

Dispenced prescriptions of analgesics prior to entering an osteoarthritis care program. a national registry linkage study

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DISPENCED PRESCRIPTIONS OF ANALGESICS PRIOR TO ENTERING AN OSTEOARTHRITIS CARE PROGRAM – A NATIONAL REGISTRY LINKAGE STUDY

ABSTRACT

Purpose:

To investigate the number of individuals with dispensed prescriptions for analgesics in a cohort 3 years prior to commencing core interventions for symptomatic hip and knee OA (BOA cohort) compared to a matched control cohort. This to benchmark against recommendations from the national guidelines for OA.

Methods:

An observational national registry linkage study. The BOA cohort (n=72069) included patients who were registered in the BOA national registry on commencement of core interventions for hip and knee OA between 2008 and 2016. A reference cohort (n=72069) from the Swedish Population Register was formed based on matching the BOA cohort to control references (1:1) regarding birth year, sex and residence. Dispensed prescriptions for the BOA cohort 3 years prior to core interventions and for the matched control cohort were linked to from the Swedish Prescribed Drug Register. Proportions and chi-squares statistics were used to describe and compare cohorts with respect to national guidelines for OA.

Results:

1. Swedish national guidelines released 2012 recommend that individuals with symptomatic hip or knee osteoarthritis (OA) receive core interventions such as patient education, exercise and weight management before considering adjunct pharmacological interventions. Before compared to after 2012, prescriptions for analgesics significantly reduced ($p < 0.001$) within the BOA cohort from 80.1% (n=6107/7625) to 74.6% (n=48078/64444) while for the control cohort, prescriptions were similar before 49% (n=3734/7625) and after 48.7% (n=31398/64444). The proportional difference in changes between the BOA and control cohorts was statistically significant ($p < 0.001$).
2. Swedish guidelines recommend against the prescription of glucosamine for OA. Before compared to after 2012, prescriptions significantly reduced ($p < 0.001$) within the BOA cohort from 15.2% (1159/7625) to 4.4% (n=2837/64444) and for the control cohort from 3.8% (n=291/7625) to 1.2% (n=790/64444). The proportional difference in reductions between the BOA and control cohorts was however statistically non-significant ($p = 0.178$).
3. Swedish guidelines recommend against the prescription of Hyaluronic acid injection for OA. Before compared to after 2012, prescriptions significantly reduced ($p < 0.001$) within the BOA cohort from 2.2% (n=168/7625) to 0.5% (n=340/64444), while for the control cohort, prescriptions were almost non-existent before (0.2%, n=12/7625) and after 2012 (0.1%, n=61/64444). The proportional difference in reductions between the BOA and control cohorts was statistically significantly larger for the BOA cohort ($p = 0.004$).
4. Swedish guidelines contain a weak-moderate priority recommendation for NSAIDs as an adjunct treatment when core interventions have not given satisfactory results. Before compared to after 2012, prescriptions significantly reduced ($p < 0.001$) within the BOA cohort from 66.5% (n=5069/7625) to 64.9% (n=37052/64444), while for the control cohort prescriptions significantly increased from 33.5% (n=2558/7625) to

- 35.1% (n=20062/64444). The proportional difference in changes between the BOA and control cohorts was statistically significant (p=0.006).
5. Swedish guidelines contain a weak priority recommendation for paracetamol as an adjunct treatment when core interventions have not given satisfactory results. Before compared to after 2012, prescriptions significantly reduced (p<0.001) within the BOA cohort from 63.4% (n=3822/7625) to 61.5% (n=31810/64443), while for the control cohort prescription significantly increased from 36.6% (n=2202/7625) to 38.5% (n=20450/64444). The proportional difference in changes between the BOA and control cohorts was statistically significant (p=0.003).
 6. Swedish guidelines contain a weak priority recommendation for weak opioids as an adjunct treatment when core interventions have not given satisfactory results. Before compared to after 2012, prescriptions significantly reduced (p<0.001) within the BOA cohort from 31.9% (n=2434/7625) to 25.1% (n=16174/64444), while for the control cohort prescription significantly decreased from 20.1% (n=1531/7625) to 17% (n=10963/64444). The proportional difference in decreases between the BOA and control cohorts was statistically significantly larger in the BOA cohort (p=0.032).
 7. Swedish guidelines contain a low priority recommendation for strong opioids as an adjunct treatment when core interventions or other pharmacological interventions have not given satisfactory results. Before compared to after 2012, prescriptions significantly increased (p<0.001) within the BOA cohort from 4.5% (n=343/7625) to 9.4% (n=6087/64444), while for the control cohort prescriptions significantly increased from 4.7% (n=362/7625) to 8.8% (n=5647/64444). The proportional difference in increases between the BOA and control cohorts was not statistically significantly different.

Conclusions:

In discordance with national guidelines for OA, prescription medications are commonly provided as first line treatment for 80% of routine care cases in the BOA cohort, which is 30% more than the control cohort. Since the release of the guidelines in 2012, this level has reduced by 5.5% in the BOA cohort and future efforts are required to promote first line core interventions. Recommendation against the prescription of glucosamine or hyaluronic acid injection for OA have good compliance in routine care. Approximately 65% of prescriptions in the BOA cohort are for NSAIDs and paracetamol, approximately 30% more than the control cohort with little change since the release of national guidelines. The prescription of weak opioids has reduced but there is a trend of increased prescription of strong opioids which is important to reduce in the future.