

# [Sickle Cell Trait]

Grand Rounds  
November 26, 1958

Chief Complaint: Fever with swollen neck, periorbital edema, dark urine 5 days duration.

Present Illness: Three year old c/f noticed to have progressive malaise, anorexia, fever for five days duration. At the same time mother noted the neck was swollen, eyes puffy, sclera icteric and the urine was dark.

Past History: Normal development with adequate nutrition. Mother felt the child was small for her age. She was diagnosed as having a sickle trait last year.

Family History: Both parents said to have sickle trait. Six year old sibling diagnosed as sickle cell anemia. One and one half year old sibling said not to be involved.

Examination: Temperature 102.4, pulse 120, respirations 24, weight 29, blood pressure 118/62. Well developed, thin, mildly icteric, acutely ill, Negro female child. HEENT tympanic membrane injected. Sclera icteric. Tonsils 2+ with slight exudate. Moderate anterior and posterior cervical adenopathy.

C-R: Heart not enlarged. No murmurs. Lungs clear.

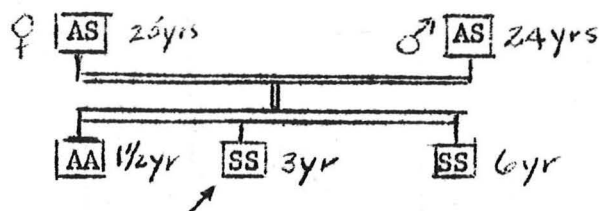
Abdomen: Liver down 4 cm. Spleen 5 cm. Kidneys -0

Skin: Icteric

Nodes: Generalized slight adenopathy

Lab: Hemoglobin 8.4, PCV 26, WBC 38,600 with 38% segs, 58 lymphs. Retic. count 10.2 with 14 NRBC/100 WBC. On peripheral smear there was marked polychromasia, many sickle forms, many target cells. The sickle cell prep. was positive. Urine was positive for bile and urobilinogen. A/G ratio was 4.29/3.68. TT was normal. CC floc 1+, SGOT 103 units, SGPT 54 units. NP culture showed no growth. Chest x-ray was normal. Heterophile showed a guinea pig absorption of 112. Mantoux was negative. Histo-plasmin negative. Hemoglobin electrophoresis was S.

Family Work-up: Mother - 12 gms. Hgb., normal smear, positive sickle prep., hemoglobin and electrophoresis SA  
Father - Hgb.?, smear?, positive sickle prep., hemoglobin electrophoresis SA  
Brother - Hgb. 7.8, sickling on smear positive, positive sickle prep, Hgb. electrophoresis S  
Sister - Hgb. 10.3, negative sickle prep, normal smear



Disease	Hgb Type	Sta- ture	Gen Symp.	Bone Pain	Spl een	Hgb	Poly chro	Sick ling	Targ. Cell	Sph. cyte	Hypo chro.
Normal	A	<u>N</u>	-	-	0	12-15	-	-	-	-	0
Sickle Trait	AS	<u>N</u>	±	±	0	12-15	-	+/-	±	-	0
Sickle Anemia	S	↓↓↓↓	++++	++++	0 to +++	4-8	+++	+/+++	++	+	0
Sickle "C"	SC	↓	++	+++	++	7-10	++	+/-rare	++++	-	0
Sickle "D"	SD	↓	+++	++	0 to +++	9-10	++	+/++	+	-	0
Sickle "E"	SE	↓↓	++	++	+++	7-11	++	+/+	+++	+	+
Sickle 3	SG	<u>N</u>	-	-	0	12-15	-	+/-	-	-	0
Sickle Thal	S(A)F	↓	++	++	+++	7-12	++	+/+	++	+	+
Sickle Sphero	SA	↓	++	++	++	7-8	+++	+/?	+	+++	0
C Trait	AC	<u>N</u>	-	-	0	12-1	-	-	++	-	0
Hgb "C"	C	<u>N</u>	+	+	+++	10-13	+	-	+++	+++	0
C Thal	CA	<u>N</u> - ↓↓↓	<u>N</u> - ++	-	++	4-11	-	-	++	++	+++
D Trait	AD	<u>N</u>	-	-	0	12-15	-	-	-	-	0
D Disease	D	<u>N</u>	+	-	+	12-13	-	-	+++	-	++
E Trait	EA	<u>N</u>	-	-	0	12-15	-	-	±	-	-
E Disease	E	↓↓	+	-	0	7-12	-	-	+++	-	-
E Thal	EAF	↓↓↓	++	-	+++	3-7	+	-	++	++	+++
Thal Minor	AA <sub>2</sub>	<u>N</u>	-	-	±	8-13	-	-	-	-	+
Thal Major	AF	↓↓↓↓	++++	+	++++	1-6	+	-	++	+	++++
H Trait	A(H)	<u>N</u>	-	-	±	10-13	+	-	+	-	±
"H" Thal	AH	↓↓	++	-	++	3.5-10	++	-	++	-	++