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PATIENT MONITORING WITH USE OF LITHIUM

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INTRODUCTION

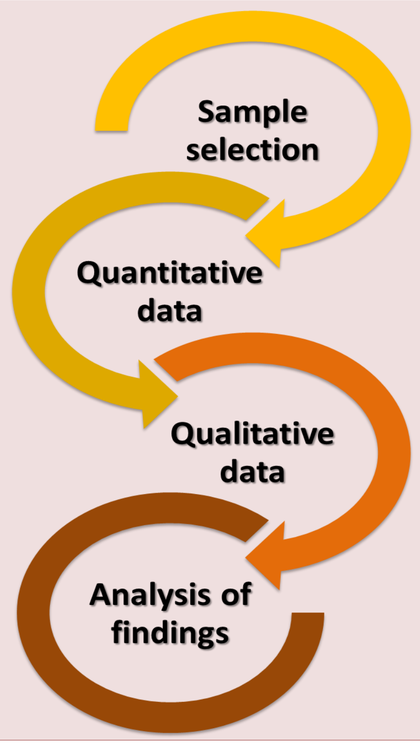
Lithium yields successful pharmacotherapeutic outcomes in psychiatric practise, but it carries a narrow therapeutic index[1], consequently necessitating vigilant patient monitoring. There is presently a lack of patient registries and fixed guidelines in place for patients receiving lithium therapy from Maltese psychiatric institutions. This research investigates how patients are being monitored and assesses the degree of pharmaceutical care currently being delivered.

AIMS

I. To highlight the strengths and weaknesses of monitoring practises currently in place for patients receiving lithium therapy from Mount Carmel Hospital (MCH) and Psychiatric Outpatients at Mater Dei Hospital (MDH), Malta.

II. To identify sectors within MCH and MDH which may potentially benefit from implementation of pharmacist intervention.

METHOD



Sampling design
- Patient recruitment based on convenience sampling
- Inclusion criteria:
  - Age range of 18-80 years
  - Secondary health care setting
- Patient sample size (N) = 44

Qualitative data - Healthcare professionals interviews
- 9 semi-structured interviews carried out
- Open-ended questions
  - 3 Hospital pharmacists
  - 2 Nursing officers
  - 4 Physicians

Quantitative data - Research instrument
- Data collection tool (DCT) constructed and validated
- DCT used to gather data from patient files pertaining to
  - Patient demographics
  - Medical background
  - Monitoring trends of a two-year period
- 6/18 wards from MCH, 24 out-patients from MDH

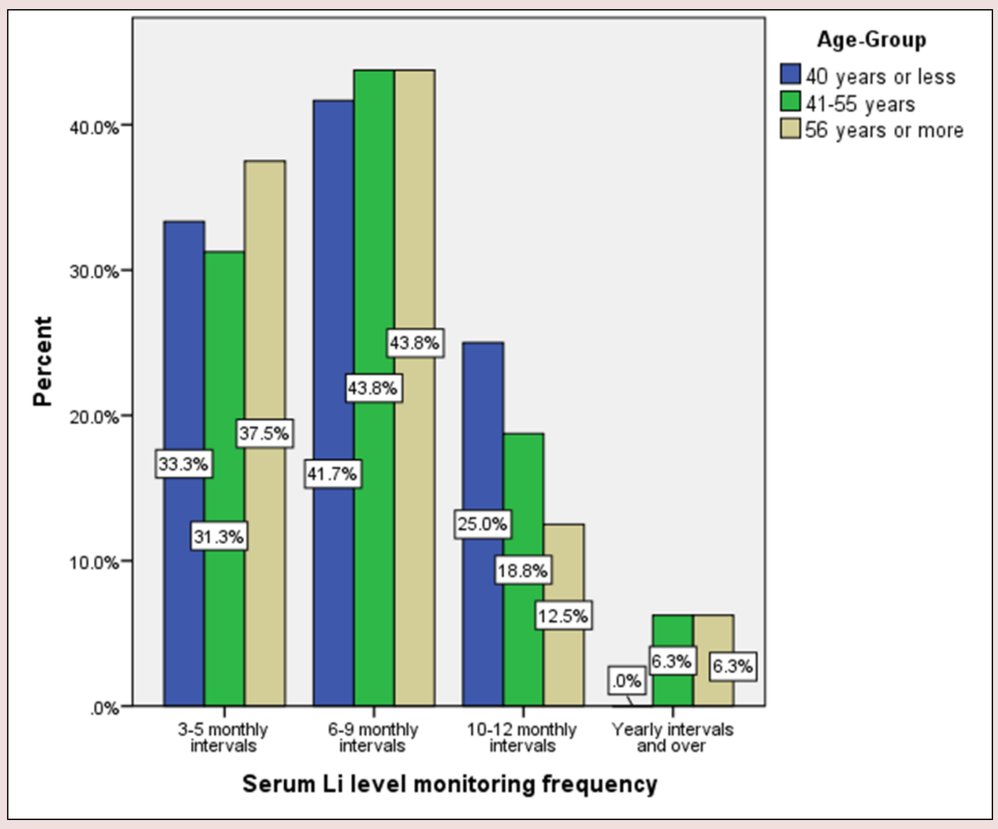
Data analysis
- Statistical analysis performed
- SPSS® V.24 software utilised for quantitative data
- Trends and correlations generated
- Shared opinions of interviewees highlighted

RESULTS

- 43.2% of patients were monitored for serum lithium levels at an interval of 6-9 months (trends from 2015-2017). This deviates from the standard review periods set by internationally recognised guidelines[2,3].

- A Logistic Regression Model identified dose modifications for lithium carried out during the previous year (2016-2017) to be a significant influential factor. It accounts for 28.8% of total variation in monitoring frequency within the sample.

Fig. 1. Monitoring frequency for serum lithium levels (N=44) for 2015-2017



- Two out of 5 physicians liaise with clinical pharmacists in case of ADRs and toxicity with lithium.
- Factors identified to be contributing to deviation from standard serum lithium monitoring frequency:
  1. Lack of proper documentation
  2. Lack of human resources dedicated to patient education and treatment review
- All respondents felt that inclusion of clinical pharmacists in psychiatric institutions should be implemented because of the present challenges that it can address.

CONCLUSION

Study findings infer that 66% of patients warrant further in-depth monitoring of lithium therapy. The lack of patient registries not only served as a limitation of study but also as a challenge for health care professionals to flag out the patients requiring urgent medication review. The consistent participation of pharmacists within the clinical setting has been identified as a growing need to ensure adequate documentation pertaining to serum level charting as well as other pharmaceutical issues not routinely addressed during short-lived ward rounds and follow-up visits. Other areas include the setting up of a structured lithium record chart and pharmacist-led education clinics, with pharmacists being at the forefront of rational medicine use.

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