SSRI/SNRI in the 6 Months Prior to Primary Total Knee Arthroplasty Increases the Risk of Postoperative Infection and Complications: A Global Database Analysis

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Introduction

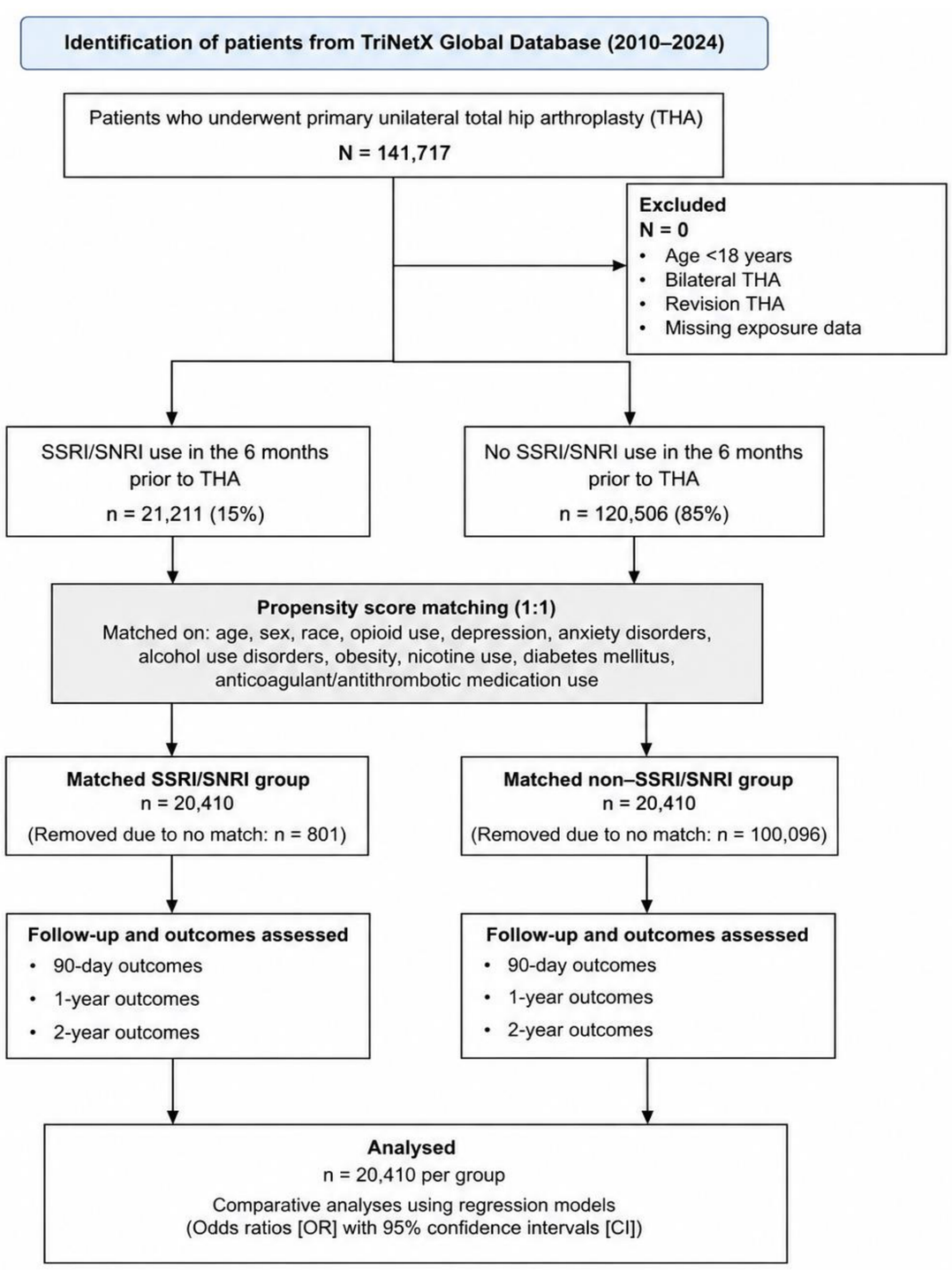
•Selective serotonin and serotonin-norepinephrine reuptake inhibitors (SSRIs/SNRIs) are commonly used among patients undergoing primary total hip arthroplasty (THA), reflecting the high prevalence of psychiatric comorbidities in this population.

•However, the impact of preoperative SSRI/SNRI use on postoperative outcomes following THA remains unclear.

•**Aim:** To evaluate whether SSRI/SNRI use within 6 months before surgery is associated with differences in short- and mid-term postoperative outcomes following primary unilateral THA.

Methods

- A retrospective cohort study using TriNetX Global Database (2010-2024).
- The database was reviewed to identify patients who underwent primary unilateral THA (n=141,717) and included patients that have been using SSRI/SNRI within 6 months before surgery (n=21,211), and patients without SSRI/SNRI use (n=120,506).
- Propensity score matching done for both the cohorts on age, sex, race, opioid use, depression, anxiety disorders, alcohol use disorders, obesity, nicotine use, diabetes mellitus, and anticoagulant/antithrombotic use.
- Outcomes were compared at 90 days, 1 year, and 2 years after THA.



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Results

Overall

- **15%** (21,211/141,717) had a SSRI/SNRI use within 6 months prior to THA.

- After propensity score matching, preoperative SSRI/SNRI use was associated with increased 90-days odds of: Sepsis, delirium, PJI, emergency department (ED) visits, opioid prescriptions, readmission, hematoma, transfusion.

90-days	Odds Ratio	95% CI	P Value
Sepsis	1.481	1.09-2	**0.01**
Delirium	1.572	1.258-1.966	**<0.001**
PJI	1.396	1.190-1.636	**<0.001**
ED visit	1.19	1.111-1.275	**<0.001**
Opioid prescription	1.673	1.585-1.765	**<0.001**
Readmission	1.244	1.181-1.310	**<0.001**
Hematoma	1.348	1.097-1.656	**0.004**
Transfusion	1.617	1.417-1.845	**<0.001**

- **At 1-year**, SSRI/SNRI use remained associated with increased odds of **PJI, hip revision, periprosthetic fracture, opioid prescription and opioid dependence/abuse.**

1-year	Odds Ratio	95% CI	P Value
PJI	1.555	1.380–1.752	**<0.001**
Hip revision	1.520	1.343–1.720	**<0.001**
Periprosthetic fracture	1.655	1.427–1.920	**<0.001**
Opioid prescription	1.703	1.618–1.792	**<0.001**
Opioid dependence/ abuse	1.319	1.132–1.537	**<0.001**

- Same associations persisted at **2-years after surgery.**

2-year	Odds Ratio	95% CI	P Value
PJI	1.454	1.284-1.645	**<0.001**
Hip revision	1.530	1.347-1.738	**<0.001**
Periprosthetic fracture	1.503	1.290-1.750	**<0.001**
Opioid prescription	1.737	1.638-1.843	**<0.001**
Opioid dependence/ abuse	1.354	1.166-1.574	**<0.001**

Conclusion

- Preoperative SSRI/SNRI use within 6 months of primary THA was associated with higher rates of short-term complications and worse 1- and 2-year outcomes, such as infection, even after matching for psychiatric comoborbidities, opioid use, and other key patient factors.
- Suggest that SSRI/SNRI use may be an important preoperative risk marker for postoperative morbidity following THA.