

Evaluation of selective serotonin reuptake inhibitors prescription and therapeutic drug monitoring: a retrospective study in geriatric rehabilitation care

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Introduction

Older adults in geriatric inpatient rehabilitation care tend to have multiple comorbidities and polypharmacy with high prevalence of thymic disorders and antidepressant drugs therapy. Age-related changes in pharmacokinetic and pharmacodynamic expose them to adverse drug reactions. Therapeutic drug monitoring (TDM) of selective serotonin reuptake inhibitors (SSRIs) in advanced age is considered of particular importance¹.

Objectives

The aim of this study was to: TDM use in this population.

- evaluate SSRIs utilization (type of molecule, indication, treatment duration, dosages and drug interactions during their stay in the geriatric rehabilitation care
- compare SSRIs concentration in blood with the expected concentration

Methods

Retrospective observational study was conducted in consenting patients taking SSRIs in a Swiss geriatric rehabilitation facility during 12 months, from July 2021 to August 2022. Descriptive statistics were then performed.

Results

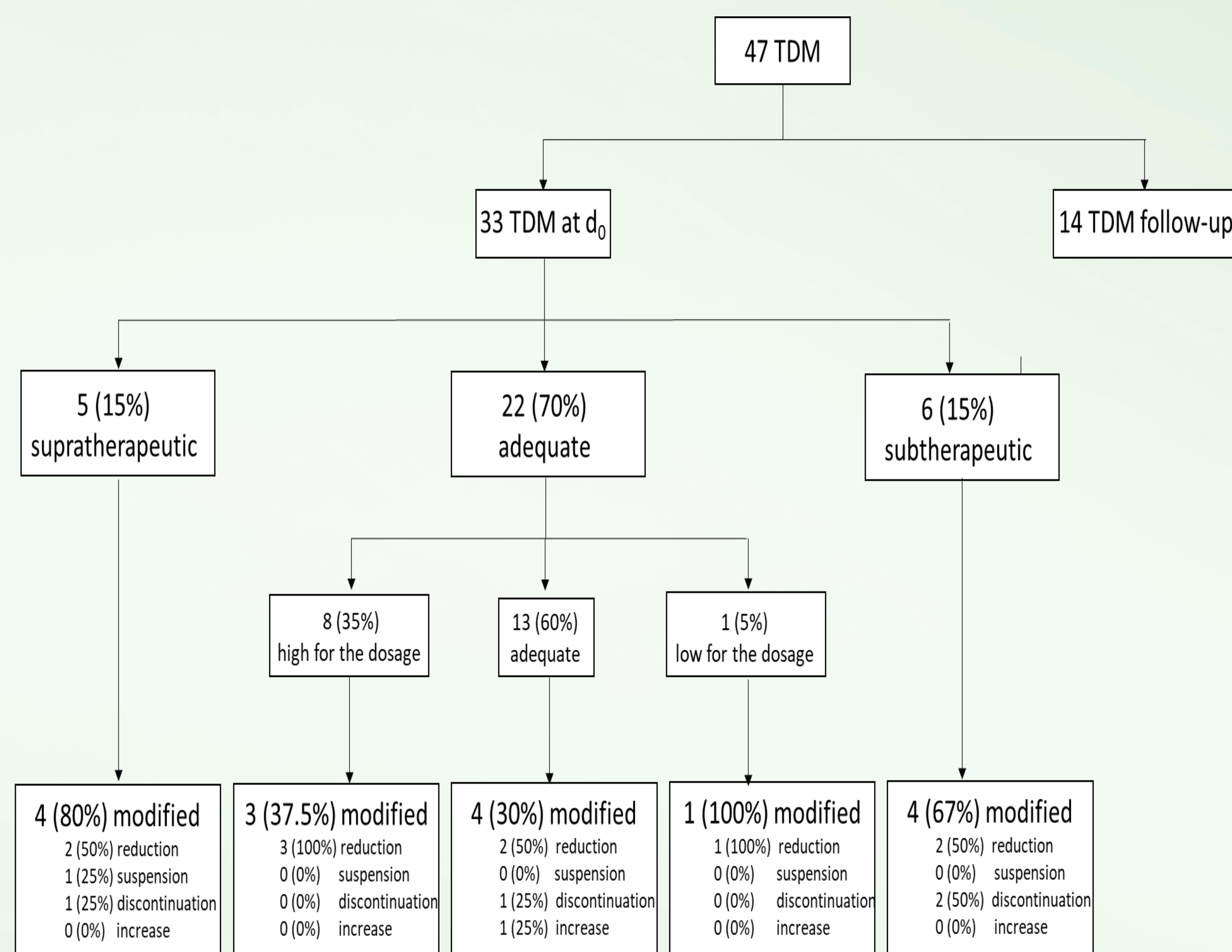
1) During the study period, 1167 patients have been admitted in the unit, including 195 treated with an SSRI (16.7%). 97 patients gave their consent to collect their data which represented 103 hospital stays.

2) Evaluation of SSRI prescription

Key characteristics	N=103
Type of SSRI prescribed (%):	
- escitalopram	61,5%
- sertraline	21,2%
- fluoxetine	8,7%
- paroxetine	5,8%
- citalopram	1,9%
- fluvoxamine	1,0%
Lack of indication in the discharge letter (%)	35,0%
Average duration of treatment with SSRI (median, min//max)	9,9, 1 d // 23,5 years
Modification of the prescription during the stay (%)	46,8%
Type of modification:	
- reduction	38%
- increase	30%
- discontinuation	16%
- switch to another antidepressant	15%
- suspension	1%
Dosage potentially inappropriated	10,8%
Drug interaction involving SSRI (%)	38%

3) Evaluation of SSRI concentration in blood (TDM)

TDM were measured in 33 patients among the 97 patients (34%).



Conclusion and perspectives

Prevalence of SSRIs is high in a geriatric rehabilitation facility with an indication for treatment not always available and a duration of prescription often long. Although less frequently prescribed, some SSRIs are considered inappropriate in elderly (i.e., paroxetine). SSRI prescriptions are often modified during the stay to optimize patient care (to reduce side effects and interactions). TDM of SSRI could be useful more often in patients at risk of adverse events associated with these medications (i.e., falls). "TDM enables to identify high concentration and adjust the dosing accordingly. Interactions and potential adverse events of SSRIs are significant. Clinical pharmacists and decision-support tools could be used to highlight elderly with inappropriate doses, drug-drug or drug-disease interactions and adjust accordingly.