

**TABLE 2.** Differential diagnosis of sickling disorders (Hb S disorders).

	Hb A (%)	Hb S (%)	Hb A2 (%)	Hb F (%)	Hb (g/dl)	MCV (fl)	Retic (%)
<b>Hb AS</b>	55-60	40-45	<3.5 (2-3)	<1	13-15	75-90	1-2
<b>Hb SS</b>	0	90-95	<3.5 (2-3)	5-10 (usually)**	6-9	70-90	10-20
<b>Hb AS/<math>\alpha^+</math>-thalassaemia</b>	62-70	28-33	<3.5 (2-3)	<1	13-15	normal or low	
<b>Hb AS/<math>\alpha^0</math>-thalassaemia</b>	68-78	20-30	<3.5 (2-3)	<1	13	<70	
<b>Hb SS/<math>\alpha</math>-thalassaemia**</b>	0	88-93	<3.5 (2-3)	1-10	9.2	normal or low	
<b>Hb S <math>\beta^0</math>-thalassaemia (major)</b>	0	90-95	>3.5 (3.5-6)	5-10	7-11 (8.8)	60-70	4
<b>Hb S <math>\beta^+</math>-thalassaemia (minor)</b>	5-30	60-90	>3.5 (3.5-6)	5-10	8-12 (11)	65-75	
<b>Hb SC</b>	0	50	<3.5 (2-3)	1 (1-7)	8-13 (11)	75-90	4
<b>Hb S HPLH</b>	0	70-80	<3.5 (2-3)	20-30	11-14	60-80	2
<b>Hb SE</b>	0	60	30-35 ***	4	13	<70	

\* Depending on the Hb S haplotype: most haplotypes have Hb F 5-10%, except Arab-Indian (Hb F ~20%). An Hb F level >10% diminishes the severity of sickle cell anaemia.

\*\* Co-inheritance of sickle cell anaemia (Hb SS) with  $\alpha^+$  or  $\alpha^0$  thalassaemia diminishes the severity of sickle cell anaemia.

\*\*\* In fact, this is Hb E, not Hb A2 (Hb E migrates to the same position as Hb A2 on Hb electrophoresis, and is eluted at the same retention time as Hb A2 on HPLC)