

Specifics of lithium carbonate in psychiatric emergencies

Particularidades do carbonato de lítio nas emergências psiquiátricas

Particularidades del uso del carbonato de litio en las emergencias psiquiátricas

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Abstract

Introduction: Lithium carbonate plays an essential function in the management of mood disorders, standing out for its robust mood-stabilizing efficacy and its well-established protective effect against suicide. Nevertheless its application in emergency situations necessitates prudence owing to its low therapeutic index, very gradual initiation of action, coupled with the necessity for ongoing clinical and laboratory surveillance. **Objective:** To critically analyze the use of lithium carbonate in psychiatric emergencies, focusing on clinical indications, associated risks, management of intoxication, and implications for the organization of health services. **Method:** This is a narrative literature review based on a non-systematic search of the PubMed/MEDLINE, Scopus, and SciELO databases, complemented by international clinical guidelines, consensus statements from scientific societies, and classical psychiatric texts. Original studies, narrative and systematic reviews, clinical trials, observational studies, and normative documents relevant to the use of lithium in urgent and emergency contexts were included. **Results:** Lithium has well-established efficacy in acute mania, relapse prevention, and reduction of suicide risk. In emergency settings, its prescription should be limited to situations involving adequate clinical assessment, demonstrated capacity for adherence, absence of a recent history of intoxication or medication-related suicide attempts, and assurance of outpatient follow-up with appropriate laboratory monitoring. Lithium intoxication is potentially severe, requiring early recognition and prompt, appropriate clinical management. **Conclusion:** Despite its substantial benefits, the use of lithium carbonate in psychiatric emergencies must be judicious, individualized, and integrated into a comprehensive care plan that ensures continuity of treatment, with the goal of maximizing therapeutic benefits while minimizing preventable risks.

Keywords: Psychiatric emergencies; Lithium carbonate; Mood disorders; Lithium intoxication; Public Health.

Resumo

Introdução: O carbonato de lítio ocupa posição central no tratamento dos transtornos do humor, destacando-se por sua eficácia estabilizadora e pelo efeito protetor contra o suicídio. Contudo, seu uso em contextos de emergência exige cautela, em razão do estreito índice terapêutico, do início de ação relativamente lento e da necessidade de monitoramento clínico e laboratorial contínuo. **Objetivo:** Analisar criticamente o uso do carbonato de lítio em emergências psiquiátricas, enfatizando indicações clínicas, riscos associados, manejo da intoxicação e implicações para a organização dos serviços de saúde. **Método:** Trata-se de uma revisão narrativa da literatura, baseada em busca não sistemática nas bases PubMed/MEDLINE, Scopus e SciELO, complementada por diretrizes clínicas internacionais, consensos de sociedades científicas e textos clássicos da psiquiatria. Foram incluídos estudos originais, revisões narrativas e sistemáticas, ensaios clínicos, estudos observacionais e documentos normativos relevantes ao uso do lítio em contextos de urgência e emergência. **Resultados:** O lítio apresenta eficácia consolidada na mania aguda, na prevenção de recaídas e na redução do risco de suicídio. Em emergências, sua prescrição deve ser restrita a situações com adequada avaliação clínica, capacidade de adesão, ausência de histórico recente de intoxicação ou tentativas de suicídio com medicamentos, e garantia de seguimento ambulatorial com monitorização laboratorial. A intoxicação por lítio é potencialmente grave, exigindo reconhecimento precoce e manejo clínico apropriado. **Conclusão:** Apesar de seus benefícios, o uso do carbonato de lítio em emergências psiquiátricas deve ser criterioso, individualizado e integrado a um plano assistencial que assegure continuidade do cuidado, visando maximizar benefícios e minimizar riscos evitáveis.

Palavras-chave: Emergências psiquiátricas; Carbonato de lítio; Transtornos do humor; Intoxicação por lítio; Saúde Pública.

Resumen

Introducción: El carbonato de litio ocupa una posición central en el tratamiento de los trastornos del estado de ánimo, destacándose por su sólida eficacia estabilizadora y por su efecto protector bien establecido frente al suicidio. No obstante, su uso en contextos de emergencia requiere cautela debido a su estrecho índice terapéutico, al inicio de acción

relativamente lento y a la necesidad de un monitoreo clínico y de laboratorio continuo. **Objetivo:** Analizar críticamente el uso del carbonato de litio en las emergencias psiquiátricas, con énfasis en las indicaciones clínicas, los riesgos asociados, el manejo de la intoxicación y las implicaciones para la organización de los servicios de salud. **Método:** Se trata de una revisión narrativa de la literatura, basada en una búsqueda no sistemática en las bases de datos PubMed/MEDLINE, Scopus y SciELO, complementada con guías clínicas internacionales, consensos de sociedades científicas y textos clásicos de la psiquiatría. Se incluyeron estudios originales, revisiones narrativas y sistemáticas, ensayos clínicos, estudios observacionales y documentos normativos relevantes para el uso del litio en contextos de urgencia y emergencia. **Resultados:** El litio presenta una eficacia bien establecida en la manía aguda, en la prevención de recaídas y en la reducción del riesgo de suicidio. En los servicios de emergencia, su prescripción debe restringirse a situaciones que cuenten con una evaluación clínica adecuada, capacidad demostrada de adherencia, ausencia de antecedentes recientes de intoxicación o de intentos de suicidio mediante medicamentos, y garantía de seguimiento ambulatorio con monitoreo laboratorial apropiado. La intoxicación por litio es potencialmente grave y exige un reconocimiento precoz y un manejo clínico oportuno y adecuado. **Conclusión:** A pesar de sus beneficios, el uso del carbonato de litio en las emergencias psiquiátricas debe ser cuidadoso, individualizado e integrado en un plan asistencial integral que garantice la continuidad del cuidado, con el objetivo de maximizar los beneficios terapéuticos y minimizar los riesgos evitables.

Palabras clave: Emergencias psiquiátricas; Carbonato de litio; Trastornos del estado de ánimo; Intoxicación por litio; Salud Pública.

1. Introduction

Psychiatric emergencies are urgent clinical situations where disruptions in cognition, mood, or behavior present an imminent danger to the patient or others, necessitating swift evaluation and intervention to avert morbidity, mortality, and other serious negative consequences (Baldaçara et al., 2019; Baldacara et al., 2022; Baldaçara et al., 2022; Garriga et al., 2016; Perico et al., 2022). The most prevalent presentations include psychomotor agitation, suicidal behavior, acute psychotic episodes, intoxication and withdrawal syndromes related to psychoactive substances, as well as confusional states secondary to medical or neurological conditions. From an epidemiological standpoint, mental and behavioral disorders account for approximately 5–10% of visits to general emergency departments, with higher proportions observed in large urban centers; agitation and suicidal ideation or attempts are consistently among the leading causes of presentation. Furthermore, individuals with psychotic disorders, mood disorders, and substance use disorders demonstrate increased rates of recurrent emergency visits, hospitalizations, and premature mortality, underscoring psychiatric emergencies as a major public health concern and highlighting the need for structured, evidence-based management strategies (Baldaçara et al., 2019; Baldacara et al., 2022; Baldaçara et al., 2022; Garriga et al., 2016; Perico et al., 2022).

Within this context, lithium carbonate occupies a singular and enduring position in the history of modern psychiatry. Its introduction into clinical practice dates to the late 1940s, when John Cade first described its antimanic effects, representing a paradigm shift by providing the first effective pharmacological treatment for bipolar disorder. Subsequent controlled studies established lithium's efficacy not only in acute mania but also in the long-term prophylaxis of mood episodes, consolidating its role as a cornerstone of maintenance treatment (Cipriani et al., 2013; Malhi et al., 2021; Malhi et al., 2018; Shorter, 2009; L. N. Yatham et al., 2018). In addition to mood stabilization, clinical and epidemiological evidence has consistently shown that lithium substantially reduces the risk of suicide and all-cause mortality in patients with mood disorders. This effect is distinctive when contrasted with that of other psychotropic agents. Lithium continues to be the primary treatment in major international guidelines, despite the emergence of second-generation antipsychotics and anticonvulsants, as a result of its potential disease-modifying properties, long-term outcome benefits, and proved efficacy (Cipriani et al., 2013; Malhi et al., 2021; Malhi et al., 2018; Shorter, 2009; L. N. Yatham et al., 2018).

In psychiatric emergency settings, lithium carbonate may be indicated for severe and potentially life-threatening manifestations of mood disorders, particularly acute mania with marked psychomotor agitation, psychotic features, or significant behavioral disorganization, as well as severe bipolar depression associated with high suicide risk. Although its onset of action is

slower than that of antipsychotics or benzodiazepines—agents commonly required for immediate behavioral control—lithium plays a crucial role in mood stabilization and in reducing early relapse once acute containment has been achieved (Cipriani et al., 2013; Gitlin, 2016; Malhi et al., 2021; Malhi et al., 2018; Malhi et al., 2017; Shorter, 2009; L. N. Yatham et al., 2018).. Additionally, its utilization in emergency situations necessitates a high degree of clinical expertise and caution, as it has a restricted therapeutic index and necessitates a meticulous assessment of renal function, hydration status, electrolyte balance, and potential drug-drug interactions and adverse effects. Consequently, the safe and effective use of lithium in psychiatric emergencies necessitates the selection of suitable patients, the evaluation of baseline laboratory data, the close monitoring of serum levels, and the integration of lithium into structured treatment protocols (Cipriani et al., 2013; Gitlin, 2016; Malhi et al., 2021; Malhi et al., 2018; Malhi et al., 2017; Shorter, 2009; L. N. Yatham et al., 2018).

This article aims to critically analyze the use of lithium carbonate in psychiatric emergencies, with emphasis on clinical indications, associated risks, management of intoxication, and implications for the organization of health services.

2. Methods

The literature search was conducted in a qualitative, non-systematic (Pereira et al., 2018; Risemberg et al., 2026), a narrative review (Fernandes et al., 2023) in a comprehensive manner using the PubMed/MEDLINE, Scopus, and SciELO databases, complemented by consultation of international clinical guidelines, classic psychiatry textbooks, and position statements or documents from scientific societies. Search terms and descriptors in English and Portuguese were combined using Boolean operators and included: “lithium carbonate,” “lithium,” “psychiatric emergencies,” “emergency psychiatry,” “acute mania,” “bipolar disorder,” “suicide prevention,” “lithium toxicity,” and “psychiatric emergencies.”

Eligible sources included original research articles, narrative and systematic reviews, randomized clinical trials, observational studies, consensus statements, and clinical practice guidelines published primarily in English or Portuguese. No strict time limits were applied to capture both seminal historical studies and contemporary evidence relevant to current clinical practice. Studies focusing exclusively on non-psychiatric uses of lithium or lacking relevance to acute psychiatric presentations were excluded.

Study selection was based on thematic relevance, apparent methodological quality, and contribution to the understanding of lithium carbonate use in psychiatric emergencies. Data were synthesized qualitatively and integrated through a critical and interpretative approach, encompassing historical aspects, clinical indications, pharmacokinetic and pharmacodynamic considerations, toxicity risks, laboratory monitoring, and practical recommendations for emergency care settings.

As this work constitutes a narrative review of the published literature, it did not involve primary data collection or direct participation of human subjects; therefore, approval by a research ethics committee was not required.

3. Results and Discussion

Mechanism of action and pharmacodynamics

Lithium carbonate exerts its therapeutic effects through complex and not yet fully elucidated mechanisms, primarily involving modulation of intracellular signaling pathways rather than direct receptor-level actions. Its main mechanisms of action include inhibition of inositol monophosphatase and glycogen synthase kinase-3 (GSK-3), resulting in downstream effects on second messenger systems, gene transcription, neuroplasticity, circadian rhythm regulation, and synaptic neurotransmission, particularly within dopaminergic, glutamatergic, and serotonergic systems (Malhi et al., 2017; Sakrajda & Rybakowski, 2025).

From a pharmacokinetic standpoint, lithium is rapidly and almost completely absorbed from the gastrointestinal tract, does not bind to plasma proteins, and is distributed throughout total body water, with relatively slow penetration into the central nervous system. Its clinical onset of antimanic action is delayed when compared with antipsychotics, with meaningful therapeutic effects generally observed after approximately 5 to 10 days of continuous treatment (Fountoulakis et al., 2022; Malhi et al., 2021; Rybakowski, 2020; Tondo & Baldessarini, 2024; U.S. DEpartment of Veterans Affairs, 2023; L. N. Yatham et al., 2018; Zisook et al., 2023). Lithium is not metabolized and is excreted unchanged by the kidneys, with renal clearance closely dependent on sodium and water balance. The elimination half-life averages 18–24 hours in young adults and may extend to 36 hours or longer in older patients or those with renal impairment (Fountoulakis et al., 2022; Malhi et al., 2021; Rybakowski, 2020; Tondo & Baldessarini, 2024; U.S. DEpartment of Veterans Affairs, 2023; L. N. Yatham et al., 2018; Zisook et al., 2023). For acute mania, therapeutic serum concentrations typically range from 0.6 to 1.2 mEq/L, while for maintenance treatment, they range from 0.6 to 0.8 mEq/L. However, serum levels exceeding 1.5 mEq/L are associated with a significantly increased risk of toxicity. The efficacy and safety of serum lithium should be guaranteed by assessing its concentrations approximately five days after treatment initiation or any dose adjustment, due to its narrow therapeutic index and the time required to achieve steady state. Dose modifications should only be implemented after this interval (Fountoulakis et al., 2022; Malhi et al., 2021; Rybakowski, 2020; Tondo & Baldessarini, 2024; U.S. DEpartment of Veterans Affairs, 2023; L. N. Yatham et al., 2018; Zisook et al., 2023).

Lithium in bipolar disorder

One of the few psychotropic agents with consistent effects on objective clinical outcomes, lithium carbonate remains a first-line treatment for bipolar disorder, supported by robust evidence of efficacy in acute mania, relapse prevention, and reduction of suicide risk (Cipriani et al., 2013; Nabi et al., 2022; Tondo & Baldessarini, 2024; Wortzel et al., 2023). In acute manic episodes—particularly in classical presentations characterized by euphoria or irritability, increased energy, and behavioral disinhibition—lithium demonstrates clinically meaningful efficacy, although in real-world emergency and inpatient settings it is frequently combined with antipsychotics and, when necessary, benzodiazepines to achieve more rapid control of agitation and psychotic symptoms (Leite et al., 2026; Malhi et al., 2021; Malhi et al., 2018; Tondo & Baldessarini, 2024; Venkateswaramurthy & Priyadarsini, 2023; Lakshmi N. Yatham et al., 2018). In the maintenance phase, lithium’s historical and clinical superiority lies in its ability to prevent both manic and, to a lesser extent, depressive recurrences, thereby reducing hospitalization rates and overall illness burden. Its effectiveness is particularly pronounced in patients with a prototypical episodic course, a positive family history of bipolar disorder, and prior robust response to lithium, reinforcing its role as a foundational mood stabilizer symptoms (Malhi et al., 2021; Malhi et al., 2018; Tondo & Baldessarini, 2024; Venkateswaramurthy & Priyadarsini, 2023; Lakshmi N. Yatham et al., 2018). Current guidelines emphasize that treatment selection should be individualized based on clinical phenotype, cycling pattern, suicide risk, and tolerability, often within combination regimens symptoms, although lithium may confer a benefit primarily as a core stabilizing agent and as an augmenting strategy in bipolar depression (Malhi et al., 2021; Malhi et al., 2018; Tondo & Baldessarini, 2024; Venkateswaramurthy & Priyadarsini, 2023; Lakshmi N. Yatham et al., 2018). Notably, lithium’s anti-suicidal effect represents a central and distinctive advantage; meta-analytic data demonstrate reductions in suicide and all-cause mortality among patients with mood disorders, underscoring its critical relevance in individuals at elevated suicide risk (Cipriani et al., 2013). Nevertheless, the clinical effectiveness of lithium is contingent upon rigorous monitoring strategies, given its narrow therapeutic index and pharmacokinetic variability related to renal function, hydration status, and drug-drug interactions. Consequently, therapeutic decision-making in bipolar disorder must integrate the magnitude of lithium’s long-term benefits—particularly in maintenance and suicide prevention—with a structured plan for laboratory surveillance and patient education to optimize safety and efficacy.

Lithium carbonate in unipolar depression (major depressive disorder)

In unipolar depression (major depressive disorder, MDD), lithium carbonate has a well-established and distinctive role primarily as an augmentation strategy for antidepressant-resistant depression, rather than as monotherapy. Since early controlled trials, lithium augmentation has consistently demonstrated clinically meaningful improvements in response and remission rates when added to antidepressants in patients who fail to respond adequately to first-line pharmacological treatments (Barroilhet & Ghaemi, 2020; Rybakowski, 2020; Volkmann et al., 2020; Zisook et al., 2023). Meta-analyses of randomized, placebo-controlled studies indicate that lithium augmentation is among the most effective evidence-based strategies for treatment-resistant MDD, with effect sizes comparable to or exceeding those observed with other pharmacological augmentation approaches. Notably, the antidepressant augmentation effect of lithium often emerges within 1–3 weeks, which is relatively rapid in the context of resistant depression, and may be achieved at lower serum concentrations than those required for acute mania, typically in the range of 0.4–0.8 mEq/L (Gitlin, 2016; Malhi et al., 2020). Beyond symptomatic improvement, lithium confers a unique clinical advantage in unipolar depression through its anti-suicidal effect, with consistent evidence demonstrating reductions in suicide attempts and suicide-related mortality—an effect not reliably replicated by antidepressants alone (Cipriani et al., 2013). Despite these benefits, lithium use in MDD requires careful patient selection, systematic laboratory monitoring, and attention to long-term tolerability due to its narrow therapeutic index, positioning lithium as a strategic, evidence-based option for patients with severe, recurrent, or treatment-resistant depression, particularly when suicide risk is prominent (Gitlin, 2016; Sher, 2008).

Lithium carbonate and suicide prevention

Lithium carbonate has a uniquely meaningful role in the prevention of suicide across mood disorders, representing the strongest pharmacological intervention currently available for reducing suicide risk in psychiatric practice. Converging evidence from randomized controlled trials, long-term observational cohorts, and large meta-analyses demonstrates that lithium treatment is associated with substantial reductions in suicide deaths, suicide attempts, and the overall mortality rate among patients with mood disorders, including both bipolar disorder and unipolar major depressive disorder (Cipriani et al., 2013; Grunze et al., 2010; Leite et al., 2026; Tondo & Baldessarini, 2024; Wortzel et al., 2023; Zisook et al., 2023). Importantly, this anti-suicidal effect appears to be at least partially independent of lithium's mood-stabilizing and antidepressant effects, suggesting a specific protective mechanism rather than a secondary consequence of symptom improvement. Comparative studies indicate that this effect is not consistently observed with anticonvulsant mood stabilizers, antipsychotics, or antidepressants, leading major international guidelines to recognize lithium as the only psychotropic medication with compelling and reproducible evidence for suicide prevention (Leonardo Baldaçara et al., 2021; L.; Baldaçara et al., 2021; Fountoulakis et al., 2022; Lam et al., 2024; Malhi et al., 2021; Wortzel et al., 2023; Zisook et al., 2023). The mechanisms underlying lithium's anti-suicidal properties are likely multifactorial and include modulation of impulsivity and aggression, stabilization of affective dysregulation, enhancement of neuroplasticity and neurotrophic signaling, regulation of circadian rhythms, and neuroprotective effects mediated through intracellular pathways such as inhibition of glycogen synthase kinase-3 (GSK-3) (Gitlin, 2016; Malhi et al., 2020). Clinically, lithium is particularly relevant for patients with recurrent depressive episodes, previous suicide attempts, or persistent suicidal ideation, in whom long-term treatment may confer a survival benefit that extends beyond symptomatic control, provided that its use is embedded within a structured framework of monitoring and patient education (Cipriani et al., 2013; Malhi et al., 2021).

Lithium in emergencies

Given the potential severity of its adverse effects and the complexity of its prescription, the use of lithium in psychiatric emergency settings must always be approached with caution. It is imperative to evaluate the probability of patient adherence

before prescribing lithium. Alternative treatments should be considered for individuals who have a history of suicide attempts involving lithium carbonate or other psychotropic medications or who lack the ability to comprehend treatment instructions. Furthermore, a previous history of lithium intolerance or intoxication must be carefully assessed (Goodwin et al., 2016; Malhi et al., 2021; Malhi et al., 2018; Strawbridge et al., 2025; L. N. Yatham et al., 2018).

It is also crucial to ensure that the patient has access to appropriate outpatient follow-up, including laboratory monitoring (such as serum lithium levels and renal function), as such longitudinal monitoring is not the objective of emergency care settings. Finally, the expected time to therapeutic response with lithium must be considered. On average, clinical effects occur within 7 to 14 days for manic episodes, 4 to 6 weeks for depressive episodes, and several months for suicide prevention (Goodwin et al., 2016; Malhi et al., 2021; Malhi et al., 2018; Strawbridge et al., 2025; L. N. Yatham et al., 2018). Therefore, lithium should only be prescribed when the anticipated response time can be appropriately managed in other settings, such as inpatient wards, outpatient clinics, day hospitals, or Psychosocial Care Centers.

Lithium intoxication

Lithium intoxication represents a serious and potentially life-threatening clinical condition, reflecting the drug's reduced therapeutic index and its complete dependence on renal excretion. Toxicity may occur in three main contexts: acute intoxication (typically following intentional overdose), acute-on-chronic intoxication (ingestion of excess lithium in patients already receiving maintenance therapy), and chronic intoxication, which is often the most insidious and clinically severe form, resulting from gradual accumulation due to dehydration, renal impairment, aging, or drug–drug interactions (Gitlin, 2016). Clinically, lithium toxicity classically manifests with gastrointestinal symptoms (nausea, vomiting, diarrhea) in early or acute stages, followed by neurological signs such as tremor, ataxia, dysarthria, nystagmus, confusion, delirium, seizures, and, in severe cases, coma. Cardiac manifestations, including T-wave changes, QT prolongation, and arrhythmias, may also occur, particularly at higher serum concentrations (Gitlin, 2016; McKnight et al., 2012; Murphy et al., 2022).

Serum lithium levels above 1.5 mEq/L are generally associated with toxicity, although there is often poor correlation between serum concentration and clinical severity, especially in chronic intoxication, where lithium accumulation in the central nervous system may lead to profound neurological dysfunction despite only moderately elevated serum levels (Malhi et al., 2018). This dissociation emphasizes the significance of clinical assessment over absolute serum values in the context of management decisions. Advanced age, chronic kidney disease, dehydration, sodium depletion, febrile illness, and the concurrent use of medications that reduce renal lithium clearance—particularly nonsteroidal anti-inflammatory drugs, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, and thiazide diuretics—are all risk factors for lithium intoxication (Gitlin, 2016; McKnight et al., 2012).

Administration of lithium intoxication is primarily supportive and depends on the severity and clinical context. Immediate discontinuation of lithium, aggressive intravenous hydration, and correction of electrolyte abnormalities are cornerstones of treatment. Management ought to be founded on the ABCD approach (Baldacara et al., 2022), with gastric lavage performed only within 1 hour after ingestion and supportive hydration for serum lithium levels up to 2.5 mEq/L. Serum levels between 2.5 and 4.0 mEq/L in critically ill patients, or levels \geq 4.0 mEq/L regardless of clinical status, should prompt treatment with hemodialysis. Importantly, neurological sequelae may persist even after normalization of serum lithium concentrations, a phenomenon described as the syndrome of irreversible lithium-effectuated neurotoxicity, further emphasizing the need for prevention through careful dosing, monitoring, and patient education (Gitlin, 2016; McKnight et al., 2012; Murphy et al., 2022). Consequently, awareness of lithium intoxication and its risk factors is essential when considering lithium use, especially in emergency settings, where clinical instability and limited follow-up may substantially enhance the probability of negative results.

Thus, lithium initiation in emergencies should be selective, individualized, and embedded within a realistic plan for continuity of care. In many cases, deferring initiation until clinical stabilization and outpatient follow-up are secured may be safer.

4. Conclusion

Lithium carbonate remains a cornerstone of modern psychiatric treatment, distinguished by its robust efficacy in mood stabilization and its unparalleled evidence for suicide prevention across mood disorders. In psychiatric emergency settings, however, its use requires a level of clinical caution that exceeds that of most psychotropic agents, owing to its limited therapeutic range, delayed onset of action, and absolute dependence on adequate monitoring and continuity of care. As highlighted throughout this review, emergency contexts often present precisely the conditions that increase lithium-related risks: clinical instability, impaired patient insight, comorbid medical illness, dehydration, polypharmacy, and limited capacity for close laboratory and outpatient follow-up.

Therefore, the decision to initiate lithium in an emergency setting should never be routine, but rather individualized and grounded in a careful risk–benefit assessment. Appropriate patient selection—including evaluation of adherence capacity, prior suicide attempts involving medications, history of intolerance or intoxication, renal function, and access to follow-up care—is essential to minimize preventable harm. In many cases, lithium’s therapeutic advantages are best realized when initiation occurs after acute stabilization, within inpatient units or structured outpatient settings that allow adequate monitoring and patient education.

Conversely, in situations where these conditions can be reliably ensured, lithium may represent a strategic intervention with substantial long-term benefits, particularly for patients with bipolar disorder and elevated suicide risk. Ultimately, the safe use of lithium in psychiatric emergencies depends less on the drug itself than on the clinical context in which it is prescribed. Integrating lithium into emergency care should therefore be selective, protocol-driven, and embedded within a realistic plan for continuity of treatment, reinforcing the principle that prudence in the acute phase is fundamental to achieving lithium’s well-established long-term therapeutic value.

References

- Baldaçara, L., Grudtner, R. R., da S. Leite, V., Porto, D. M., Robis, K. P., Fidalgo, T. M., Rocha, G. A., Diaz, A. P., Meleiro, A., Correa, H., Tung, T. C., Malloy-Diniz, L., Quevedo, J., & da Silva, A. G. (2021). Brazilian Psychiatric Association guidelines for the management of suicidal behavior. Part 2. Screening, intervention, and prevention. *Brazilian Journal of Psychiatry*, 43(5), 538-549. <https://doi.org/10.1590/1516-4446-2020-1108>
- Baldaçara, L., Grudtner, R. R., Leite, V. S., Porto, D. M., Robis, K. P., Fidalgo, T. M., Rocha, G. A., Diaz, A. P., Meleiro, A., Correa, H., Tung, T. C., Malloy-Diniz, L. F., & da Silva, A. G. (2021). Brazilian guidelines for the management of suicide behavior. Part 2. Screening, intervention, and prevention. *Braz J Psychiatry*, Forthcoming 2020.
- Baldaçara, L., Ismael, F., Leite, V., Pereira, L. A., Dos Santos, R. M., Gomes Junior, V. P., Calfat, E. L. B., Diaz, A. P., Perico, C. A. M., Porto, D. M., Zacharias, C. E., Cordeiro, Q., da Silva, A. G., & Tung, T. C. (2019). Brazilian guidelines for the management of psychomotor agitation. Part 1. Non-pharmacological approach. *Braz J Psychiatry*, 41(2), 153-167. <https://doi.org/10.1590/1516-4446-2018-0163>
- Baldacara, L., Pettersen, A. G., Leite, V. D. S., Ismael, F., Motta, C. P., Freitas, R. A., Fasanella, N. A., Pereira, L. A., Barros, M. E. L., Barbosa, L., Teles, A. L. S., Palhano, R., Guimaraes, H. P., Braga, M. A., Castaldelli-Maia, J. M., Bicca, C., Gligliotti, A., Marques, A., & da Silva, A. G. (2022). Brazilian Psychiatric Association Consensus for the Management of Acute Intoxication. General management and specific interventions for drugs of abuse. *Trends Psychiatry Psychother*. <https://doi.org/10.47626/2237-6089-2022-0571>
- Baldaçara, L. R., Rocha, G. A., Pinto, F. I., Gomes, I. E. V. e. M., Ribeiro, C. C., Calfat, E. L. d. B., Rosa, C. E., Leite, V. d. S., Barros, M. E. L., Motta, L. S., Agne, N. A., Ribeiro, P. G., Teles, A. L. S., Amaral, L. R. O. G. d., Ribeiro, J. d. A. M., Neves, M. d. C. L. d., Ribeiro, H. L., Silva, I., Lentz, V. J., & da Silva, A. G. (2022). Brazilian Psychiatric Association consensus for the management of psychiatric emergencies in pregnancy and postpartum period. *Debates em Psiquiatria*, 12, 1-44. <https://doi.org/10.25118/2763-9037.2022.v12.389>
- Barroilhet, S. A., & Ghaemi, S. N. (2020). When and how to use lithium. *Acta Psychiatr Scand*, 142(3), 161-172. <https://doi.org/10.1111/acps.13202>
- Cipriani, A., Hawton, K., Stockton, S., & Geddes, J. R. (2013). Lithium in the prevention of suicide in mood disorders: updated systematic review and meta-analysis. *BMJ*, 346, f3646. <https://doi.org/10.1136/bmj.f3646>

- Fernandes, J. M. B., Vieira, L. T., & Castelhanos, M. V. C. (2023). Revisão narrativa enquanto metodologia científica significativa: Reflexões técnico-formativas. *REDES – Revista Educacional da Sucesso*, 3, 1-7.
- Fountoulakis, K. N., Tohen, M., & Zarate, C. A., Jr. (2022). Lithium treatment of Bipolar disorder in adults: A systematic review of randomized trials and meta-analyses. *Eur Neuropsychopharmacol*, 54, 100-115. <https://doi.org/10.1016/j.euroneuro.2021.10.003>
- Garriga, M., Pacchiarotti, I., Kasper, S., Zeller, S. L., Allen, M. H., Vazquez, G., Baldacara, L., San, L., McAllister-Williams, R. H., Fountoulakis, K. N., Courtet, P., Naber, D., Chan, E. W., Fagiolini, A., Moller, H. J., Grunze, H., Llorca, P. M., Jaffe, R. L., Yatham, L. N., . . . Vieta, E. (2016). Assessment and management of agitation in psychiatry: Expert consensus. *World J Biol Psychiatry*, 17(2), 86-128. <https://doi.org/10.3109/15622975.2015.1132007>
- Gitlin, M. (2016). Lithium side effects and toxicity: prevalence and management strategies. *International Journal of Bipolar Disorders*, 4(1). <https://doi.org/10.1186/s40345-016-0068-y>
- Goodwin, G. M., Haddad, P. M., Ferrier, I. N., Aronson, J. K., Barnes, T. R. H., Cipriani, A., Coghill, D. R., Fazel, S., Geddes, J. R., Grunze, H., Holmes, E. A., Howes, O., Hudson, S., Hunt, N., Jones, I., Macmillan, I. C., McAllister-Williams, H., Miklowitz, D. R., Morriss, R., . . . Young, A. H. (2016). Evidence-based guidelines for treating bipolar disorder: Revised third edition recommendations from the British Association for Psychopharmacology. *Journal of Psychopharmacology*, 30(6), 495-553. <https://doi.org/10.1177/0269881116636545>
- Grunze, H., Vieta, E., Goodwin, G. M., Bowden, C., Licht, R. W., Möller, H.-J., & Kasper, S. (2010). The World Federation of Societies of Biological Psychiatry (WFSBP) Guidelines for the Biological Treatment of Bipolar Disorders: Update 2010 on the treatment of acute bipolar depression. *THE WORLD JOURNAL OF BIOLOGICAL PSYCHIATRY*, 11(2), 81-109. <https://doi.org/10.3109/15622970903555881>
- Lam, R. W., Kennedy, S. H., Adams, C., Bahji, A., Beaulieu, S., Bhat, V., Blier, P., Blumberger, D. M., Brietzke, E., Chakrabarty, T., Do, A., Frey, B. N., Giacobbe, P., Gratzler, D., Grigoriadis, S., Habert, J., Ishrat Husain, M., Ismail, Z., McGirr, A., . . . Milev, R. V. (2024). Canadian Network for Mood and Anxiety Treatments (CANMAT) 2023 Update on Clinical Guidelines for Management of Major Depressive Disorder in Adults: Réseau canadien pour les traitements de l'humeur et de l'anxiété (CANMAT) 2023 : Mise à jour des lignes directrices cliniques pour la prise en charge du trouble dépressif majeur chez les adultes. *The Canadian Journal of Psychiatry*, 69(9), 641-687. <https://doi.org/10.1177/07067437241245384>
- Leite, V. d. S., Baldaçara, L., Canedo Filho, D. d. P., Grudtner, R. R., Freitas, R. A. d., Ribeiro, F. V., Akowanou, G. E. R. H., & Amaral, L. R. O. G. d. (2026). Effectiveness of interventions in the prevention of mood disorders: an overview of systematic reviews with meta-analysis. *Debates em Psiquiatria*, 16, 1-47. <https://doi.org/10.25118/2763-9037.2026.v16.1542>
- Malhi, G. S., Bell, E., Bassett, D., Boyce, P., Bryant, R., Hazell, P., Hopwood, M., Lyndon, B., Mulder, R., Porter, R., Singh, A. B., & Murray, G. (2021). The 2020 Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders. *Aust N Z J Psychiatry*, 55(1), 7-117. <https://doi.org/10.1177/0004867420979353>
- Malhi, G. S., Bell, E., Singh, A. B., Bassett, D., Berk, M., Boyce, P., Bryant, R., Gitlin, M., Hamilton, A., Hazell, P., Hopwood, M., Lyndon, B., McIntyre, R. S., Morris, G., Mulder, R., Porter, R., Yatham, L. N., Young, A., & Murray, G. (2020). The 2020 Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders: Major depression summary. *Bipolar Disorders*, 22(8), 788-804. <https://doi.org/10.1111/bdi.13035>
- Malhi, G. S., Das, P., Outhred, T., Irwin, L., Morris, G., Hamilton, A., Lynch, K., & Mannie, Z. (2018). Understanding suicide: Focusing on its mechanisms through a lithium lens. *J Affect Disord*, 241, 338-347. <https://doi.org/10.1016/j.jad.2018.08.036>
- Malhi, G. S., Gessler, D., & Outhred, T. (2017). The use of lithium for the treatment of bipolar disorder: Recommendations from clinical practice guidelines. *Journal of Affective Disorders*, 217, 266-280. <https://doi.org/10.1016/j.jad.2017.03.052>
- McKnight, R. F., Adida, M., Budge, K., Stockton, S., Goodwin, G. M., & Geddes, J. R. (2012). Lithium toxicity profile: a systematic review and meta-analysis. *The Lancet*, 379(9817), 721-728. [https://doi.org/10.1016/s0140-6736\(11\)61516-x](https://doi.org/10.1016/s0140-6736(11)61516-x)
- Murphy, N., Redahan, L., & Lally, J. (2022). Management of lithium intoxication. *BJPsych Advances*, 29(2), 82-91. <https://doi.org/10.1192/bja.2022.7>
- Nabi, Z., Stansfeld, J., Plöderl, M., Wood, L., & Moncrieff, J. (2022). Effects of lithium on suicide and suicidal behaviour: a systematic review and meta-analysis of randomised trials. *Epidemiol Psychiatr Sci*, 31, e65. <https://doi.org/10.1017/s204579602200049x>
- Pereira, A. S., Shitsuka, D. M., Parreira, F. J., & Shitsuka, R. (2018). *Metodologia da pesquisa científica*. Editora da UFSM. https://repositorio.ufsm.br/bitstream/handle/1/15824/Lic_Computacao_Metodologia-Pesquisa-Cientifica.pdf?sequence=1
- Perico, C. A., Santos, R. M. D., Baldacara, L. R., Simaro, C. S., Junqueira, R. C., Pedro, M. O. P., & Castaldelli-Maia, J. M. (2022). Psychiatric emergency units in Brazil: a cross-sectional study. *Rev Assoc Med Bras (1992)*, 68(5), 622-626. <https://doi.org/10.1590/1806-9282.20211267>
- Risemberg, R. I. C., Wakin, M., & Shitsuka, R. (2026). A importância da metodologia científica no desenvolvimento de artigos científicos. *E-Acadêmica*, 7(1). <https://doi.org/10.52076/eacad-v7i1.675>
- Rybakowski, J. (2020). Lithium treatment - the state of the art for 2020. *Psychiatr Pol*, 54(6), 1047-1066. <https://doi.org/10.12740/pp/128340> (Leczenie litem – stan wiedzy na rok 2020.)
- Sakrajda, K., & Rybakowski, J. K. (2025). The Mechanisms of Lithium Action: The Old and New Findings. *Pharmaceuticals*, 18(4). <https://doi.org/10.3390/ph18040467>
- Sher, L. E. O. (2008). Manic-Depressive Illness: Bipolar Disorders and Recurrent Depression, Second Edition. *American Journal of Psychiatry*, 165(4), 541-542. <https://doi.org/10.1176/appi.ajp.2007.07121846>
- Shorter, E. (2009). The history of lithium therapy. *Bipolar Disorders*, 11(s2), 4-9. <https://doi.org/10.1111/j.1399-5618.2009.00706.x>
- Strawbridge, R., Boules, C., Morriss, R., & Young, A. H. (2025). Lithium: Old Drug, New tricks? *Current Psychiatry Reports*, 27(12), 679-686. <https://doi.org/10.1007/s11920-025-01646-0>

Tondo, L., & Baldessarini, R. J. (2024). Prevention of suicidal behavior with lithium treatment in patients with recurrent mood disorders. *Int J Bipolar Disord*, 12(1), 6. <https://doi.org/10.1186/s40345-024-00326-x>

U.S. DEpartment of Veterans Affairs. (2023). *Management of Bipolar Disorder (BD)*. <https://www.healthquality.va.gov/guidelines/MH/bd/>

Venkateswaramurthy, N., & Priyadarsini, R. (2023). A Review of Repercussions of Lithium Amalgamated with Antipsychotics for the Remedy of Bipolar Disorder. *Journal of Drug Delivery and Therapeutics*, 13(5), 106-109. <https://doi.org/10.22270/jddt.v13i5.6064>

Volkman, C., Bschor, T., & Köhler, S. (2020). Lithium Treatment Over the Lifespan in Bipolar Disorders. *Front Psychiatry*, 11, 377. <https://doi.org/10.3389/fpsy.2020.00377>

Wortzel, H. S., Simonetti, J. A., Oslin, D. W., Hermes, E., & Matarazzo, B. B. (2023). Lithium Use for Suicide Prevention, Revisited. *J Psychiatr Pract*, 29(1), 51-57. <https://doi.org/10.1097/pr.0000000000000680>

Yatham, L. N., Kennedy, S. H., Parikh, S. V., Schaffer, A., Bond, D. J., Frey, B. N., Sharma, V., Goldstein, B. I., Rej, S., Beaulieu, S., Alda, M., MacQueen, G., Milev, R. V., Ravindran, A., O'Donovan, C., McIntosh, D., Lam, R. W., Vazquez, G., Kapczinski, F., . . . Berk, M. (2018). Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) 2018 guidelines for the management of patients with bipolar disorder. *Bipolar Disord*, 20(2), 97-170. <https://doi.org/10.1111/bdi.12609>

Yatham, L. N., Kennedy, S. H., Parikh, S. V., Schaffer, A., Bond, D. J., Frey, B. N., Sharma, V., Goldstein, B. I., Rej, S., Beaulieu, S., Alda, M., MacQueen, G., Milev, R. V., Ravindran, A., O'Donovan, C., McIntosh, D., Lam, R. W., Vazquez, G., Kapczinski, F., . . . Berk, M. (2018). Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) 2018 guidelines for the management of patients with bipolar disorder. *Bipolar Disorders*, 20(2), 97-170. <https://doi.org/10.1111/bdi.12609>

Zisook, S., Domingues, I., & Compton, J. (2023). Pharmacologic Approaches to Suicide Prevention. *Focus (Am Psychiatr Publ)*, 21(2), 137-144. <https://doi.org/10.1176/appi.focus.20220076>