

Analysis of Complications in Patients with a History of Cannabis Use and Tobacco Use Undergoing Implant-Based Breast Reconstruction

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Background:

- There is paucity of information regarding the perioperative effects of marijuana in breast reconstructive surgeries.
- The purpose of this study was to explore an association between a history of cannabis use and post-operative complications in the setting of implant-based breast reconstruction.

Methods:

- Two databases, TriNetX and PearlDiver™, were queried for patients undergoing implant-based breast reconstruction.
- Outcomes were compared across four cohorts:
 1. Patients with a diagnosis of cannabis use only
 2. Patients with a diagnosis of tobacco use only
 3. Patients with a diagnoses of both cannabis and tobacco use
 4. Patients without diagnoses of cannabis or tobacco.

Table 1. Regression analysis evaluating associations between an active diagnosis of cannabis use or tobacco use following implant-based in TriNetX.

	Odds Ratio	95% CI	P-value
Surgical site infection			
Cannabis	2.68*	(1.25 - 5.71)	0.008
Tobacco	2.22*	(1.59 - 3.11)	<0.0001
Wound dehiscence			
Cannabis	2.21*	(1.01 - 4.80)	0.041
Tobacco	2.45*	(1.72 - 3.50)	<0.0001
Incision and drainage			
Cannabis	1	(0.40 - 2.45)	1
Tobacco	0.59*	(0.38 - 0.94)	0.025
Debridement			
Cannabis	1	(0.40 - 2.45)	1
Tobacco	1.12	(0.76 - 1.65)	0.555

* indicate $p < 0.05$.

Study Impact

Patients with an active diagnosis of cannabis use were at increased risk of developing post-operative complications, and the risk was even higher in patients using both tobacco and cannabis.

	Odds Ratio	95% CI	P-value
Surgical site infection			
Cannabis & Tobacco	1.72*	(1.08 - 2.74)	0.028
Tobacco	1.49*	(1.34 - 1.66)	<0.0001
Wound dehiscence			
Cannabis & Tobacco	5.53*	(3.27 - 9.37)	<0.0001
Tobacco	2.02*	(1.83 - 2.23)	<0.0001
Incision and drainage			
Cannabis & Tobacco	2.39*	(1.51 - 3.79)	0.0002
Tobacco	1.54*	(1.41 - 1.67)	<0.0001
Debridement			
Cannabis & Tobacco	2.22*	(1.41 - 3.51)	0.0006
Tobacco	1.72*	(1.58 - 1.87)	<0.0001

* indicate $p < 0.05$

Table 2. Regression analysis evaluating associations between an active diagnosis of cannabis and tobacco use or tobacco use only following implant-based breast reconstruction in PearlDiver™.

Results:

- Patients in the Cannabis Only cohort and Tobacco Only cohort had a significantly increased risk of developing surgical site infection and dehiscence
- Patients with a diagnosis of cannabis and tobacco use had a significantly increased risk of all four post-operative complications of interest.

Limitations:

- This study is retrospective in design, limiting the ability to define causal relationships
- As a database study, this data was limited to availability of variables, variable definition, and accuracy of data coding and entry.

Disclosures:

- The authors have no relevant disclosures to share. This study is COMIRB exempt.