Opioid Use among Patients with Early Inflammatory Arthritides Compared to the General Population

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Drug therapy outcomes in inflammatory arthritis (IA) have improved during the past decade. Still, arthritis pain management remains a great challenge. Increasing use and abuse of prescription opioids has caused worldwide concern. However, only a few previous studies have reported in IA patients' opioid use.

The aim of our study was to assess to what extent the worldwide opioid epidemic affects Finnish patients with early inflammatory arthritis.

The data for this work came from the registers maintained by the Social Insurance Institution of Finland. We collect all incidents of patients with newly onset seropositive and seronegative rheumatoid arthritis (RA) and undifferentiated arthritis (UA) between 2010 and 2014. For each case, 3 general population controls were matched according to age, sex, and place of residence. Patients' and controls' opioid purchases were evaluated between 2009 to 2015.

A total of over 12,000 patients were identified. The largest diagnosis group was seropositive RA with over 6000 individuals. The number of patients in the other groups was just under 3000 each. UA patients were about 8–9 years' younger diagnosis than patients with RA.

In this figure, the center of the horizontal axis represents the index date, which is the date when the patient received the decision of special reimbursement for antirheumatic drugs. Opioid purchases were evaluated 1 year before and after index date. We further divided this observation time into 3-month periods.

Here we see that the opioid purchases of seropositive RA patients gradually increased and peaked during the last quarter before the index date, but declined rapidly after the index date when antirheumatic medication was presumably initiated. A similar drop was not seen in the controls. One year after the diagnosis, RA patients still use more opioids than the controls.

The same progress was seen in seronegative RA and also in patients with UA. In this UA group, the decrease in opioid purchases was less marked after diagnosis than RA, although these patients were significantly younger than RA patients. Instead, in the general population, opioid purchases became more common with rising age.

Here we show the risk ratio of opioid purchases among the patients 1 year before and 1 year after the index date compared to the controls. Patients with UA were up to 4 times more likely to be opioid purchasers than the controls during the last quarter before the index date, and still a 2.5-point difference remain during the whole first year after the index date.

From this table, we see that at least 1 opioid purchase was done by 23–27% of the patients 1 year before, and by 15%–20% of the patients 1 year after the index date.

We also investigated long-term opioid use. The calendar year was divided into 3-month periods. Long-term users had opioid purchases at least in 3 of these periods per year. We found that during the first year after the index date, patients with seropositive RA were 1.3-times, patients with seronegative RA were 1.9-times, and UA patients 3.5-times more likely to be long-term opioid users than their controls form the general population.

Our analysis included all opioids from mild to strong. The majority of purchased opioids were mild opioids, like codeine and tramadol, in all IA diagnosis groups and among controls during the 2-year observation period. Moderate and strong opioids were purchased less frequently.

To conclude, IA patients are more likely to buy opioids 1 year before and 1 year after the diagnosis than the general population. Opioid purchases peak just before the diagnosis of IA, but decrease rapidly after that, especially in seropositive RA. Compared to some Western countries, the use of opioids for arthritis pain among newly diagnosed Finnish IA patients was less common, and it concentrated on mild opioids.