Canadian Best Practice Recommendations for Stroke Care

PatientOrderSets.com

PATIENT INFORMATION

Document allergies on approved form and ensure medication reconciliation has been reviewed as per organizational process

Canadian Stroke Best Practices Acute Stroke and Transient Ischemic Attack (TIA) Admission Order Set (Order Set 3)

ACTION

Order set 3 is appropriate for admissions from the emergency department, direct inpatient admissions, strokes that occur after admission to hospital for another initial reason ("in-hospital strokes"), and as follow-up orders for stroke patients who have received tPA in the ED.

☐ Discontinue all previous stroke patient order sets

Admission

☐ Admit t stroke unit OR ☐ Admit toito: _____

☒ Dr. _____ to consult/assume MRP

Diagnosis: _____

Does the patient have allergies or hypersensitivities? ☐ No ☐ Yes: Refer to allergy documentation and process

Code Status: ☐ Full Resuscitation ☐ DNR ☐ _____

Next of kin: _____ Phone number: (____) _____

Estimated length of stay: ☐ less than 3 days ☐ 3 to 5 days ☐ 5 to 7 days ☐ ____ days

Precautions

☐ Contact - Reason: _____ ☐ Droplet- Reason: _____ ☐ Airborne - Reason: _____

☐ _____

Stroke Symptom Onset Time

☐ Obtain and record stroke symptom onset time (or time patient was last seen normal (LSN)/last- known well LKW):
Document: Date of Onset/LSN: _____ (dd/mm/yyyy) Time of onset/LSN: _____ (hh:min)

Consults

☒ Stroke Neurologist/Stroke Team
☐ Neurosurgeon
☐ Physiatrist
☐ Palliative Care Team ☐ Occupational Therapist (OT) ☐ Speech Language Pathologist (SLP)
☐ Physiotherapist (PT)

☐ Dietitian
☐ Neuropsychologist ☐ Pharmacist ☐ Psychiatrist ☐ Social Worker (SW)
☐ _____ Reason: _____

Swallowing Screening and Assessment

☒ NPO until completion of Dysphagia Screening ☒ Screen patient for swallowing ability and presence of dysphagia
Document: Date:_____Time: _____ Dysphagia screening result: ___ Normal swallow, _ Abnormal swallow
☐ If swallowing screen is abnormal, refer patient to a SLP or OT for a detailed assessment, diet recommendations and therapy plan Document Referral Date: _____ (dd/mm/yyyy)

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Diet: Post Swallowing Assessment

☒ Upon completion of swallowing screen or assessment, initiate appropriate diet and texture

☐ Clear Fluids ☐ Full Fluids ☐ DAT ☐ Healthy Heart ☐ Diabetic (less than 1800 kCal)

Modified Diet:

☐ Dysphagia Pureed Diet ☐ Dysphagia Thickened fluids ☐ Dental Soft ☐ Minced

MD to consider initiating enteral nutrition support (tube feeding) within 3 days of admission for a patient who is unable to meet nutritional requirements (NG tube not to be inserted within 24 hours of tPA administration)

☐ Monitor hydration status

Activity and Functional Assessments

☐ Activity as tolerated ☐ Bed rest x _____ hours, then reassess ☐ Elevate head of bed to 30 degrees

☐ Mobilize patient as soon as possible once medically stable (side of bed, chair, ambulation)

☐ Mobilize patients who received tPA when medically stable (side of bed, chair, ambulation)

Functional Assessments

☒ Assess patient for Falls Risk and reassess when changes in status occur

☒ Rehabilitation assessment within 48 hours of patient admission

☒ Complete AlphaFIM(R) by Day 3 following admission

☐ Complete an ADL assessment

Cognitive Assessments

☐ Assess patient for cognitive status using a validated tool (e.g., MoCA)

☐ Assess patient for signs of depression, mood changes or changes in personality

☐ Notify Stroke Team if any changes to mood or cognition

Vitals

☐ T, HR, RR, BP q _____ h ☐ Pain Score q _____ h

☐ If SBP greater than _____ mmHg or DBP greater than _____ mmHg for 2 or more readings taken 10 minutes apart, notify MD

Neurovitals

☐ Stroke severity assessment q _____ h

National Institute of Health Stroke Scale (NIHSS) **or** Canadian Neurologic Scale (CNS) or GCS

(NIHSS or CNS are preferred assessment tools)

☒ If any changes in neuro status or new/worsening signs and symptoms of stroke, notify Stroke Team STAT

☐ _____

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Monitoring

☐ Intake and Output
☒ Pressure Ulcer Risk Assessment/Skin assessment daily
☐ _____

Respiratory

☐ O_2 flow rate at 2 – 6 L/minute by nasal cannulae (preferable) or at 5 – 10 L/minute by face mask
☐ Titrate O_2 to achieve a target SpO_2 93 - 96% ☐ Titrate O_2 to achieve a target SpO_2 _____ to _____%

Patient with known chronically elevated $PaCO_2$

☐ Titrate O_2 to achieve a target SpO_2 88 - 92% ☐ Titrate O_2 to achieve a target SpO_2 _____to _____%
with O_2 flow rate at 1 - 2 L/minute by nasal cannulae or as per Venturi/Venti-mask package insert at 24 - 28%
☐ _____

Lab Investigations (subsequent tests to be considered following patient arrival to ED)

☐ CBC ☐ aPTT ☐ INR
☐ Capillary Blood Glucose STAT
☐ Electrolytes ☐ Glucose ☐ BUN ☐ Creatinine, GFR
☐ CK ☐ Troponin ☐ Ca ☐ Mg
☐ AST, ALT, ALP, Bilirubin, serum Protein ☐ TSH ☐ HbA1C
☐ 12 hour fasting HDL, LDL, total Cholesterol, Triglycerides, total Cholesterol/HDL ratio (to be done the next day after admission)
☐ Coagulopathy screening
- ☐ Anticardiolipin (Antiphospholipid) antibody ☐ Lupus anticoagulant
- ☐ Anti-beta2-glycoprotein type 1 ☐ Sickle cell screen
- ☐ Protein S ☐ Protein C ☐ Antithrombin III
- ☐ Prothrombin Gene Mutation ☐ Factor V Leiden Mutation ☐ Homocysteine
- ☐ PNH screen (Paroxysmal Nocturnal Hemoglobinuria)

☐ Vasculitis screen
- ☐ Erythrocyte Sedimentation Rate (ESR) ☐ C-Reactive Protein (CRP)
- ☐ Antinuclear antibody (ANA) ☐ C3/C4 ☐ c- and p-ANCA

Additional Lab Investigations

☐ Cross + Type for 2 units packed red blood cells
☐ ABG ☐ Sickle Cell Screen ☐ B12 ☐ Ca, Mg, PO4
☐ Blood C + S x 3 ☐ Urine R + M ☐ Urine C + S
☐ HIV ☐ Syphilis Serology
☐ If female less than 50 years of age, serum β HCG
☐ Additional Lab tests: _____

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Blood Glucose Monitoring/Glycemic Management

☐ If first random blood glucose is greater than 10 mmol/L, repeat Blood Glucose
AND ☒ Fasting Blood Glucose ☒ HbA1C
☐ For diabetic patients, follow standard individual hospital diabetic protocol
☐ Capillary Blood Glucose QID and PRN
☐ Consult Diabetes Management Team **OR** ☐ Consult Endocrinologist
☐ Capillary Blood Glucose _____ (frequency)

Diagnostics

☐ Chest X-Ray PA + Lateral - Reason: _____
☐ 12-lead ECG daily for _____ days

Neuro

☐ CT Head Non Contrast at _____ days post admission - Reason: _____ OR
☐ Diffusion Weighted MRI - Reason: _____
☐ CT angiogram - Reason: _____
☐ MR angiogram - Reason: _____
☐ _____ Reason: _____

IV Therapy

☐ 0.9% NaCl at _____ mL/h
WITH ☐ 20 mmol KCl/L ☐ 40 mmol KCl/L
☐ _____ at _____ mL/h
☐ Saline Lock and flush as per hospital Policy/Procedure

Antithrombotic Therapy

☒ No anticoagulants, No antithrombotics until CT completed and hemorrhage ruled out, and tPA eligibility determined

MD to order at least 160 mg of acetylsalicylic acid (ASA) immediately as a one time loading dose after brain imaging has excluded intracranial hemorrhage

☐ acetylsalicylic acid :_____ mg PO x 1 (only administer PO route after swallowing screen completed) given at:.
_____ (Date/Time administered)
☐ If patient has swallowing difficulty, administer acetylsalicylic acid 325 mg PR OD

☐ Initiate maintenance antithrombotic therapy when CT/MRI has confirmed absence of hemorrhage
(wait 24 hours post tPA administration)
☐ acetylsalicylic acid 81 mg PO OD
☐ clopidigrel 75 mg PO OD
☐ extended-release dipyridamole 200 mg/acetylsalicylic acid 25 mg1 capsule PO BID

☐ _____

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Antithrombotic Therapy for Stroke Patients with Atrial Fibrillation

- ☐ apixaban _____ mg PO q _____ h
- ☐ dabigatran _____ mg PO q _____ h
- ☐ rivaroxaban _____ mg PO q _____ h
- ☐ acetylsalicylic acid _____ mg PO q _____ h
- ☐ Warfarin
  - ☐ warfarin loading dose of _____ mg PO daily for _____ days,
    THEN warfarin _____ mg PO daily for _____ days
  - ☐ warfarin maintenance dose of _____ mg PO daily
  - ☐ INR target range: _____ (target 2.5 and range 2.0 - 3.0 for a majority of patients)
  - ☐ If on warfarin, INR daily until therapeutic range reached, **then** INR q _____ days
- ☐ _____ Dose:_____mg Route: _____ Frequency: q_____ h

Bladder Management

- ☐ Avoid indwelling catheter
- ☐ Monitor patient for urinary incontinence or retention
  - ☐ If patient does not void spontaneously within 6 hours of admission, perform bladder scan
  - ☐ If bladder scan volume is greater than 300 mL, then catheterize in and out
  - ☐ Repeat bladder scan q4-6h
- ☐ Implement bladder-training program for patients with urinary incontinence or retention
- ☐ _____

Bowel Management

- ☐ Monitor patient for persistent constipation and bowel incontinence
- ☐ Implement bowel management program for patients with persistent constipation and bowel incontinence
- ☐ _____

Nausea/Vomiting Management

- ☒ Assess patient for presence of nausea with vitals and PRN
- ☐ dimenhy**DRINATE** 25 – 50 mg PO/NG/IV/PR q4h PRN (use lowest possible for effect for elderly/frail)
- ☐ dimenhy**DRINATE** 12.5 – 25 mg PO/NG/IV/PR/IM q4h PRN (use lowest possible for effect for elderly/frail)
- ☐ ondansetron 4 mg PO/NG/IV q8h PRN. If not effective after 1 dose, notify MD
- ☐ _____

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Pain/Fever Management

Consider lowering the maximum daily dose of acetaminophen to 3,000 mg or less in 24 hours or, in patients at risk of hepatotoxicity with high doses e.g. chronic alcohol users, established liver disease, chronically malnourished*

☒ If acetaminophen ordered, **max from all sources _____ mg in 24 hours (max 3,000 or 4,000 mg in 24 hours)**

☐ acetaminophen 650 mg PO/NG/PR q4h PRN for pain or if T greater than/equal to 37.5°C

☐ _____

Patient and Family Education

☒ Assess patient and family for learning needs and readiness for information

☒ All team members to provide education to patient, family and caregivers throughout admission

☒ Provide discharge education and skills training to patient, family, and caregivers

Discharge Plan

☐ Initiate discharge planning process

☐ Expected Discharge to:

- ☐ Home or place of residence
- ☐ Repatriate/transfer to other acute care: _____
- ☐ Inpatient rehabilitation
- ☐ Long Term Care
- ☐ Complex Continuing Care
- ☐ Palliative Care
- ☐ _____

☐ Expected Discharge Referrals:

- ☐ Stroke Prevention Clinic
- ☐ Home Care Services
- ☐ Outpatient rehabilitation
- ☐ Community-based rehabilitation
- ☐ Palliative Care Team/Advanced Care Planning/ End-of-Life specialist

Additional Orders

☐ _____

☐ _____

☐ _____

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