

A case series of Aripiprazole in facilitating weaning from mechanical ventilation in the ICU setting

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INTRODUCTION

- Weaning from mechanical ventilation (MV) is a major challenge in the ICU setting.
- Difficult and prolonged weaning is associated with
 - Delirium
 - Anxiety or agitation due to perceived dyspnea (air hunger)
- Multiple agents used for weaning with mixed results
 - Dexmedetomidine
 - Lorazepam
 - Quetiapine
 - Valproic acid
 - Clonidine

Aim: Assess preliminary effectiveness of aripiprazole (ARI) in [1] weaning from MV [2] reducing anxiety/agitation during weaning trials.

METHODS

- Case series design
- Chart review done by CL psychiatry fellow

Parameters monitored

- Sedatives required on day of ARI initiation
- MV duration prior to ARI initiation
- Sedatives required after 6 doses of ARI
- Ventilation duration after ARI initiation
- Maximum ARI dose trialed

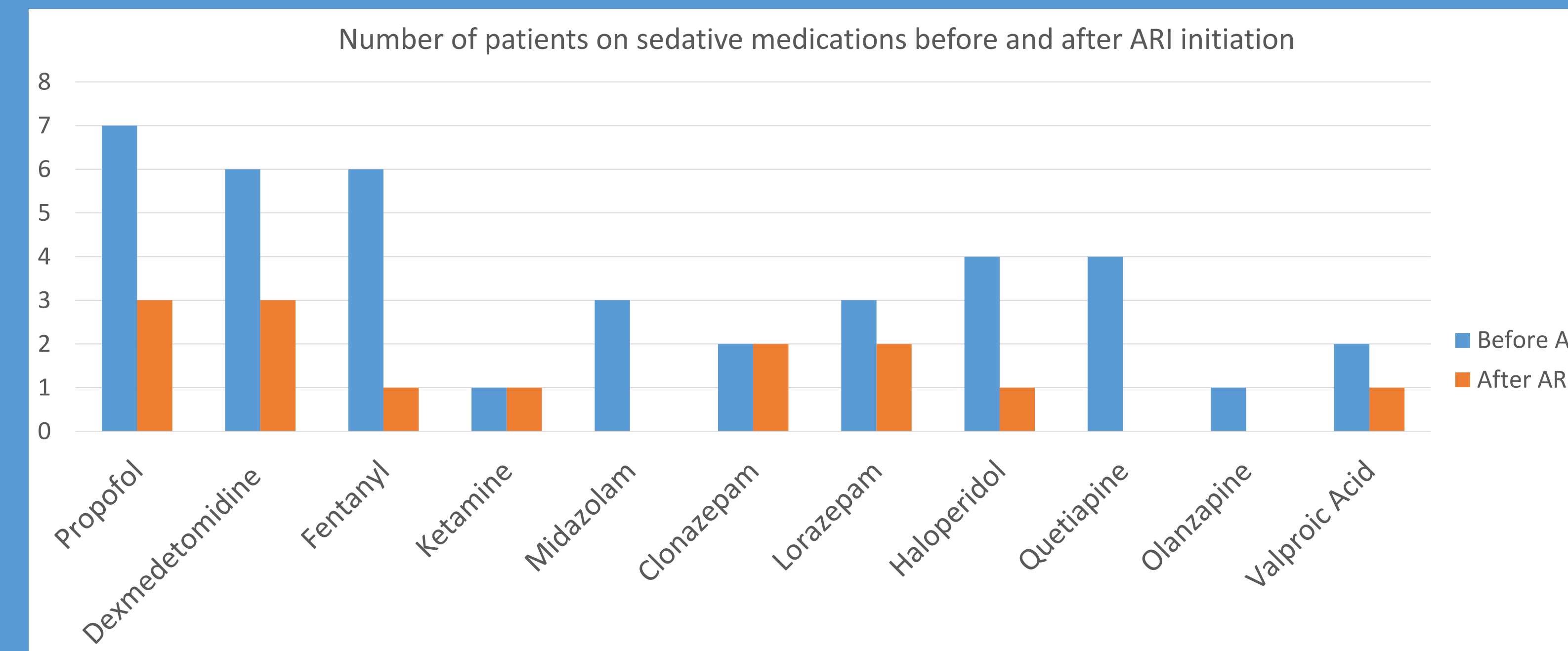
Outcomes assessed

- MV status (yes/no)
- Anxiety/Agitation status (by CL psychiatrist)

RESULTS

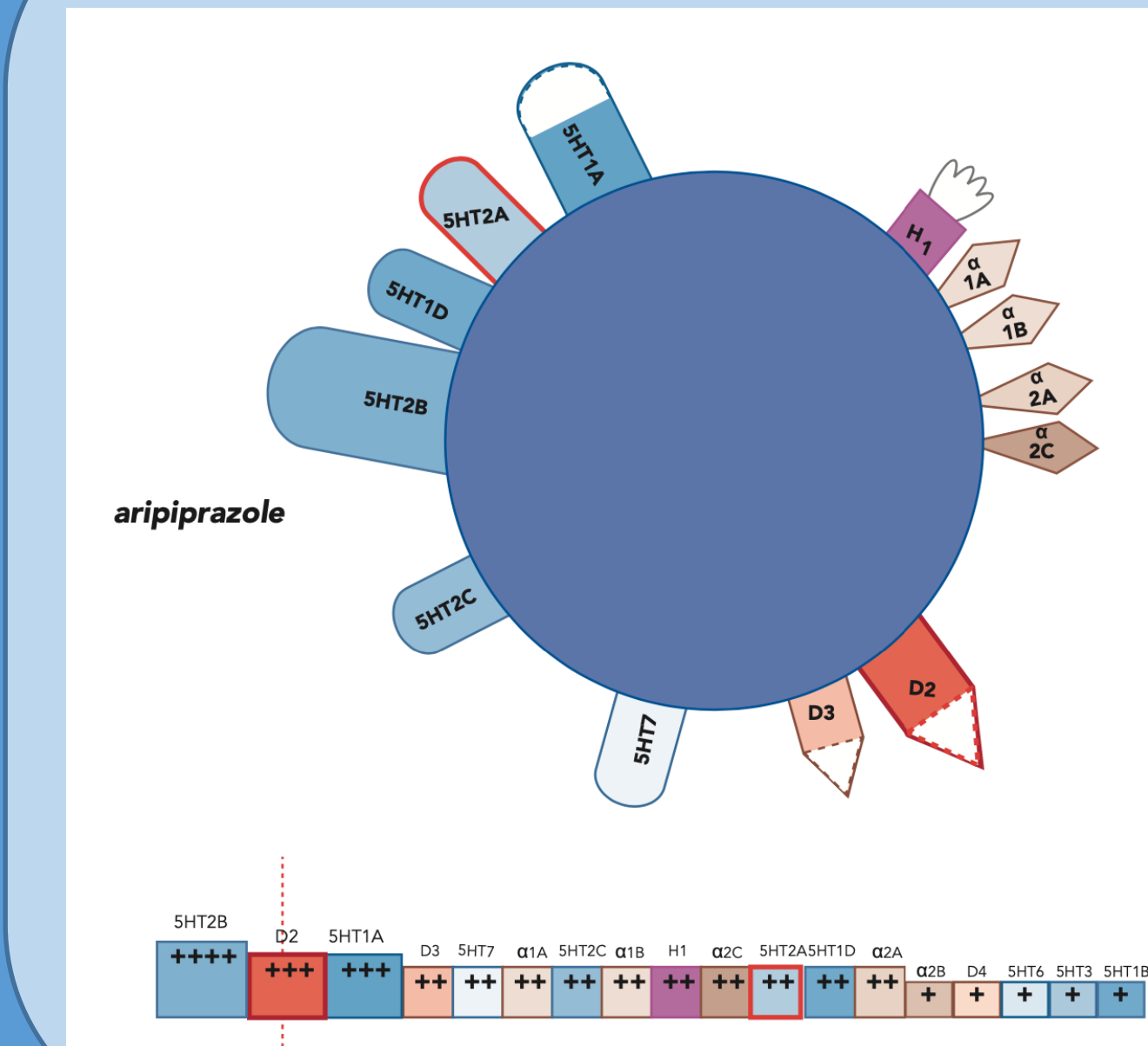
Mean age: 46 years (range: 28 – 66 years)
60% intubated due to respiratory failure secondary to COVID pneumonia
1 patient with pre-admission anxiety diagnosis

Patient	# vent days before ARI	# vent days after 6 ARI doses	Decrease in anxiety/agitation	Max daily ARI dose (mg)
1	24	Ongoing	N/A	30
2	7	1	Yes	30
3	17	3	Yes	30
4	22	Ongoing	Yes	40
5	21	2	Yes	30
6	8	3	Yes	15
7	57	24 (deceased)	N/A	30
8	14	6	Yes	30
9	25	3	Yes	10
10	15	2	Yes	30



DISCUSSION

ARI is a pharmacologically unique antipsychotic



- Partial dopamine agonism
- Limited anticholinergic & antihistaminergic activity

Limitations

- Subjective assessment of anxiety/agitation by CL psychiatrist
- Effectiveness assessed after an arbitrary/anecdotal # of ARI doses (6 doses)

Moving Forward

- Cohort study design with larger sample size
- Clearly defined pre/post parameters with objective measures

References

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- Buckley MS, Smithburger PL, Wong A, Fraser GL, Reade MC, Klein-Fedyshin M, et al. Dexmedetomidine for Facilitating Mechanical Ventilation Extubation in Difficult-to-Wean ICU Patients: Systematic Review and Meta-Analysis of Clinical Trials. *J Intensive Care Med*. 2021;36(8):925-36. Epub 2020/07/07. doi: 10.1177/0885066620937673. PubMed PMID: 32627672.
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