

ERYTHROCYTE SEDIMENTATION RATE IN EARLY SYPHILIS

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Summary

Pretreatment erythrocyte sedimentation rate was studied in 80 proved cases of early syphilis (primary, secondary and early latent) of which 73 were males and 7 females. Erythrocyte sedimentation rate (ESR) was raised in 80% cases of early syphilis. All the 7 (100%) female cases showed raised ESR, while 57 (78.8%) out of 73 male cases had raised ESR. Out of 80 cases of early syphilis, asymptomatic neurosyphilis was detected in 23 cases and 22 (95.6%) of these cases had raised ESR.

Fowler¹ reported raised ESR in 43% cases of seronegative primary, 67.5% cases of seropositive primary, 84% cases of secondary and 68.6% of early latent syphilis, before treatment and held the view that ESR determination had little value in the management of syphilis in general, but could be helpful in the post-treatment follow-up of late syphilis.

The present observation is part of a laboratory investigative study carried out in 80 cases of early syphilis where ESR was also determined to find out changes if any and its correlation with neuroaxis involvement during early syphilis.

Material and Methods

A total of 80 (73 males and 7 females) proved cases of early syphilis (primary, secondary and early latent) that atten-

ded the sexually transmitted diseases clinic of Irwin Hospital, New Delhi, formed the material for the present study. A thorough general physical examination of all systems, routine examination of blood (TLC, DLC & Hb%) and urine and other investigations were carried out to exclude any associated systemic disease which may affect the ESR. Pregnant females were excluded from the study.

No attempt was made for ESR determination during treatment or after treatment. As laid down by Fowler¹ ESR rate of 8 mm. in the first hour was regarded as normal upper limit in males and 13 mm. in females. ESR was estimated by Westergren method.

Observations and Comments

Different values of ESR in different stages of early syphilis are shown in Table-1.

64 (80%) out of 80 cases of early syphilis had raised ESR. Of these 64 cases, 3 (60%) were seronegative primary, 11 (68.75%) seropositive primary, 46 (86.8%) secondary syphilis and 4 (66.6%)

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TABLE 1
E. S. R. in different stages of early syphilis

	Total No. of cases in each group	Cases with raised E. S. R.		E.S.R. readings	
		No.	%	Range (mm/1st hr)	Mean value (mm/1st hr)
Primary syphilis					
Seronegative	5	3	60.0	10-18	10.8
Seropositive	16	11	68.75	10-36	14.6
Secondary syphilis	53	46	86.8	10-70	22.8
Early latent syphilis	6	4	66.6	10-50	20.0
Total	80	64	80.0		

TABLE 2
Sex - wise distribution of cases with elevated ESR.

Sex	Total cases	Cases with raised E.S.R.		Range (mm/1st hr.)	Mean value (mm/1st hr.)
		No.	%		
Male	73	57	78.8	10-70	17.4
Female	7	7	100.0	18-50	32
Total	80	64			

early latent syphilis cases (Table-1). Number of cases with raised ESR showed steady rise from seronegative primary to secondary stage of the disease and then showed a decrease in the early latent stage. The range of ESR observed in seronegative primary, seropositive primary, secondary and early latent syphilis were 10 to 18, 10 to 36, 10 to 70 and 10 to 50 mm. and the mean values were 10.8, 14.6, 22.8 and 20 mm respectively (Table-1).

ESR reading in relation to sex is shown in Table-2. Out of 73 males, 57 (78.8%) had raised ESR, while all the 7 females (100%) had raised ESR. The range of ESR in male and female cases were from 10 to 70 and 18 to 50 mm. and the mean values were 17.4 and 32 mm. respectively.

Table 3 shows raised ESR in cases of asymptomatic neurosyphilis during early syphilis and in early syphilis without

TABLE 3
ESR in early asymptomatic neurosyphilis and syphilis without neuroaxis involvement.

	No. of cases	Cases with raised E.S.R.		Range (mm/1st hr)	Mean Value (mm/1st hr)
		No.	%		
Asymptomatic neuro syphilis	23	22	95.6	10-42	20.4
Early syphilis without neuroaxis involvement	57	42	73.7	10-70	18.2
Total	80	64			

neuro axis involvement. 22 (95.6%) out of 23 cases of early asymptomatic neurosyphilis had raised ESR. The mean values of ESR in early asymptomatic neurosyphilis and early syphilis were 20.4 and 18.2 and the range was from 10 to 42 and 10 to 70 mm. respectively.

Same rising trend of raised ESR from seronegative primary to secondary and then decline in early latent stage as reported by Fowler¹, was observed in our study also though with minor variations.

In the present series, 95.6% cases of asymptomatic early neurosyphilis showed raised ESR. This raised sedimen-

tation rate of erythrocytes may be considered to be a response for this condition as other causes for raised ESR were carefully excluded. However, this does not seem to have diagnostic value but may have some prognostic value and needs further evaluation.

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Reference

1. Fowler W: The erythrocyte sedimentation rate in syphilis, *Brit J Vener Dis*, 52 : 309, 1976.

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— *Managing Editor*