

Nestroft Screening Tool for β -Thalassemia Trait

Management of β thalassemia is too expensive to be applied in many developing countries. Therefore, attempts to prevent and control thalassemia in the community deserve a high priority. NESTROFT (Naked Eye Single Tube Red cell Osmotic Fragility test) is a simple and economic technique for identifying carriers of β thalassemia genes(1). In this study, a total of 500 children of which 340 were anemic were screened by NESTROFT(2,3). Etiological investigations were carried out in 105 of 340 children. Results of these 105 patients were used in evaluating NESTROFT.

NESTROFT was successful in detecting 11/12 subjects with β thalassemia trait (*Table I*). The test had a sensitivity of 91.66%, specificity of 84.9%, positive predictive value of 44% and negative predictive value 98.7%. It is concluded that NESTROFT can be incorporated in the primary health care

system for identifying β -thalassemia carriers

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TABLE I—Nestroft Results in 105 Anemic Subjects.

Type of Anemia	No.	Positive test	Negative test
Iron deficiency	67	6	61
Megaloblastic	3	0	3
Dimorphic	12	1	11
β thalassemia major	5	5	0
β thalassemia trait	12	11	1
HbE trait	1	1	0
Undiagnosed hemolytic	2	1	1
Leukemia (ALL)	1	0	1
Aplastic	1	0	1
Red cell aplasia	1	0	1
	105	25 (23.3%)	80 (76.7%)