

Table S1. Comparison of main characteristics, acute and chronic complications and therapeutic management in SS/S β 0 patients according to the region of birth.

	SS/Sβ0: Whole Population <i>n</i> = 186	SS/Sβ0: Patients Born in France <i>n</i> = 93	SS/Sβ0: Patients Born in Sub- Saharan Africa <i>n</i> = 93	<i>p</i> ^a	<i>p</i> ^b
Male, <i>n</i> (%)	91 (48.9)	50 (53.8)	41 (44.1)	0.2	0.5
Age at last follow-up (years)	27.9 (22.4–34.1)	25.6 (22.2–30.2)	30 (23–36.8)	0.001	<0.0001
Height (cm)	172 (165–178)	174.3 (167.8–178.6)	170 (163–177.8)	0.01	0.007
Male (cm)	177 (172–182)	176 (173.6–182)	178 (171.8–180.3)	0.8	0.4
Female (cm)	167 (161–171)	168.8 (164.3–173.8)	164 (160–169.5)	0.009	0.004
Weight (kg)	63 (57.1–70)	63.5 (59–72)	63 (56.5–70)	0.1	0.01
BMI (kg/m²)	21.3 (19.8–23.8)	21.2 (19.8–24.2)	21.5 (19.9–23.7)	0.9	0.1
Hb (g/dL)	8.4 (7.5–9.4)	8.2 (7.5–9.2)	8.5 (7.9–9.6)	0.1	0.2
MCV (fL)	82 (75.3–89.8)	80 (75–89)	82.2 (76–91.4)	0.4	1
Reticulocytes (G/L)	267 (182.3–347.3)	256 (169.5–336)	275 (184.5–347.8)	0.6	0.2
LDH (UI/L)	438 (361.8–516.8)	438 (325–531.5)	438 (386.5–503)	0.6	0.2
Total bilirubin (μmol/L)	42 (29–75)	39 (29–77.5)	48 (27.5–66)	0.6	0.7
HbA2 (%)	3.3 (3–3.7)	3.4 (3–3.5)	3.3 (2.9–3.7)	1	0.5
HbF (%)	5.5 (2.8–8.5)	5.1 (2–8.5)	6.7 (3.2–8.8)	0.2	0.3
Vaso-occlusive crisis					
Number of admissions for VOC in the last 12 months	1 (0–2)	1 (0–3)	1 (0–2)	0.1	0.9
Acute chest syndrome, <i>n</i> (%)	145/185 (78.4)	80/93 (86)	65/92 (70.7)	0.02	0.005
Number of episodes over lifetime	2 (1–4)	3 (1–4)	1 (0–3)	<0.0001	0.002
Age at first episode (years)	20.9 (15.7–24.7)	19.2 (11.6–22.3)	23.5 (18.3–28.9)	<0.0001	0.01
\geq 1 ICU admission for ACS over lifetime	88/174 (50.6)	53/90 (58.9)	35/84 (41.7)	0.03	0.008
Priapism, <i>n</i> (%)	31/81 (38.3)	17/45 (37.8)	14/36 (38.9)	1	0.7
Age at 1st priapism episode (years)	16.8 (12.6–22.4)	18 (12.9–22.8)	15.3 (12.2–18.2)	0.5	0.7
Stroke, <i>n</i> (%)	17/177 (9.6)	6/90 (6.7)	11/87 (12.5)	0.3	0.3
Age at first stroke (years)	19 (11.1–23.3)	17.1 (12.9–21.2)	19 (11–28.4)	0.8	0.1
Splenic complications					
Splenectomy, <i>n</i> (%)	15/175 (8.6)	8/87 (9.2)	7/88 (8)	1	0.6

Age at splenectomy (years)	11.3 (9–14.8)	12.1 (7.6–15.4)	10.9 (9.5–13.5)	0.9	0.2
Cholecystectomy, <i>n</i> (%)	121/181 (66.9)	68/92 (73.9)	53/89 (59.6)	0.06	0.04
Age at cholecystectomy (years)	16.8 (12.5–23.3)	14.4 (10.9–20.2)	21.1 (14.8–28.3)	<0.0001	1
Thrombo–embolic events, <i>n</i> (%)	14/183 (7.7)	8/91 (8.8)	6/92 (6.5)	0.8	0.2
Pulmonary embolism, <i>n</i> (%)	11/183 (6)	6/91 (6.6)	5/92 (5.4)	1	0.4
Age at 1st thrombo–embolic event (years)	27.3 (24–30.3)	28.4 (23.2–30.6)	26.1 (24.6–28.3)	0.7	0.2
Retinopathy, <i>n</i> (%)	72/163 (44.2)	39/83 (47)	33/80 (41.3)	0.6	0.2
Age at diagnosis of retinopathy (years)	23.2 (20.3–29.3)	21.2 (16.7–25.8)	27.8 (23–30.9)	<0.0001	0.2
Laser photocoagulation, <i>n</i> (%)	29/146 (19.9)	18/76 (23.7)	11/70 (15.7)	0.3	0.05
Cardiac involvement, <i>n</i> (%)	64/146 (43.8)	34/74 (46)	30/72 (41.7)	0.7	0.7
Age at diagnosis of cardiopathy (years)	25.7 (20.5–29.7)	24.5 (20.5–28.6)	27.5 (21–30.6)	0.2	0.7
LV systolic dysfunction, <i>n</i> (%)	14/181 (7.7)	8/91 (8.8)	6/90 (6.7)	0.8	0.2
LV and/or LA dilatation, <i>n</i> (%)	53/136 (39)	29/72 (40.3)	24/64 (37.5)	0.9	0.6
Age at diagnosis of LV dilatation (years)	25.1 (20.2–29.2)	24.5 (18.2–28.4)	27.4 (21.1–30.4)	0.08	0.5
TRV ≥ 2.5 m/s, <i>n</i> (%)	14/161 (8.7)	6/86 (7)	8/75 (10.7)	0.6	0.8
Cerebral vasculopathy, <i>n</i> (%)	32/96 (33.3)	13/50 (26)	19/46 (41.3)	0.2	0.2
Brain aneurysms, <i>n</i> (%)	13/92 (14.1)	4/50 (8)	9/42 (21.4)	0.1	0.09
Silent cerebral infarcts, <i>n</i> (%)	10/79 (12.7)	6/43 (14)	4/36 (11.1)	0.7	0.4
Moyamoya, <i>n</i> (%)	2/91 (2.2)	1/53 (1.9)	1/38 (2.6)	1	0.9
Vessel stenosis, <i>n</i> (%)	7/91 (7.7)	2/53 (3.8)	5/38 (13.2)	0.8	0.7
Nephropathy, <i>n</i> (%)	60/129 (46.5)	29/70 (41.4)	31/59 (52.5)	0.3	0.4
eGFR (mL/mn/1.73 m ²)	126 (112.1–136.2)	128.2 (120.2–137.4)	121.9 (105.2–134.6)	0.009	0.07
Hyperfiltration §, <i>n</i> (%)	29/176 (16.5)	14/89 (15.7)	15/87 (17.2)	0.9	0.4
Chronic kidney insufficiency ¶, <i>n</i> (%)	4/174 (2.3)	0/89 (0)	4/85 (4.7)	0.06	1
ACR > 3 mg/mmol, <i>n</i> (%)	50/114 (43.9)	25/62 (40.3)	25/52 (48.1)	0.5	0.6
ACR (mg/mmol)	2 (0.9–9.3)	1.7 (0.8–6.8)	2.3 (1.3–12.2)	0.1	0.4
Bone complications					
Avascular osteonecrosis (AON), <i>n</i> (%)	60/172 (34.9)	32/89 (36)	28/83 (33.7)	0.9	0.3
Age at diagnosis of AON (years)	18.9 (16.6–26.6)	18.9 (16.6–25.2)	18.9 (16.5–28.6)	0.6	0.3
H-shaped vertebrae, <i>n</i> (%)	39/76 (51.3)	18/38 (47.4)	21/38 (55.3)	0.6	0.5
Fracture, <i>n</i> (%)	48/145 (33.1)	29/72 (40.3)	19/73 (26)	0.1	0.05

Osteomyelitis, <i>n</i> (%)	38/169 (22.5)	23/80 (28.8)	15/89 (16.9)	0.1	0.04
Age at 1st osteomyelitis episode (years)	10.8 (6.4–19.2)	7.7 (2.8–19.2)	12.1 (8.9–18.8)	0.1	1
Skin ulcers, <i>n</i> (%)	22/151 (14.6)	6/80 (7.5)	16/71 (22.5)	0.01	0.04
Age at first episode (years)	18.6 (16.8–27.5)	23.2 (18.6–29.6)	18.5 (14.4–25.8)	0.2	0.005
Hydroxyurea					
Lifetime exposure, <i>n</i> (%)	131/186 (70.4)	69/93 (74.2)	62/93 (66.7)	0.3	0.2
Current treatment, <i>n</i> (%)	105/186 (56.5)	54/93 (58.1)	51/93 (54.8)	0.8	0.7
Age at introduction (years)	19.4 (15.4–24.8)	18.5 (14.3–23.2)	22.1 (16.4–28.5)	0.003	0.002
Cumulative lifetime dose (g)	1396 (502.5–2470.8)	1299.3 (540.3–2748.2)	1424.5 (456–1963)	0.7	0.2
Cumulative lifetime duration (years)	4 (1.6–8.1)	3.9 (1.9–8)	4.2 (1.4–7.9)	0.8	0.003
Chronic blood transfusion program					
Previous, <i>n</i> (%)	60/177 (33.9)	28/89 (31.5)	32/88 (36.4)	0.6	0.9
Current, <i>n</i> (%)	28/180 (15.6)	17/93 (18.3)	11/87 (12.6)	0.4	0.2
Blood transfusion complications, <i>n</i> (%)	41/154 (26.6)	22/80 (27.5)	19/74 (25.7)	0.9	0.6
Types of transfusion complications *:					
Antibodies without hemolytic reaction, <i>n</i> (%)	31/40 (77.5)	17/22 (77.3)	14/18 (77.8)	1	0.7
DHTR with antibodies, <i>n</i> (%)	6/40 (15)	4/22 (18.2)	2/18 (11.1)	0.7	0.7
DHTR without antibodies, <i>n</i> (%)	2/40 (5)	1/22 (4.6)	1/18 (5.6)	1	0.5
Acute hemolytic transfusion reaction, <i>n</i> (%)	1/40 (2.5)	0/22 (0)	1/18 (5.6)	0.5	1

SCD: sickle cell disease, BMI: body mass index, Hb: hemoglobin, MCV: mean corpuscular volume, LDH: lactate dehydrogenase, HbA2: adult hemoglobin A2, HbF: fetal hemoglobin. VOC = vaso-occlusive crisis, ACS = acute chest syndrome, LV: left ventricle, LA: left atrial, TRV: tricuspid regurgitation velocity, ACR: urine albumin-to-creatinine ratio, AON: avascular osteonecrosis, eGFR: estimated glomerular filtration rate. § Renal hyperfiltration was defined as an eGFR ≥ 130 mL/min/1.73m² for women and ≥ 140 mL/min/1.73 m² for men. ¶ Chronic kidney insufficiency was defined by an eGFR < 60 mL/min/1.73 m². DHTR: delayed hemolytic transfusion reactions, MRI: magnetic resonance imaging. Continuous variables are expressed as the median [IQR]. ^a bivariate analysis: Chi², Fisher's, Student's or Wilcoxon test. ^b multivariate analysis with adjustment for age, gender and genotype. Significant p values appear in bold.