbach, MSc[1], George S. Jeha, MD[2], Lindsay C. Burrage, MD, PhD[3], Olaf Bodamer, MD, PhD[4], Valeria C. Benavides, MD[5], Andrea M. Lewis, MSc[3], Sian Ellard, PhD[6], Pratik Shah, MD[7], Declan Cody, MD[8], Alejandro Diaz, MD[9], Aishwarya Devarajan, MSc[4], Lisa Truong, MSN[10], Siri Atma W. Greeley, MD, PhD[11], Diva D. De Leon, MD[12], Andrew C. Edmondson, MD, PhD[13], Soma Das, PhD[1], Paul Thornton, MD[10], Darrel Waggoner, MD[1] and Daniela del Gaudio, PhD[1]

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The author Diva D. De Leon was incorrectly listed as Diva D. De Leó-Crutchlow in the original version of this paper.

Reason for correction of manuscript: Data from Patient 4 and 9 was identified to be derived from the same individual. This patient was born in London, first seen in Great Ormond Street Hospital in London by Dr. Pratik Shah for the initial hyperinsulinism work-up. Subsequently, this patient and her family relocated to the United States and she was seen at Boston Children's by Dr. Olaf Bodamer where the diagnosis of Kabuki syndrome was made through whole exome sequencing. Unknowingly this patient was aggregated in the data sent from University of Exeter for the manuscript. Due to the initial attribution of the sources from two different geographical locations, the duplication was not detected at the time of manuscript submission. Later the patient was discovered to have been evaluated at both locations and investigations revealed the data duplication.

The following are corrections to our manuscript:

Corrected Title: Congenital hyperinsulinism as the presenting feature of Kabuki syndrome: clinical and molecular characterization of 9 affected individuals

Abstract: In the methods section the total number of patients with HI and KS is nine instead of ten. In the results section, the number of KDM6A pathogenic variants is n=4 instead of n=5.

Main text, page 5, last paragraph of Introduction: Total number of individuals with characterization of presenting features is nine.

Patients and methods: Patient 9 to be removed. Patient 10 will be moved up and renamed as Patient 9.

Results: Clinical details and genetic findings: Patient 9 to be removed. Patient 10 will be moved up and renamed as Patient 9.

Discussion: Nine patients were characterized in the manuscript. Out of the total number of variants identified in KDM6A, two instead of three were truncating variants. Total size of cohort found to have KS and hyperinsulinism (including the case identified from analysis

[1]Department of Human Genetics, University of Chicago Genetic Services Laboratory, The University of Chicago, Chicago, Illinois, USA; [2]Pediatric Diabetes and Endocrinology, Texas Children's Hospital, Houston, Texas, USA; [3]Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, Texas, USA; [4]Division of Genetics and Genomics, Boston Children's Hospital, Harvard Medical School, Boston, Massachusetts, USA; [5]Division of Pediatric Endocrinology, University of Illinois College of Medicine, Peoria, Illinois, USA; [6]Institute of Biomedical and Clinical Science, University of Exeter Medical School, Newcastle upon Tyne, UK; [7]Great Ormond Street Hospital, London, UK; [8]Our Lady's Children's Hospital, Crumlin, Dublin, Ireland; [9]Pediatric Endocrinology, Pediatric Specialists of America, Nicklaus Children's Hospital, Miami, Florida, USA; [10]Cook Children's Medical Center, Fort Worth, Texas, USA; [11]Department of Pediatrics and Medicine, The University of Chicago Medicine, Chicago, Illinois, USA; [12]Department of Pediatrics, Divisions of Endocrinology and Genetics, The Children's Hospital of Philadelphia and Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania, USA; [13]Division of Human Genetics, Department of Pediatrics, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, USA; [14]Present address: Department of Pathology and Laboratory Medicine, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois, USA. Correspondence: Daniela del Gaudio (ddelgaudio@bsd.uchicago.edu)

of 100 additional samples) is n=10, with 4 pathogenic variants in KDM6A (40%), which is still an evident enrichment over the general frequency of KDM6A pathogenic variants (2-8%) in KS. Finally, 8 out of 9 of the KS patients with HI were responsive to diazoxide treatment instead of 9 out of 10, reinforcing the same conclusion that the hypoglycemia in these patients were adequately managed with diazoxide, and that a timely diagnosis will be key to improving outcomes.

Table 1 Clinical history of 9 patients who presented with CHI

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Current Age	8 months	18 months	13 months	14 months	5 years
Gender	Male	Female	Male	Female	Male
Ethnicity & Family history	Italian/German/ Slovakian, non-consanguineous	Caucasian parents, maternal depression, history of alcohol abuse/dependence, gastric bypass, epilepsy, tobacco use 1/2 pack per day. Paternal heart condition, hypertrophic cardiomyopathy with defibrillator	Hispanic/Latino, maternal family history of asthma, paternal diabetes age of onset 28 years	Italian/Iranian, non-consanguineous	Hispanic, non-consanguineous
Age at delivery	37 5/7 weeks via [a] NSVD to G1P0 28 years-old mother	38 6/7 weeks via NSVD to G5P0040 36 years-old mother	39 6/7 weeks via NSVD to G2P2 24 years-old mother	39 4/7 weeks via NSVD	39 weeks via NSVD
Birth weight	6 lbs 15 oz	7lbs 3oz	7lbs 8oz	6 lbs 0.7 oz	7lbs 8oz
Perinatal complications	Tachypnea requiring [b]CPAP, hypoglycemia	Increased work of breathing after feeding	Desaturations on [c]DOL3	[d]IUGR at 32 weeks	-
Presentation of hypoglycemia	DOL1	DOL1	DOL1	DOL1	DOL8
Plasma glucose (mg/dL) Ref: 80-120 [Lowest recorded]	51 [29]	21 [21]	44 [12]	75.6 [25.2/34.2]	47 [40]
Insulin (uIU/ml = mU/L)	10.9	8.1	3.9	16.3	40
Beta hydroxybutyrate (mmol/L)	0.04	NA	0.15	NA	0.04
Free fatty acids (mmol/L)	0.28	NA	NA	NA	NA
Glycemic response to glucagon (mg/dL)	70	110 (taken during assessment for response to diazoxide)	Response to glucagon noted but no value available	NA	20
Treatment of hypoglycemia	Diazoxide 4.5 mg/kg/ day. Started at 15 mg/kg/ day	Diazoxide 5 mg/kg/day	Diazoxide 4 mg/kg/day	Initially with chlorothiazide 0.2 ml twice/day, diazoxide 3 mg/kg three times/day	Diazoxide until 3 months of age
Was normoglycemia achieved?	Yes	Yes	Yes	Yes	Yes

	Patient 6	Patient 7	Patient 8	Patient 9
Current Age	3 years	9 months	18 months	7 months
Gender	Female	Male	Female	Male
Ethnicity & Family history	Caucasian	Asian	Caucasian, non-consanguineous	Ecuadorian
Age at delivery	39 weeks via NSVD	37 weeks via C-section due to non-reassuring fetal heart tones	39 1/7 weeks via elective C-section for breech presentation	38 weeks via C-section
Birth weight	7lbs 14oz	5lbs 5oz	11lb 2oz	6 lbs 8oz
Perinatal complications	Polyhydramnios with tobacco use and asthma in the mother	Single umbilical artery, IUGR, and nuchal cord	[d]PPHN requiring sildenafil	15 day NICU stay for respiratory distress colostomy at DOL1, Surgeries: colostomy, [e]PSARP, g-tube and fundoplication
Presentation of hypoglycemia	DOL7	DOL7	DOL1	Likely early DOL but only discovered while coming from Ecuador for ostomy reversal during pre-operatory work at 7 months-old
Plasma glucose (mg/dL) Ref: 80-120 [Lowest recorded]	35 [31]	46 [30]	17	41 [33]
Insulin (uIU/ml = mU/L)	8.8	1	8.5	6.9
	0.21	0.22	0.6	0.6

Table 1 continued

	Patient 6	Patient 7	Patient 8	Patient 9
Beta hydroxybutyrate (mmol/L)				
Free fatty acids (mmol/L)	1.82	NA	0.3	1.3
Glycemic response to glucagon (mg/dL)	42	82	NA	80
Treatment of hypoglycemia	Diazoxide (partially responsive), octreotide, pancreatectomy due to diffuse disease, at 3 years old managed with Somatuline, g- button feeds, overnight feeds	Diazoxide, responsive and well controlled. At 4 months of age stopped due to pulmonary hypertension. Solcarb to help maintain blood glucose. Now managed with feeds	Partial pancreatectomy and Diazoxide 10 mg/kg/day	Diazoxide 10 mg/kg three times a day
Was normoglycemia achieved?	No	Yes	Yes	Yes

[a] NSVD: Normal spontaneous vaginal delivery;
[b] CPAP: Continuous positive airway pressure;
[d] IUGR: intrauterine growth retardation;
[c] DOL: Day of life;
[d] PPHN: Persistent Newborn Pulmonary Hypertension;
[e] PSARP: Posterior Sagittal Anorectoplasty.
Note: Laboratory values for plasma glucose, insulin, beta-hydroxybutyrate, and free fatty acids were recorded during a critical sample collection.

Table 2 : Kabuki syndrome features of the 9 patients

Features	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Age of KS diagnosis	2 months	18 months	6 months	6 months	1 year
Genotype	Mosaic hemizygous deletion of *KDM6A* exons 3-24 arr[hg19]Xp11.3 (44818602_44947539)x0	*De novo* deletion of *KDM6A* exons 7-17 arr[hg19] Xp11.3 (44892185_ 44935785)x1	*De novo KMT2D* c.603_604dup (p. Gly202Alafs*7)	*De novo KDM6A* c.357C>G (p. Tyr119*)	*De novo KMT2D* c.11149C>T (p. Gln3717*)
Facial	Long palpebral fissures	Long eyelashes, low set ears, Protruding ear lobes	Long palpebral fissures with lateral eversion of eyelid	Long palpebral fissures, eversion of lateral third of lower eyelid, arched/ sparse eyebrows, depressed/flat nasal tip, large/dysmorphic ears	Long palpebral fissures, short nasal septum, arching eyebrows
Eye	Left homonymous hemianopsia visual field defect, exotropia (since resolved), and bilateral hyperopia	Left-side strabismus	–	–	–
Oral	Thin upper lip vermilion	–	Thin upper lip vermilion	–	–
Skeletal	Hip dysplasia	–	Sacral dimple with hair tuft	Hip dysplasia	–
Hand	–	Fleshy finger pads	5th finger clinodactyly, tapering fingers, abnormal palmar creases, fleshy finger pads	Fetal fingertip pads	–
Neurological	Congenital partial agenesis of the corpus callosum with right paramedian posterior interhemispheric cyst, developmental delay, seizures	Decreased symmetric muscle tone and strength	Developmental delay	Neonatal hypotonia	Hearing loss, developmental delay
Cardiovascular	Small atrial septal defect and resolving bi-ventricular hypertrophy	–	–	–	Atrial septal defect
Gastrointestinal	Feeding difficulties and gastroesophageal reflux	–	Feeding difficulties	Feeding difficulties and gastroesophageal reflux	Feeding difficulties
Urogenital	–	–	Dysplastic left kidney, renal cysts in right	–	–
Endocrine	Short stature: height < 5th percentile	–	Short stature: 5th percentile in height	Short stature	–

Features	Patient 6	Patient 7	Patient 8	Patient 9
Age of KS diagnosis	15–18 months	9 months	11 months	7 months
Genotype	*De novo KMT2D* c.709del (p. Glu237Serfs*24)	*De novo KMT2D* c.8366G>A (p.Arg2789Gln)	*De novo KDM6A* c.2074_2075del (p. Gln692Glyfs*37)	*De novo KMT2D* c.6613delinsAA, (p.Ala2205Asnfs*38)
Facial	Long palpebral fissures, short nasal septum, low set ear	Long palpebral fissures	Depressed nasal bridge	Arched eyebrows
Eye	–	–	Prominent eyes	Long eyelashes, blue sclerae
Oral	–	–	Small jaw	
Skeletal	–	Sacral dimple	Left [a]DDH with Palvik Harness	
Hand	–	–	–	
Neurological	Hearing loss, developmental delay	Developmental delay	Sacral dimple	Developmentally delayed
Cardiovascular	–	One umbilical artery	[b]PDA and small [c]PFO with mild concentric LVH	Heart murmur, Ventricular septal defect
Gastrointestinal	Feeding difficulties	Feeding difficulties	Feeding difficulties Cows milk protein intolerance	Imperforate anus, GERD
Urogenital	–	–	–	Undescended testes
Endocrine	–	–	Premature thelarche	Low weight and height

[a] DDH: Developmental dysplasia of the hip
[b] PDA: Patent ductus arteriosus;
[c] PFO: Patent foramen ovale
The reference sequence used for *KDM6A* is NM_021140.3. The reference sequence used for *KMT2D* is NM_003482.3.