

## DO ANTIDEPRESSANTS INCREASE THE RISK OF BLEEDING DURING PERCUTANEOUS TRACHEOSTOMY?

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**INTRODUCTION:** Bedside percutaneous tracheostomy (PT) is now routinely performed in the intensive care units. A recent large observational study has shown that selective serotonin reuptake inhibitors (SSRI) are associated with increased risk of bleeding and transfusion in surgical patients. SSRIs were known to cause increased upper gastrointestinal bleeding. SSRIs affect coagulation cascade and platelet function and may result in bleeding complications during PT. A thorough literature review did not reveal any studies that evaluated the association of bleeding complications of these agents with PT. We present our experience of PT in patients on SSRIs and selective nor-epinephrine reuptake inhibitors (SNRI) at a tertiary university hospital.

**METHODS:** Retrospective chart review was performed on patients who underwent PT between December 2008 and June 2013. All patients that underwent PT were identified from our procedure database. We collected information regarding demographics, use of SSRI/SNRI, complications and procedural details. Risk factors of patients on SSRI/SNRI (Group A) were compared to those who were not on these medications (Group B). Bleeding of 5 mL or more was considered significant. We classified 5 to 19 ml as minor bleed and any bleeding of 20ml or more as major. Two tailed p value with 95% confidence interval was used for analysis. Student's t-test was used for continuous variables and chi-square was used for categorical variables.

**RESULTS:** 199 records were available for review. 26 patients were on SSRIs (Table 1A). There was no statistically significant difference on baseline characteristics between the two groups. 11.5% patients in group A (3 out of 26) had bleeding compared to 13.9% in group B ( 24 out of 173), which was not statistically significant ( $p=0.86$ ). Although all patients in group A had major bleeding it was not statistically significant ( $p=0.15$ ) compared to group B. Overall, 13.2% of patients had bleeding of 5ml or more. There was no significant correlation between the dose of SSRI/SNRI and bleeding. There was no statistically significant difference in the use of electrocautery, procedural hypotension and pressor requirement between the two groups (Table 1B).

**CONCLUSION:** PT can be safely performed on patients on SSRI or SNRI without any increased risk of bleeding.

**CLINICAL IMPLICATIONS:** Although limited by retrospective nature and small sample size, this study reports the safety of PT in patients on SSRI or SNRI and the importance of close monitoring for major bleeding.

**Table 1A: Types of Antidepressants used**

**SSRIs:** Sertraline, Citalopram, Paroxetine, Escitalopram, Fluoxetine. **SNRIs:** Venlafaxine, Duloxetine.

**Table 1B: Relationship between SSRI/SNRIs and other risk factors**

	Group A (n=26)	Group B (n=173)	p value
Use of electrocautery	4 (15%)	12 (7%)	0.192
Hypotension during procedure	4 (15%)	55 (32%)	0.107
Requirement for pressors	1 (4%)	18 (10%)	0.478