

Tourniquet Test

The tourniquet test is part of the new World Health Organization case definition for dengue. The test is a marker of capillary fragility and it can be used as a triage tool to differentiate patients with acute gastroenteritis, for example, from those with dengue. Even if a tourniquet test was previously done, it should be repeated if

- It was previously negative
- There is no bleeding manifestation

How To Do a Tourniquet Test

1. Take the patient's blood pressure and record it, for example, 100/70.
2. Inflate the cuff to a point midway between SBP and DBP, and maintain for 5 minutes, $(100 + 70) \div 2 = 85$ mm Hg
3. Reduce and wait 2 minutes.
4. Count petechiae below antecubital fossa.
 - A positive test is 10 or more petechiae per 1 square inch.



The tourniquet test has variable sensitivity and specificity.¹⁻⁵ Using a cut off of ≥ 20 petechiae/square inch increases specificity, but loses sensitivity.^{1,2} The tourniquet is

- More likely to be positive near time of defervescence¹
- Less likely to be positive in patients with shock

SBP: systolic blood pressure

DBP: diastolic blood pressure

References

1. Kalayanarooj et al, *J Infect Dis*, 1997; 176:313-321.
2. Phuong et al, *Trop Med Intl Health*, 2002; 7: 125-132.
3. Lucas et al, *Indian J of Peds*, 2000; 67:503-504.
4. Pushpa et al, *Annals of Trop Peds*, 1998; 18:289-293.
5. Thaung et al, *SE Asian J. Trop Med*, 1975; 6(4): 580-591.



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