

Clinical Prediction Rules for the Hip Disorders: Are We up to the Mark?

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Abstract

This letter to editor brings into notice the dearth of research in the area of clinical prediction rules (CPR) and clinical decision rules (CDR) on examination and treatment of orthopedic hip disorders. There were three studies that reported CPRs/CDRs which are described in this letter. There was one study each on hip pain/osteoarthritis, septic arthritis versus transient synovitis, and nursing home stay after hip fracture.

Keywords: Hip Disorders; Physical Examination; Predictive Validity; Orthopedic Examination.

Dear Sir,

This letter to editor brings into notice the dearth of research in the area of clinical prediction rules (CPR) and clinical decision rules (CDR) on examination and treatment of orthopedic hip disorders.

Hip pain/ Osteoarthritis

Sutlive et al [1] determined the diagnostic accuracy of common clinical examination items and constructed a preliminary CPR for diagnosing hip osteoarthritis (OA) in individuals with unilateral hip pain in their prospective cohort study of 72 patients of whom 21 had radiographic evidence of hip OA. The CPR comprised of 5 examination variables, and if at least 4 of 5 variables were present, the positive LR was equal to 24.3 for increasing the probability of hip OA to 91%.

Septic arthritis versus Transient Synovitis

Kocher et al [2] validated a previously published CPR for differentiating between septic arthritis (SA) and transient synovitis (TS) of the hip in 51 SA and 103 TS children who were operationally defined on

the basis of the white blood-cell count in the joint fluid, the results of cultures of joint fluid and blood, and the clinical course. The four independent predictors of septic arthritis of the hip (a history of fever, non-weight-bearing, an erythrocyte sedimentation rate of 40 mm/hr, and a serum white blood-cell count of >12,000 cells/cu.mm were identified and reported.

Prolonged nursing home residence after hip fracture

Steiner et al [3] developed (DS) and validated (VS) a CPR for nursing home residence 6 months after a hip fracture in two of their prospective cohort studies, on 344 and 239 community-dwelling hip fracture elderly patients respectively from 92 and 11 healthcare units respectively. Whilst 18.7% of patients in the DS resided in nursing homes 6 months after hip fracture, the four independent risk factors identified for institutionalization were (1) being unmarried, (2) incontinence, (3) dependence in ambulation, and (4) cognitive impairment. In the VS, 6.1% of patients resided in nursing homes after 6 months, with a range from 50.0% of patients with four risk factors to 0% of those with no risk factors.

There were three studies that reported CPRs/CDRs which are described in this letter. There was one study each on hip pain/osteoarthritis, septic arthritis versus transient synovitis, and nursing home stay after hip fracture.

References

1. Sutlive TG, Lopez HP, Schnitker DE, Yawn SE, Halle RJ, Mansfield LT, et al. Development of a clinical prediction rule for diagnosing hip osteoarthritis in individuals with unilateral hip pain. *J Orthop Sports PhysTher.* 2008; 38(9): 542–50.
2. Kocher MS, Mandiga R, Zurakowski D, Barnewolt C, Kasser JR. Validation of a clinical prediction rule for the differentiation between septic arthritis and transient synovitis of the hip in children. *J Bone Joint Surg Am.* 2004; 86-A(8): 1629–35.
3. Steiner JF, Kramer AM, Eilertsen TB, Kowalsky JC. Development and validation of a clinical prediction rule for prolonged nursing home residence after hip fracture. *J Am Geriatr Soc.* 1997; 45(12): 1510–4.

