



SKIN MANIFESTATIONS OF INTERNAL DISEASE

## A RARE CAUSE OF ISCHEMIC STROKE WITH DERMATOLOGICAL MANIFESTATIONS

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**Background:** Unusual dermatological symptoms may imply a critical diagnosis, and thus preempt hazardous interventions. Here we describe how an uncommon cause of ischemic stroke with skin manifestations was overlooked, leading to catastrophic consequences.

**Observation:** Mrs. NB, a 44-year-old Indian security officer, presented to the Emergency Department for sudden-onset expressive aphasia and right facial asymmetry at 3:15pm. Concurrently, she developed ecchymosis on her right arm without any trauma or predisposing medications. Two days prior, she had complained of intermittent vertiginous giddiness and blurring of vision, which resolved spontaneously after two hours. The stroke telemedicine service was consulted, and intravenous (IV) recombinant tissue plasminogen activator (rTPA) was administered from 4:55pm to 5:55pm. Computed Tomography (CT) of the brain showed no acute infarct, but uncovered a subacute infarct in the left thalamus. At 6:15pm, Mrs. NB's Glasgow Coma Scale score precipitously dropped from 13 to 8. A second CT of the brain revealed new acute bilateral sub-arachnoid hemorrhages and an acute subdural hemorrhage. Five minutes later, she suffered a generalized tonic-clonic seizure, which terminated with IV diazepam after one minute. She was intubated, blood products were infused to reverse the thrombolysis, and IV levetiracetam was started. Blood investigations demonstrated severe thrombocytopenia (platelet count of 14,000 per microliter) and hemolytic anemia (hemoglobin level of 9.9g/dL). After consultation with a hematologist, the patient was diagnosed with thrombotic thrombocytopenic purpura (TTP), and transferred to a tertiary-care hospital where plasma exchange, IV rituximab and IV methylprednisolone were initiated. Elevated ADAMTS13 antibody levels and undetectable ADAMTS13 activity confirmed the diagnosis. After 20 days of daily plasma exchange, Mrs. NB's platelet level gradually normalized and her multi-organ failure improved. She is undergoing stroke rehabilitation at a community hospital.

**Key Message:** TTP is a rare cause of ischemic stroke, and should be suspected when unprovoked ecchymosis is an associated symptom.

