Osteoarthritis Disorder Algorithm
Please review definition and pathophysiology when using the algorithm

Assess for the presence of risk factors, both major and minor or contributing

- Obesity (increases mechanical stress) (Felson, 1988)
- Repetitive use (ie, jobs requiring heavy labor and bending) (Felson, 2004)
- Previous trauma (ie, posttraumatic OA)
- Infection
- Crystal deposition
- Acromegaly
- Previous rheumatoid arthritis (ie, burnt-out rheumatoid arthritis)
- Heritable metabolic causes (eg, alkaptonuria, hemochromatosis, Wilson disease)
- Hemoglobinopathies (eg, sickle cell disease, thalassemia)
- Neuropathic disorder leading to a Charcot joint (eg, syringomyelia, tabes dorsalis, diabetes)
- Underlying orthopedic disorders (eg, congenital hip dislocation, slipped femoral capital epiphysis)
- Disorders of bone (eg, Paget disease, avascular necrosis)

Source: Osteoarthritis at Emedicine Retrieved at http://www.emedicine.com/pmr/TOPIC93.HTM#section~Clinical

Are Risk Factors Present?

NO

Monitor for presence of signs/symptoms:
Insidious throbbing joint pain relieved with rest
Over time pain is present at rest
Warmth, effusion, pt tenderness, limited ROM and crepitus

Symptom Box

YES

Are positive findings present?

Stable

Initiate client education for Health Seeking Behaviors to identify:
2. exercise moderately, regularly and pace yourself to avoid injury
3. follow precautions for lifting and posture and get assistance if necessary
4. monitor for s/s of joint pain and call MD when present
5. Avoid repetitive stress injuries
6. Wear safety equipment to minimize risk for injury

Unstable

Follow collaborative plan of care for PC: joint effusion

Initiate the plan of care for a Risk for Ineffective Therapeutic Regimen management:
- Teach client about disease process including teaching from box 1
- Lifestyle modifications such as exercise and weight reduction, is a core component of the management of osteoarthritis
- Encourage a healthy diet with adequate Vit C and D
- Encourage low-impact exercises if OA affects weight-bearing joints
- Teach use of assistive devices if needed
- Refer to PT, OT and recreational therapy
- Instruct in therapeutic and adverse effect of medication therapy; Tylenol, NSAID, Cox 2 inhibitors, followed by narcotic analgesic for acute pain
- Encourage use of warm soaks for pain
- Clients may require procedures to correct joint damage; Arthroscopic procedures, Intraarticular injections and joint replacement as the disease progresses
- report s/s of joint effusion to physician for further evaluation
- Periodic follow-up
Collaborative Problem Template

OUTCOMES/BENCHMARKS:
No joint edema
No point tenderness of joint
Full range of motion

Potential Complication: Joint effusion

<table>
<thead>
<tr>
<th>ASSESS s/s of the acute complication</th>
<th>Monitor for presence of the disorder</th>
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</thead>
<tbody>
<tr>
<td>Joint pain</td>
<td>Monitor effusion by performing fluid ballottement of affected joint</td>
</tr>
<tr>
<td>Stiffness</td>
<td>monitor X-ray result for the presence of joint narrowing an deformity</td>
</tr>
<tr>
<td>Swelling</td>
<td>monitor results of joint fluid aspiration</td>
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<tr>
<td>Limited ROM</td>
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Assess for contributing factors:
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- Repetitive use (e.g., jobs requiring heavy labor and bending) (Felson, 2004)
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<td><em>The nurse checks labs and diagnostic tests that confirm the presence of contributing factors</em></td>
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Additional assessment includes monitoring from presence of complications of an exacerbation of the disorder

*The nurse checks Vital signs, labs and diagnostic tests that confirm the presence of a complication of the disorder*

DO
Perform nursing actions that relief of pain, restoration or maintenance of joint function, and prevention of joint damage
administer analgesic as prescribed and monitor effectiveness
provide joint rest for relief of pain as prescribed instruct in use of crutches, a cane, splints, or other orthotic devices encourage avoidance of aggravating events provide heat/cold applications as prescribed Teach the patient joint preservation techniques Provide nutritional services, PT, OT consult to assist client in strategies to maintain ideal body weight, activity and employment Assist in Intraarticular injections as performed and monitor client’s response
Monitor for adverse effects of medication therapy
  *Bleeding, GI ulceration, hypertension, renal insufficiency, constipation especially in clients of advanced age and comorbidities*

CALL
- Worsening pain refractory to medication, worsening edema to affected joint, newly developed deformity
- Treat as an acute Musculoskeletal injury: protect, rest, ice, elevation and call MD

Susan McCabe revised 10/1/08