Osteoarthritis and LTCI

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Objectives

- Discuss osteoarthritis as a multifocal disease
- Review domains of assessment including pain, patient self-report, functional status and joint imaging
- Recognize underwriting considerations including risks and co-morbidities
- Examine impact of osteoarthritis on disability and LTCI claims
Osteoarthritis

- Highly prevalent among older adults
  - Prevalence estimates vary widely
  - Based on X-ray, symptoms, age, sex, joint
- Strongly linked to late-life disability
- Second to depression as most disabling condition
- Major cause of musculoskeletal pain
- Public health issue
- Significant economic burden: 7x that of RA
- Patient concerns: falling, loss of independence
- Impact of rising incidence of obesity
Obesity Trends* Among U.S. Adults

BMI ≥ 30, or ~ 30 lbs. overweight for 5'4" person

CDC’s Behavioral Risk Factor Surveillance System (BRFSS) 2004 Data
Osteoarthritis

- Traditionally thought to be noninflammatory
- Recent studies show synovitis
- Inflammatory markers (CRP, IL-6) higher in patients with OA knee
- High levels of soluble TNF-α associated with lower physical function, increased OA symptoms, worse knee radiograph scores in older obese adults with OA
- Does not invariably deteriorate; when it does social as well as biological factors may be important*

* Peters British J General Practice 2005

Pennix Journal of Rheumatology 2004
Pain Assessment

- Assess severity, frequency, number and location of pain sites, function
- More consistently disabling with age, as measured by interference with function
- Influenced by coping strategies and mood
- Pain intensity and physical impairment only partly predict daily functional status
- Pain-related fear and self reported pain intensity show strong association with daily functioning
Patient-Related Fear

- Growing evidence supporting pain-related fear and functional disability

- “Activity avoidance” *
  - Belief that activity may result in reinjury or increased pain

- “Somatic focus” *
  - Belief in underlying somatic-medical problem

- Level of pain and pain related fear associated with functional limitations

* Heuts et al International Association for the Study of Pain 2004
OA Pain in Older Persons

- Systematic review relating OA pain and QOL
  - lack of studies in persons >75yo

- North Staffordshire Osteoarthritis Project
  - Recent pain, # and location, interference with function
  - 4 week prevalence 72.4%
  - Higher in females
  - Median # sites: 6; 12.5%: widespread
  - Interference with daily activities: 38.1%
  - Pain interference with daily living increases with age
    - Thomas, Peat et al International Study of Pain, 2004
Functional Status:
Self-report vs Performance Measures

- **Self-report questionnaires:** patient centered, subjective
  - WOMAC (Western Ontario & McMaster Universities Osteoarthritis Index)
    - Pain, stiffness, physical function
  - Health Assessment Questionnaire
  - Arthritis Impact Measurement Scales

- **Patient observation:** performance based, objective
  - Functional Independence Measure
  - Klein-Bell ADL Scale
Functional Status: 
Self-report vs Performance Measures

- Methods of disability assessment
  - Self-report, proxy reports, clinical judgment, home performance-based assessment
- Study: 26 tasks; 4 domains of daily living
  - 57 community dwelling women (>70yo)
- Disability estimates
  - not interchangeable with in-home task performance
- Self-report & proxy report
  - Higher concordance with performance
  - Rate of discordance 31%-54%
  - Least concordance in personal care and greatest in functional mobility and physically oriented IADL

Rogers, Holm, et al Arthritis & Rheumatism 2003
Functional Status: Self-report vs Performance Measures

- Relationship between self-report and performance-related measures
- Validity of timed tests
  - Lower Extremity Functional Scale (LEFS)
  - Self-paced walk
  - Timed up-and-go
  - Stair test
- 3 domains: time, pain, exertion
- Performance based on time alone does not adequately represent functional status
- Composite based on time, pain & exertion better

Stratford, Kennedy, et al Arthritis & Rheumatism 2003
OA of Knee

- Associated with mobility disability and with disability progression
- Affects 33% of all older adults in US
- Self-reported task difficulty preceded by task modification*
- Preclinical disability+
  - Associated with lower knee extensor strength, higher body weight and pain severity
- Quadriceps weakness
  - strongest single predictor of functional limitation
  - Implicated in development and progression
- Obesity: modifiable risk factor

*Women’s Health and Aging Study (WHAS)II. 2000
+ Ling et al Journal of Rheumatology. 2003
Joint Imaging in OA of Knee

- Substantial risk of progression in clinical OA patients with radiographic abnormalities
  - 50% of patients with JSN=1 progress to complete joint loss in 12.03 years
  - 50% of patients with JSN=2 progress to complete joint loss in 7.44 years
- Pain and disability not well correlated with JSN
- Osteophytes, limited additional value with JSN=2
- Contralateral findings useful only if JSN=0
Underwriting Concerns

- **Presence and severity of pain**
  - Single most important factor in shaping perception of disability

- **Disability**
  - Highest when pain and deformity interact

- **Co-morbidities**
  - Depressive symptoms
  - Anxiety
  - Lowered pain threshold
  - Obesity

*Creamer et al British Society for Rheumatology 2000*
Questions?

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