Supplementary material

Kieszek B, Cichocki P, Adamczewski Z, et al. Renal artery embolization in an adult patient with Bartter syndrome: a difficult but life-saving decision. Pol Arch Intern Med. 2024; 134: 16720. doi:10.20452/pamw.16720.

Table S1. Genetics of Bartter syndrome and typical clinical findings (Based on: Mrad FCC, Soares SBM, de Menezes Silva LAW, et al. Bartter syndrome: clinical findings, genetic causes and therapeutic approach. World Journal of Pediatrics. 2021; 17: 31-39.)

	Gene	**OMIM**	**Inheritance**	**Gene product**	**Clinical findings**
Type 1	*SLC12A1*	601678	AR	NKCC2	Prematurity, polhydramnios, nephrocalcinosis, hypercalciuria, hypokalemic alkalosis, hyposthenuria, high levels of prostaglandin E2
Type 2	*KCNJ1*	241200	AR	ROMK1	Prematurity, polhydramnios, nephrocalcinosis, hypokalemic alkalosis, hyposthenuria, hypercalciuria, high levels of prostaglandin E2
Type 3	*CLCNKB*	607364	AR	CLC-Kb	Hypokalemia, hypochloremic alkalosis, hypocalciuria or hypercalciuria associated to hypermagnesuria and mild hipomagnesemia
Type 4a	*BSND*	602522	AR	Barttin (β subunit of CLC-Ka and CLC-Kb)	Prematurity, polhydramnios, hypokalemia, high levels of prostaglandin E2, mild hypochloremic alkalosis, severe renal wasting, sensorial deafness
Type 4b	*CLCNKA* *CLCNKB*	613090	AR	CLC-Ka and CLC-Kb	Prematurity, polhydramnios, hypokalemia, high levels of prostaglandin E2, mild hypochloremic alkalosis, severe renal wasting, sensorial deafness

Type 5	*MAGED2*	300971	XLR	MAGED2	Polyhydramnios, transient salt wasting, hypokalemia, hypercalciuria, severe hypochloremic metabolic alkalosis.
Autosomal dominant hypokalcemia with Bartter's syndrome	*CASR*	601198	AD	CaR	Hypocalcemic hypercalciuria, secondary hyperaldosteronism, hypomagnesemia, hypokalemic alkalosis and hypercalciuria
AD – autosomal dominant; *AR* – autosomal recessive, *BSND* – barttin CLCNK type accessory beta subunit, *CaR* – calcium sensing receptor, *CASR* – calcium-sensing receptor, *CLC-Ka* – chloride channel Ka, *CLC-Kb* – chloride channel Kb, *CLCNKA* –chloride voltage-gated channel Ka gene, *CLCLNKB* – chloride voltage-gated channel Kb gene, *KCNJ1* – potassium voltage-gated channel subfamily J member 1 gene, *MAGED2* – mage family member D2, *NKCC2* – sodium-potassium-2 chloride cotransporter, , *ROMK* – medullary potassium channel,*SCL12A1* – solute carrier family 12 member 1, *XLR* – X-linked recessive					

Table S2. The patient's blood and urine parameters relevant to establishing the diagnosis of BS

Serum creatinine, umol/l N: 45.0 – 84.0	eGFR CKD-EPI, ml/min/1,73 m^2	Serum urea, mmol/l N: 2.8 – 7.2	Serum sodium, mmol/l N: 136.0 – 146.0	Serum potassium, mmol/l N: 3.5 – 5.1	Serum chloride, mmol/l N: 101.0 – 109.0	Serum calcium, mmol/l N: 2.2 – 2.65	Serum magnesium, mmol/l N: 0.77 – 1.03	Blood pH N: 7.35 – 7.45	Blood bicarbonate $HCO3^{-}$, mmol/l N: 22.0 – 26.0	Serum aldosterone in supine position, nmol/l N: 0.08 – 0.45	Plasma renin activity in supine position, ng/ml/h N: 0.2 – 2.8
56	118	5	132	2.5	90	2.4	1.03	7.39	38.1	1.33	>40.0

24h urine sodium excretion, mmol N: 40.0 – 220.0	24h urine potassium excretion, mmol N: 25.0 – 125.0	24h urine calcium excretion, mg N: 100.0 – 320.0	24h urine magnesium excretion , mmol N: 61.0 – 207.0	24h urine phosphate excretion, mg N: 400.0 – 1300.0	24h urine protein excretion, mg N: <150						
479	133	119	7.6	400	200						

Table S3. Evolution of the most important parameters over time

	Dec 2010 At the diagnosis of BS	Oct 2013 Before inserting the first vascular port for intravenous electrolytes supplementation	Sep 2019 Before the renal artery embolization	Oct 2019 After the renal artery embolization, before implementing haemodialysis	May 2020 During chronic hemodialysis, 7 months after the renal artery embolization	Aug 2021 5 months after the kidney transplantation
Serum creatinine, umol/l N: 45.0 – 84.0	56	93.7	140.9	334.7	preHD: 323.5	88.4
eGFR CKD-EPI, ml/min/1,73m^2	118	69	40.7	14.2	preHD: 14.8	70.6
Serum urea, mmol/l N: 2.8 – 7.2	5	7.6	37.9	38.72	preHD: 23.5 postHD: 2.33	6.78
Serum sodium, mmol/l N: 136.0 – 146.0	132	129	119.2	124.8	preHD: 129.8 postHD: 135.2	139.1
Serum potassium, mmol/l N: 3.5 – 5.1	2.5	3.29	3.87	3.42	preHD: 3.38 postHD: 3.94	3.7
Serum chloride, mmol/l N: 101.0 – 109.0	90	96	74	81.9	preHD: 85.5 postHD: 95.8	106

Serum calcium, mmol/l N: 2.2 – 2.65	2.4	2.64	2.88	---	preHD: 2.63	2.31
Serum magnesium, mmol/l N: 0.77 – 1.03	1.03	0.83	1.04	0.79	preHD: 0.87	0.72
Blood pH N: 7.35 – 7.45	7.39	7.53	7.42	7.33	preHD: 7.389	7.43
Blood bicarbonate $HCO3^{-}$, mmol/l N: 22.0 – 26.0	38.1	28.2	24.4	24.9	preHD: 27.3	29.2