CANADIAN STROKE BEST PRACTICE RECOMMENDATIONS

Acute Stroke Management

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TABLE 2A: Recommended Laboratory Investigations for Patients with Acute Stroke or Transient Ischemic Attack

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TABLE 2A: Recommended Laboratory Investigations for Patients with Acute Stroke or Transient Ischemic Attack

Recommended Laboratory Investigations for Patients with Stroke and Transient Ischemic Attack		
*Note: This list presents the recommended **initial** laboratory tests for patients with stroke and TIA. Patient presentation, clinical judgment, and local stroke protocols should be considered in selecting appropriate laboratory investigations and the timing of completion.*		
Complete blood count (CBC)	International Normalized Ratio (INR)	Partial thromboplastin time (PTT)
Electrolytes	Creatinine and glomerular filtration rate (eGFR)	Liver enzymes (e.g., AST, ALT)
Random glucose or hemoglobin A1c	**Fasting** plasma glucose, or 2-hour plasma glucose, or glycated hemoglobin (A1c), or 75 g oral glucose tolerance test	Lipid profile (Fasting optional and decision should be based on individual patient factors)

Additional Laboratory Investigations for Consideration in Specific Circumstances			
*Note: All patients are individuals, and some may require additional investigations to fully understand their clinical situation. The investigations noted below may not be indicated for many patients with stroke and should be considered in **selected** patients with stroke based on clinical presentation and medical history.*			
Calcium, Magnesium, Phosphate	If female <50 years of age, consider pregnancy test	Blood cultures if infection suspected (per individual institutional protocol)	
ESR	CRP	Troponin, where indicated	
Blood and/or urine drug screen	HIV and syphilis serology, where indicated		
Arterial hypercoagulability screen: For consideration in selected patients *only if clinically indicated* *Consultation with a specialist in thrombosis to evaluate for hypercoagulable state is recommended.*			
Anticardiolipin antibodies, Beta-2-glycoprotein	Lupus anticoagulant	Sickle cell screen	Serum homocysteine and vitamin B12
Venous hypercoagulability screen: For consideration in selected patients *only if clinically indicated (e.g., a young person with a PFO)* *Consultation with a specialist in thrombosis to evaluate for hypercoagulable state is recommended.*			
Protein S	Protein C	Factor V Leiden	
Prothrombin gene mutation	Antithrombin III		
Special considerations especially in young adults and children with stroke in absence of identified etiology *(Note: There is not strong evidence for the investigations listed below, and they should be considered only in selected patients with stroke based on clinical presentation and medical history.)* ***Consultation with a hematologist or neurologist is recommended.***			
Lumbar puncture for CSF analysis (cell count and differential, protein, glucose, bacterial and viral studies; possibly cytology/flow cytometry if CNS lymphoma is a consideration)	Brain biopsy (if vasculitis of the central nervous system or angiocentric lymphoma is a consideration)		
Advanced neuroimaging (i.e., diagnostic catheter cerebral angiography and or MRI vessel wall imaging)	Further genetic tests – CADASIL, Fabry's, MELAS		