

Daily average consumption of oxycodone CR and oxymorphone ER before and after the introduction of reformulated oxycodone CR

R. Amy Puenpatom¹, Kent Summers¹, Robert Garvin¹, Larry Ma¹, Sheryl L. Szeinbach², Rami Ben-Joseph¹

¹Endo Pharmaceuticals Inc., Chadds Ford, PA, USA, ²Ohio State University, College of Pharmacy, Columbus, OH, USA

Purpose

Oxycodone controlled release (CR) and oxymorphone extended release (ER) are two commonly prescribed, oral, long-acting opioids that are Food and Drug Administration-approved for twice-daily dosing. Reformulated oxycodone CR was released in August 2010 with a matrix designed to be crush-resistant. The objective of the study was to compare Daily Average Consumption (DACON) for oxymorphone ER and traditional oxycodone CR before the release of reformulated oxycodone CR and the DACON of oxymorphone ER, traditional oxycodone CR, and reformulated oxycodone CR after the release of reformulated oxycodone CR.

Method

This was a retrospective database analysis of health insurance claims data from January 2010 to March 2011. Data from the Thomson Reuters MarketScan[®] database (Thomson Reuters, Ann Arbor, MI) were used to determine monthly DACON of oxymorphone ER, traditional oxycodone CR, and reformulated oxycodone CR dispensed to patients aged ≥ 18 years. DACON for each prescription was calculated by dividing the total number of tablets dispensed by days supplied. Patients with DACON less than one or more than 500 were excluded. Sensitivity analyses were conducted using quantity dispensed for exclusion criteria. Overall monthly DACONs were calculated for all doses combined, the highest dosage strengths (oxycodone CR 80 mg and oxymorphone ER 40 mg), and for all lower dosage strengths, respectively. Outliers of DACON by each drug were removed using the 3-standard deviation cutoff from mean method. Data were summarized using descriptive statistics.

Results

The study sample consisted of 411,404 oxycodone CR prescriptions (traditional or reformulated) dispensed to 76,123 patients and 62,656 oxymorphone ER prescriptions for 11,931 patients after excluding high DACON outliers. Reformulated oxycodone CR accounted for more than 50% of oxycodone CR tablets dispensed in September 2010, one month after its introduction, and its share steadily increased to 95% by March 2011. Over the 15-month observation period, the overall mean DACON values for all dosage strengths were approximately .4 tablets per day higher for oxycodone CR (traditional or reformulated, mean 2.9, range 2.8 to 2.9) than for oxymorphone ER (mean 2.5, range 2.4 to 2.5). Before the introduction of reformulated oxycodone CR, the differences of mean DACONs between oxycodone CR and oxymorphone ER were .51 for the highest dosage strengths (oxycodone CR 80 mg, oxymorphone ER 40 mg) and .45 tablets per day for the lowest dosage strengths (oxycodone CR 10 mg, oxymorphone ER 5 mg). After the introduction of reformulated oxycodone CR, the difference in mean DACONs between reformulated oxycodone CR and oxymorphone ER in the highest and lowest dosage pairs were .45 and .40 tablets per day, respectively.

Conclusions

Throughout the observation period, the overall mean DACON was higher for oxycodone CR (traditional or reformulated) than oxymorphone ER by .4 to .5 tablets per day for all dosage strengths. These data suggest that oxycodone CR is frequently prescribed 3 times daily (mean 2.9 tablets/d), whereas oxymorphone ER is more often prescribed twice daily (mean 2.5 tablets/d). These differences in oxymorphone ER and oxycodone CR DACON were

consistent across all dosage strengths. Because of the limited availability of long-term data for reformulated oxycodone CR in the current study, more data are needed to determine the long-term utilization of these opioids.