SASKATCHEWAN REGISTERED NURSES' ASSOCIATION

RNs WITH ADDITIONAL AUTHORIZED PRACTICE
CLINICAL DECISION TOOL
AUGUST 2017

MIGRAINE HEADACHES ADULT

DEFINITION

- A disorder (sometimes familial) marked by periodic, often unilateral, pulsatile headaches that begin in childhood or early adult life and tend to recur with diminishing frequency in later life.
- Recurrent headaches due to vascular disturbances. Symptoms are similar to tension headaches and manifestations of individual migraine attacks vary between and among individuals.

IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- First or worst headache of the client's life especially if > 50 years of age
  - Consider central nervous system (CNS) infection, intracranial hemorrhage
- Thunderclap headache in a client of any age (may indicate a subarachnoid hemorrhage)
- Focal neurologic signs (not typical aura)
  - Consider arteriovenous malformation, collagen vascular disease, intracranial mass lesion
- Headache triggered by cough or exertion, or while engaged in sexual intercourse
  - Consider mass lesion, subarachnoid hemorrhage
- Headache with change in personality, mental status, level of consciousness
  - Consider CNS infection, intracerebral bleed, mass lesion
- Neck stiffness or meningismus
  - Consider meningitis
- New onset of severe headache in pregnancy or postpartum
- Papilledema
- Systemic illness with headache (e.g., fever, rash)
- Tenderness over temporal artery
- Worsening pattern
- New headache type in a client with:
  - Cancer
  - HIV
  - Lyme disease

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CAUSES

- Constriction and dilatation of intracranial and extracranial arteries.

PREDISPOSING AND RISK FACTORS

- Female
- Age
  - First migraines usually occur during adolescence but can occur at any age, usually before 40 years of age.
- Family history of migraine
- Individual attacks may be triggered by specific foods (e.g., chocolate, cheese, smoked meats, alcohol), missing meals, menstrual cycle, oral contraceptives, fatigue, excessive sleep, stress or relief of stress, excessive or flickering lights
- Associated with epilepsy, hereditary hemorrhagic telangiectasia, Tourette's syndrome, ischemic stroke, and depression

HISTORY

- Most headache diagnoses are based entirely on the client history. Only rarely does physical examination provide clues to the diagnosis.
- For the client presenting with headache for **the first time** or **with a significant change in headache pattern** elicit the following:
  - Headache onset (thunderclap, association with head or neck trauma), previous attacks (progression of symptoms), duration of attacks (< 3 hours, > 4 hours, continuous), and days per month or week with headache
  - Pain location (unilateral, bilateral, frontal, periorbital, occipital; associated neck pain)
  - Headache associated symptoms (e.g., nausea, vomiting, photophobia, phonophobia, osmophobia, conjunctival injection, rhinorrhea)
  - Chills, tremors, and/or diaphoresis
  - Relationship of headache to possible precipitating factors (e.g., stress, posture, cough, exertion, straining, neck movement, jaw pain, regular perimenstrual or periovulatory timing, etc.)
  - Headache severity and effect of the headaches on work and family activities

  - Acute and preventive medications tried in the past, and response to these medications and side effects
- Prodrome (e.g., irritability, mood swings, changes in energy level, food cravings, fluid retention)
- Enquire about aura (including visual defects and sensory losses). Usually precedes headache, lasts approximately 5-30 minutes, recedes with onset of headache (although sometimes aura and headache may overlap); 80% of migraines occur without aura.
  - By definition, aura associated with migraine lasts 60 minutes or less. Therefore, headache with aura-like symptoms should not be assumed to be benign or a primary headache when aura-like symptoms are present for more than 60 minutes.
- Presence of co-existent conditions that may influence treatment choice (e.g., insomnia, depression, anxiety, hypertension, asthma, and history of heart disease or stroke)

PHYSICAL FINDINGS

- Neurological assessment
  - Neurologic abnormalities require evaluation and are particularly concerning in association with acute headaches. Abnormalities are one of the best predictors of CNS pathology.
  - A focal neurologic deficit should not be attributed to migraine headache unless a similar pattern has occurred with a previous migraine.
  - Abnormal findings on examination can be pronounced, such as meningismus or unilateral vision loss, or subtle, such as extensor plantar response or unilateral pronator drift.
  - Obtundation or confusion suggests a dangerous headache because these signs do not occur with benign or primary headache.
  - Clients with headache and fever, papilledema, or severe hypertension (systolic pressure greater than 180 mm Hg or diastolic pressure greater than 120 mm Hg) require evaluation for CNS infection and increased intracranial pressure.
- Absence of signs of head trauma
- Palpate muscles of mastication for tender points

- The following findings may be present in a client experiencing migraine:
  - Cranial/cervical muscle tenderness
  - Horner syndrome (e.g., relative miosis with 1-2 mm of ptosis on the same side as the headache)
  - Conjunctival injection
  - Tachycardia/bradycardia
  - Hypertension/hypotension
  - Hemisensory or hemiparetic neurologic deficits (e.g., complicated migraine)
  - Adie-type pupil (e.g., poor light reactivity, with near dissociation to light)

DIFFERENTIAL DIAGNOSIS

- Migraine with aura
- Migraine without aura
- Cluster headache (refer to Appendix A for additional information)
- Tension type headache (refer to Appendix A for additional information)
- Mass lesion
- Intracerebral hemorrhage, arteriovenous malformation, subarachnoid hemorrhage, subdural hemorrhage
- Cerebral venous thrombosis
- Spontaneous internal carotid artery dissection
- Temporal arteritis
- Meningitis
- Acute angle closure glaucoma

COMPLICATIONS

- Chronic migraine
- Migraine triggered seizures
- Migrainous infarction (stroke with migraine)
- Persistent aura (e.g., 30-60 minutes) without infarction
- Ischemic stroke may occur as a rare, but serious, complication of migraine
- In migraines with aura, hemorrhagic stroke is also a possible, but rare, complication. Risk factors for stroke include the following:
  - Migraine with aura

  - Female
  - Cigarette smoking
  - Estrogen use
- Family and marital dysfunction if headaches frequent
- Absenteeism from work or school
- Depression
- Drug addiction (e.g., to prescription opioid analgesics)

INVESTIGATIONS AND DIAGNOSTIC TESTS

- None
  - Neuroimaging is only indicated in clients who present with signs or symptoms of dangerous headache because they are at increased risk of intracranial pathology.

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MAKING THE DIAGNOSIS

- N.B. not all headaches are migraines

Migraine with Aura
At least two episodes fulfilling the following criteria: • Aura consisting of at least one of the following, but no motor weakness: fully reversible visual symptoms including positive features (e.g., flickering lights, spots or lines) and/or negative features (e.g., loss of vision); fully reversible sensory symptoms including positive features (e.g., pins and needles) and/or negative features (e.g., numbness); fully reversible dysphasic speech disturbance • At least two of the following: homonymous visual symptoms and/or unilateral symptoms; at least one aura symptom develops gradually over 5 or more minutes and/or different aura symptoms occur in succession over 5 or more minutes; each symptom lasts at least 5 minutes, but no longer than 60 minutes • A headache that fulfills the criteria for migraine without aura and begins during the aura or follows the aura within 60 minutes • Headache not attributed to another disorder
Migraine without aura
At least five episodes fulfilling the following criteria: • Headache episodes lasting 4-72 hours (untreated or unsuccessfully treated) • Headache has at least two of the following characteristics: unilateral location, pulsating quality, moderate or severe pain intensity, aggravated by (or causes avoidance of) routine physical activity such as walking or climbing stairs • During the headache, the client experiences at least one of the following: nausea or vomiting; photophobia, phonophobia • Headache is not attributed to another disorder

MANAGEMENT AND INTERVENTIONS

Goals of Treatment

- Therapy will vary depending on the severity of each attack.
- Identify and modify trigger factors.
- Relieve symptoms.

- Prevent recurrences.

Appropriate Consultation

- Symptoms/presentations in the Immediate Consultation Required in the Following Situations section.
- Consult a physician/RN(NP) if an acute attack is moderate to severe (on a pain scale of 0-10, pain ≥ 5) and is unresponsive to first-line drug therapy, or if attacks recur and are not controlled with current prophylactic regimen.

Non-Pharmacological Interventions

- Rest in dark, quiet room
- Ice packs
- Pressure massage of the scalp
- Relaxation therapy
- Cognitive behavioural therapy (e.g., stress management training)
- Nothing by mouth temporarily if vomiting is significant

Pharmacological Interventions

- Assess state of hydration and consider IV access for hydration and medication administration.
  - Normal saline 500 mL bolus x 1 dose may be beneficial
- Non-steroidal anti-inflammatory drugs (NSAIDs), including ASA, acetaminophen, and triptans, are the primary medications for acute migraine treatment. A triptan should be used when NSAIDs are not effective. Advise clients to take their medications early in their migraine attack, where possible, to improve effectiveness. For severe migraine attacks, consider providing an additional rescue medication if the client's usual acute medication does not work consistently with every attack.
- Acute management of mild to moderate attack
  - Acetaminophen 1000 mg orally q6h prn (maximum dose 4 g per day)
    And/or
  - Naproxen 500 mg orally bid
    Or
  - Ibuprofen 600-800 mg orally tid

Or

- Toradol (Ketorolac) 30 mg IM q6h
  And/or
- Metoclopramide 5-10 mg orally or 10 mg IM or IV q6-8h prn not to exceed 30 mg per day
  Or
- DimenhyDRINATE (Gravol), 25-50 mg IM q4-6h prn

- Acute management of moderate to severe attack
  - Medications as used for mild to moderate plus triptan
  - A consult with a physician/RN(NP) is required
  - Triptans should be avoided in clients with ischemic heart disease, Prinzmetal's (vasospastic) angina, uncontrolled hypertension, stroke or pregnancy.
- NSAIDs are contraindicated in pregnant clients.
- Consult a physician/RN(NP) if headache frequency meets criteria for prophylactic therapy.
  - Migraine prophylactic therapy should be considered in clients whose migraine attacks have a significant impact on their lives despite appropriate use of acute medications and trigger management/lifestyle modification strategies.

Client and Caregiver Education

- Counsel client/caregiver about appropriate use of medications (dose, frequency, compliance, etc.).
- Recommend that the client keep a diary to record headache characteristics, use of medications, potential triggers and response to therapy.
- Explain expected disease course and prognosis.
- Recommend regular rest and activities, appropriate diet.
- Help the client to identify trigger factors and then to attempt to reduce or eliminate them.
- Help the client to identify and avoid other causative factors (e.g., coffee, chocolate, alcohol, certain foods, oral contraceptives, nuts, cheese).
- Cognitive restructuring to avoid catastrophic/negative thinking.
- Communication skills to talk effectively about pain with family and others.

Monitoring and Follow-Up

- Encourage regular follow-up until headaches are effectively controlled; frequency of follow-up should be individualized to each person's unique circumstances.

Referral

- Symptoms/presentations in the Immediate Consultation Required in the Following Situations section.
- Arrange follow-up with a physician to discuss prophylactic therapy if headaches are frequent or severe enough to interfere with daily activities.
- Referral for a neurologic examination may be needed if optimum first-line therapy and prophylaxis fail to control attacks.
- Refer to/consult with physician/RN(NP) if seeing client < 18 years of age.

DOCUMENTATION

- As per employer policy

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Appendix A
Classifications of Headaches

Cluster Headache
o At least five episodes fulfilling the following criteria: ▪ Severe or very severe unilateral orbital, supraorbital, or temporal pain lasting 15-180 minutes if untreated ▪ Headache is accompanied by at least one of the following ipsilateral autonomic symptoms: conjunctival injection or lacrimation, nasal congestion or rhinorrhea, eyelid edema, forehead and facial sweating, miosis or ptosis, restlessness or agitation ▪ Headache episodes occur from 1 every other day - 8 per day ▪ Not attributable to another disorder o Episodic cluster headache ▪ Fulfills all of the above criteria ▪ At least two cluster periods lasting 7-365 days and separated by pain-free remissions of more than 1 month o Chronic cluster headache ▪ Fulfills all of the above criteria ▪ Episodes recur for more than 1 year without remission periods or with remission periods lasting less than 1 month
Tension-type Headache
Infrequent o At least ten episodes occurring fewer than 1 day per month on average (fewer than 12 days per year) and fulfilling the following criteria: ▪ Headache lasts 30 minutes - 7 days ▪ Headache has at least two of the following features: bilateral location, pressing or tightening (nonpulsating) quality, mild or moderate intensity, not aggravated by routine physical activity such as walking or climbing stairs ▪ Both of the following: no nausea or vomiting (anorexia may occur), either photophobia or phonophobia Frequent o At least ten episodes occurring on more than 1 but fewer than 15 days per month for at least 3 months and fulfilling all of the criteria for infrequent episodic tension-type headache.

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This SRNA Clinical Decision Tool (CDT) exists solely for use in Saskatchewan by an RN with additional authorized practice as granted by the SRNA. The CDT is current as of the date of its publication and updated every three years or as needed. A member must notify the SRNA if there has been a change in best practice regarding the CDT. This CDT does not relieve the RN with additional practice qualifications from exercising sound professional RN judgment and responsibility to deliver safe, competent, ethical and culturally appropriate RN services. The RN must consult a physician/RN(NP) when clients' needs necessitate deviation from the CDT. While the SRNA has made every effort to ensure the CDT provides accurate and expert information and guidance, it is impossible to predict the circumstances in which it may be used. Accordingly, to the extent permitted by law, the SRNA shall not be held liable to any person or entity with respect to any loss or damage caused by what is contained or left out of this CDT.