4190 | Sociodemographic and clinical predictors of prescription opioid use in a longitudinal community-based cohort study of middle-aged and older adults

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Background: Chronic pain prevalence in the United States is likely to increase with an aging population. While opioids have commonly been prescribed to manage pain, their use may be more likely in certain patients.

Objectives: Assess predictors of prescription opioid use in an adult population with a high prevalence of chronic pain.

Methods: Data were from a community-based cohort of White and African American adults aged 50-90 years residing in predominantly rural Johnston County, North Carolina. Univariable and multivariable logistic regression models were used to evaluate sociodemographic and clinical factors in non-opioid users (n=795) at baseline (2006-2010) as predictors of opioid use at follow-up (2013-2015). Variables included age, sex, race, obesity (BMI≥30kg/m^2), polypharmacy (5+ medications), educational attainment (<12, ≥12 years), employment (unemployed, employed/retired), insurance (uninsured, public, private), Census block group household poverty rate (<12%, 12-24%, ≥25%), depressive symptoms (Center for Epidemiologic Studies Depression Scale ≥16 or depression diagnosis), perceived social support (moderate/poor [<19], strong [≥19]; Strong Ties Measure of Social Support, range 0-20), pain sensitivity (sensitive [<4kg], normal [≥4kg] pressure pain threshold), and pain catastrophizing (high [≥15], moderate/low [<15]; Pain Catastrophizing Helplessness Subscale, range 0-25).

Results: At follow-up, 13% (n=102) of participants were using prescription opioids. In univariable models, younger age, female sex, obesity, polypharmacy, unemployment, public (vs. private) health insurance, higher poverty, depressive symptoms, poorer perceived social support, pain catastrophizing, and elevated pain sensitivity were independently associated (p<0.05) with opioid use. In the multivariable model, younger age (60 vs. 70 years; adjusted odds ratio, 95% confidence interval=1.76, 1.12–2.77), polypharmacy (2.21, 1.27 −3.85), high pain catastrophizing (2.12, 1.29–3.48), and depressive symptoms (1.93, 1.12–3.31) remained significant independent predictors.

Conclusions: The simultaneous assessment of a breadth of clinical and sociodemographic factors identified polypharmacy, pain catastrophizing, and depressive symptoms as modifiable predictors of prescription opioid use. These findings support the incorporation of pharmacological review and behavioral approaches into chronic pain management strategies. Further research is warranted to track changes in these factors as prescription opioid use declines nationwide

4232 | Understanding real-world use and survival with the use of anaplastic lymphoma kinase (ALK) inhibitors for ALK-positive non-small cell lung cancer: A Hong Kong-wide cohort study

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Background: Anaplastic lymphoma kinase (ALK) inhibitors have advanced the treatment of ALK-positive non-small cell lung cancer (NSCLC). There is limited real-world data on the treatment and outcomes in patients with ALK-positive NSCLC in the Asian population.

Objectives: To assess the treatment patterns and survival outcomes with the use of ALK inhibitors in Hong Kong.

Methods: We conducted a population-based cohort study using electronic medical database managed by the Hong Kong Hospital Authority. Patients treated with ALK inhibitors between 2013 and 2017 were followed-up until 2018. Patient characteristics and treatment patterns of ALK inhibitors, including a switch in therapy and treatment discontinuation were described. Using the Kaplan-Meier method, overall survival (OS) of patients treated with crizotinib was analyzed.

Results: Among 417 patients who received ALK inhibitors (median age, 57 years; 59.2% women), crizotinib was initiated as the first-line ALK-targeted therapy in 387 (92.8%), for a median treatment duration of 39 weeks. The majority of patients had confirmed lung adenocarcinoma (81.7%) and 15.3% of patients had brain metastases before receiving ALK inhibitors. More than half of the patients on crizotinib switched to either chemotherapy (18.8%) or a second-generation ALK inhibitor (36.2%) after a median period of 10 months. Nearly 20% of patients on crizotinib, 16% on ceritinib and 7% on alectinib discontinued therapy for more than 3 months. The median OS of patients treated with crizotinib was 10.4 months (95% confidence interval, 7.97-12.7).

Conclusions: In Hong Kong, crizotinib was the most common initial choice of treatment for ALK-positive NSCLC. Crizotinib appears to be associated with 10 months OS, but treatment discontinuation and switch in therapy due to disease progression occur frequently.

4262 | Prescribing pattern of antibiotics in children

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Background: Antimicrobial Resistance (AMR) is a worldwide problem with the public. "Taiwan Antimicrobial Resistance, Prescribing and Efficacy in Neonates and Children Project (TARPEC)" is a multicenter study to estimate the magnitude of antimicrobial resistance in pediatrics in Taiwan.