

Effect of Low Dose Dexmedetomidine on Post Anesthesia Discharge After Day Case Breast Cancer Surgery.

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BACKGROUND

- Breast cancer is the most frequently diagnosed cancer among women
- Improvements in surgical and anesthetic methods allow the majority of breast cancer surgeries to be done as day-case.
- Key requirements include rapid return to oral intake and mobilization.
- Dexmedetomidine quickens recovery trajectories, making the drug well-suited for same-day discharge procedures.
- It preferentially activates α_2 -adrenergic receptors, leading to sedation and mild analgesia while sparing respiratory drive.

OBJECTIVE

- To evaluate the impact of low-dose intravenous dexmedetomidine on the post-anesthesia discharge times in patients undergoing day-case surgery for breast cancer.

METHODS

- A prospective double-blinded randomised control trial on 82 breast cancer patients, scheduled for elective day case breast cancer surgery, randomized in two 41 member groups.
- Group A received dexmedetomidine infusion (0.6 $\mu\text{g/kg/hr}$) intraoperatively while Group B was given saline.
- Rest of anesthesia conduct was same in both groups.
- Primary outcome was to compare the frequency of early discharge. (total discharge time within 120 minutes)

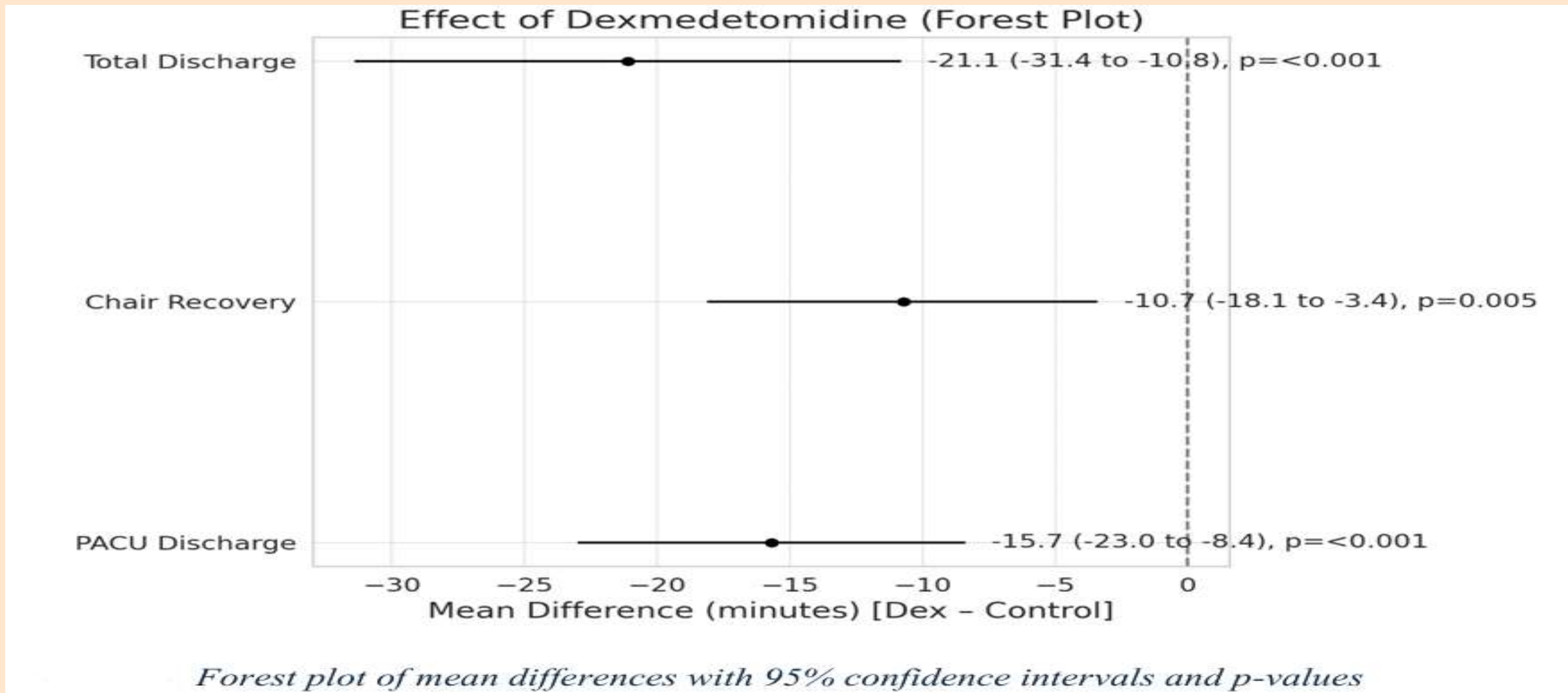
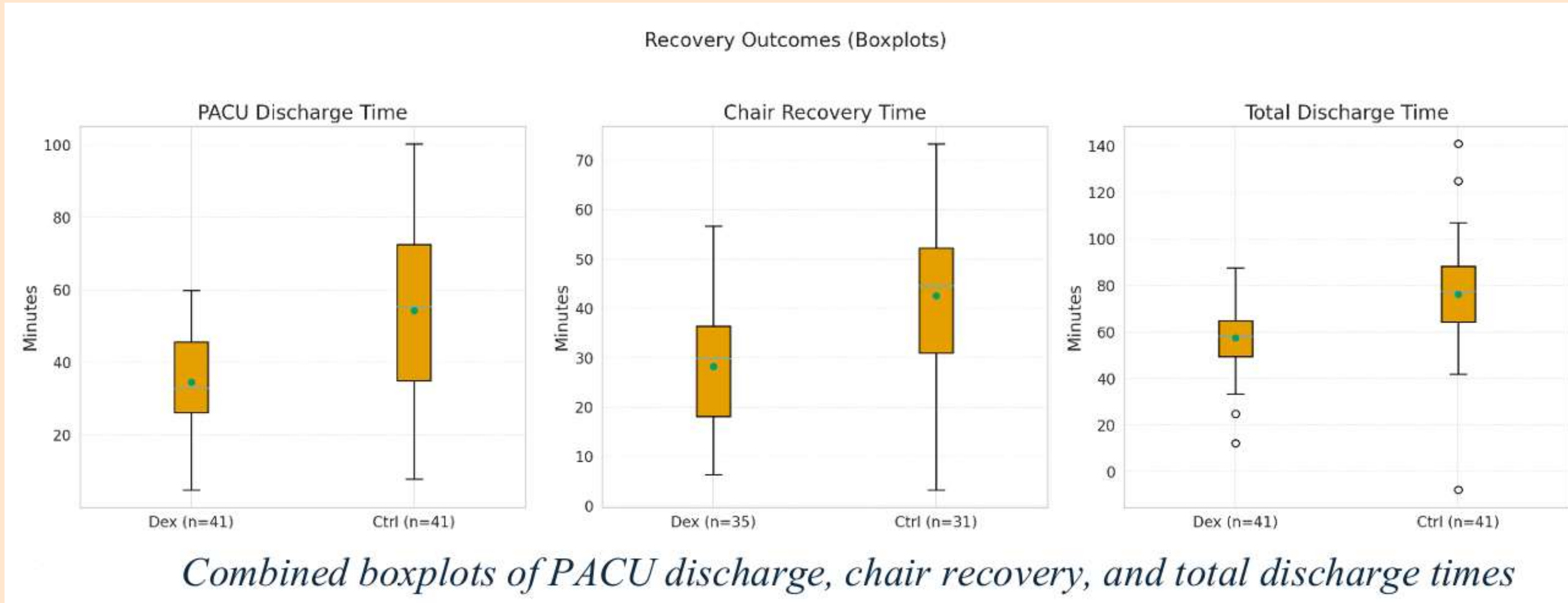
RESULTS

- Baseline variables (age, BMI, duration of surgery) were comparable ($p > 0.05$).

Outcome	Dexmedetomidine (Mean \pm SD)	Control (Mean \pm SD)	Mean Difference (95% CI)	p-value
PACU discharge time (min)	35.6 \pm 11.0	51.3 \pm 20.5	-15.7 (-23.0 to -8.4)	<0.001
Chair recovery time (min)	28.1 \pm 11.0	38.9 \pm 17.6	-10.7 (-18.1 to -3.4)	0.005
Total discharge time (min)	59.6 \pm 18.5	80.7 \pm 27.4	-21.1 (-31.4 to -10.8)	<0.001

Group	Early Discharge ≤ 120 min	Not Early	Percentage (%)
Dexmedetomidine	41	0	100.0
Control	37	4	90.2

Application of chi square test on this difference yielded a p value of 0.124, which is not statistically significant.



CONCLUSION

- This randomized controlled trial provides robust evidence that low-dose dexmedetomidine infusion markedly shortens postoperative recovery in day-case breast cancer surgery.
- Subjects administered dexmedetomidine exhibited shortened recovery room discharge intervals, accelerated transition to chair ambulation, and diminished total length of stay, together with an increase in early same-day discharge relative to the control group.
- Limitations consisted of a single institution implementation, a sample not more than modest, and exclusion of surgical candidates classified ASA physical status III or greater, which may curtail the generalizability of the findings.

