

# Nursing care for a patient with autoimmune encephalitis: Experience report

Cuidados de enfermagem a uma paciente com encefalite autoimune: Relato de experiência

Atención de enfermería a un paciente con encefalitis autoimune: Relato de experiencia

## RESUMO

Objetivo: Descrever a Sistematização da Assistência de Enfermagem (SAE) a paciente com diagnóstico de encefalite autoimune. Método: Trata-se de relato de experiência realizado com paciente internada na clínica médica de Hospital Escola em São Luís- MA no período de julho de 2022 baseado na Teoria das Necessidades Humanas Básicas de Wanda Horta. Resultados: Foram aplicadas as seis etapas do processo de enfermagem. As principais necessidades humanas básicas afetadas foram: regulação neurológica, nutrição, locomoção, higiene oral/corporal e mobilidade. O plano de cuidados foi implementado durante o acompanhamento, verificado pouca evolução clínica e a paciente permanecendo com dependência total da equipe de enfermagem. Conclusão: Por meio desse relato foi possível identificar os principais diagnósticos e especificidades da paciente. Reforçando que os suportes teóricos aliados ao estudo do caso, garantem a aplicabilidade da SAE..

**DESCRIPTORES:** Doenças autoimunes; Cuidados de enfermagem; Teoria de enfermagem.

## ABSTRACT

Objective: To describe the Systematization of Nursing Care (SNC) for patients diagnosed with autoimmune encephalitis. Method: This is an experience report carried out with a patient hospitalized in the medical clinic of Teaching Hospital in São Luís-MA in the period of July 2022 based on Wanda Horta's Theory of Basic Human Needs. Results: The six stages of the nursing process were applied. The main basic human needs affected were: neurological regulation, nutrition, locomotion, oral/body hygiene and mobility. The care plan was implemented during the follow-up, there was little clinical evolution and the patient remained totally dependent on the nursing team. Conclusion: Through this report, it was possible to identify the main diagnoses and specificities of the patient. Reinforcing that the theoretical supports allied to the case study, guarantee the applicability of the SNC.

**DESCRIPTORS:** Autoimmune diseases; Nursing care; Nursing theory.

## RESUMEN

Objetivo: Describir la Sistematización de la Atención de Enfermería (SAE) a pacientes con diagnóstico de encefalitis autoimune. Método: Se trata de un relato de experiencia realizado con un paciente internado en la clínica médica del Hospital Escola de São Luís-MA en el período de julio de 2022 con base en la Teoría de las Necesidades Humanas Básicas de Wanda Horta. Resultados: Se aplicaron las seis etapas del proceso de enfermería. Las principales necesidades humanas básicas afectadas fueron: regulación neurológica, nutrición, locomoción, higiene oral/corporal y movilidad. El plan de cuidados se implementó durante el seguimiento, hubo poca evolución clínica y el paciente permaneció totalmente dependiente del equipo de enfermería. Conclusión: A través de este relato, fue posible identificar los principales diagnósticos y especificidades del paciente. Reforzando que los soportes teóricos aliados al estudio de caso, garanticen la aplicabilidad del SAE.

**DESCRIPTORES:** Enfermedades autoimunes; Cuidado de enfermera; Teoría de enfermería.

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## INTRODUÇÃO

**A**utoimmune encephalitis (AE) is an inflammatory disease characterized by subacute involvement of short-term memory and various symptoms (psychotics, atypical clinical manifestations and epileptic seizures), which makes the differential diagnosis a challenge. The pathophysiology of the disease is classified according to its location, causal antigens, and likely mechanisms.<sup>1</sup>

Also called autoimmune encephalopathy, it represents a specific form of autoimmunity against the central nervous system (CNS), differing from the mechanisms related to neuroinflammation arising from primary disorders such as multiple sclerosis, or secondary disorders such as neurodegeneration.<sup>2</sup>

Unlike classic cases of paraneoplastic encephalitis, its prognosis may be much more favorable after immunoglobulin immunotherapy and, when appropriate, tumor ex-

cision.<sup>3</sup> The complex clinical picture may vary according to the patient's age, neuronal antigen distribution, and the presence or absence of an underlying neoplasm.<sup>4</sup>

The pathological process affects memory, cognitive activity, and behavior to varying degrees, all of which depend on the normal activity of neurotransmitter receptors, ion channels, and other neuronal surface proteins that participate in synaptic transmission.<sup>4</sup> In this sense, it is important to highlight that theoretical models contribute significantly to care when used as a reference for the systematization of care. Through them, it is possible to organize information and data from patients/clients, analyze, interpret, to later systematize care and evaluate the results obtained and expected.<sup>5</sup>

Thus, the objective of the present study was to report the Systematization of Nursing Care in the light of Wanda Horta's Theory of Basic Human Needs to a patient with autoimmune encephalitis in a teaching

hospital in Maranhão.

## METHOD

The Theory of Basic Human Needs by Wanda Horta was used as a theoretical framework for the construction of this report<sup>6</sup>, with the application of the six stages of the nursing process: nursing history, nursing diagnosis, care plan, care plan, evolution and prognosis. The report was built from the experience of practical activities of the Adult Health discipline 1 with student follow-up to the patient hospitalized in the medical clinic sector of Hospital Escola in the period of July 2022.

For data collection, the nursing history (interview and physical examination) was applied. After this stage, the nursing diagnoses were established, and from them, the elaboration of the care plan and then the Nursing prescription/Care plan that were organized according to their level of priority.<sup>7</sup>

## RESULTS

As it is an experience report in which the participants are not identified, the present study did not require authorization from the Research Ethics Committee (CEP - Comitê de Ética em Pesquisas) in accordance with the Resolution of the National Health Council No. 466 of 2012.

Her main complaint was “deep sadness and she was not wanting to eat”. 3 months ago she started symptoms of deep sadness, inappetence and agitated behavior. 1 month after the onset of symptoms, she was taken by her family to see a psychiatrist in another municipality in Maranhão, where she was diagnosed with depression and started drug therapy with antipsychotics and anxiolytics. The patient progressed without improvement and started to have seizures and was taken to the Regional Reference Hospital where an MRI of the skull was performed, which indicated a small change in the parieto-frontal region with hypersignal on T2/ flair with cortical dysplasia. She was referred to the capital's emergency hospital where the diagnostic hypothesis of autoimmune encephalitis was raised, and later referred to a teaching hospital. The patient was unable to report doubts and understanding about her condition due to the lowering of the level of consciousness and aphasia, and the companion had little knowledge about the clinical condition.

The following Basic Human Needs were identified: restful sleep (8h/day) without interruptions during the day; 3 meals a day-breakfast: couscous and coffee with milk; lunch: rice, pasta and an animal protein; dinner: couscous with egg (not held daily). Ingestion of 1L of water and liquids/ day, mother informs that she preferred soda and that she used it excessively. Intestinal elimination 1x/day, normal consistency; mean vesical elimination of 4-6x/day amber yellow coloration, without dysuria; body hygiene by spray bath 2x/day with bar soap and scalp 1x/week with shampoo; oral hygiene 2x/day with toothpaste without flossing; denies the practice of physical and sexual activities.

He lives in his own house, made of masonry, with 8 rooms, internet access, untreated water network (storage in tanks), garbage disposal by incineration, without sewage treatment and with animals nearby, mother says that they felt safe because the place is calm and peaceful. Up to the time

do her nails and eyebrows. She interacts well with family members and her bond of friendship.

Health-related care: Did not perform periodic exams, dental evaluations and did not use continuous medication. Vaccinated against COVID-19 with two doses and other full vaccination schedule. Risk situation: Family- Mother: denies it; maternal grandmother: arthritis and arterial hypertension. History of chickenpox in childhood, denies underlying disease, allergic reactions and smoking; a month ago she started to use alcohol sporadically. Nursing impression: The data are consistent with the companion's report, but in relation to the patient's intimate data, it was not possible to perform the collection due to her current state.

Physical Examination: Vital Signs (VS): BP- 110X70 mmHg, Pulse- 67 beats/min, HR- 98 bpm, RR- 16 irpm, TAX- 35.8 °C. On general inspection: patient confined to bed, regular general condition, aphasic, normotensive, spontaneous breathing in room air, disoriented in time and space (Glasgow scale 12), emaciated, feeding by nasogastric tube, vesical elimination by indwelling urinary catheter, peripheral venous access in the right upper limb. Skin and appendages: normal color, hair in the genital region, intact nails, dehydrated skin and mucous membranes. Head and neck: normocephalic, scalp with poor hygiene and presence of dirt, symmetrical eyes, isochoric and photoreactive pupils, preserved photomotor reflex, denies the use of corrective lenses, neck without lymph node enlargement and non-palpable thyroid, denies pain on palpation.

Chest: elliptical, without edema, hypoxemia or spots, breath sounds present, clear lung sound and good lung expansion. Cardiovascular: Normal-phonetic two-stroke heart sounds with no murmur or visible pulsations. Abdomen: flat, bowel sounds present and reduced, aorta inaudible; denies pain on superficial and deep palpation, absence of air, fluids or masses. Upper and lower limbs reduced mobility with slow and uncoordinated movements upon command, preserved peripheral perfusion.

of admission, the companion reported that the patient was reserved, communicative and expressive with her friends, in addition to being well understood by the people she lived with. She enjoys visiting her grandmother's and friends' houses for leisure. Support network: mother and maternal grandmother. She is vain, likes to dress well,

**The pathological process affects memory, cognitive activity, and behavior to varying degrees, all of which depend on the normal activity of neurotransmitter receptors, ion channels, and other neuronal surface proteins that participate in synaptic transmission.**

Genitals: not evaluated, but a companion reported the presence of milky mucus in underwear in a small amount and without a foul odor. Denies STIs and other conditions. In Table 1, the main nursing diagnoses were identified

Assistance Plan: Doing and Helping: medication as prescribed; administer and control the infusion of diet and water; measurement of vital signs; decubitus change; body and oral hygiene; hydration of the skin and mucous membranes; Glasgow and Braden scale; promote comfort. Guide: main caregiver regarding the disease and treatment, change of position, care with NET and IUC maintenance. Supervise: sleep and rest, level of consciousness, VS, skin, enteral diet, NET fixation, bladder and bowel eliminations. Forward: speech therapist, physical therapist.

Care Plan: administering prescribed medication; check vital signs every 6/6 hours; install 500ml diet 2x a day; install water 100 ml 4/4 hours; bed bath 1x/day with hypoallergenic soap; oral hygiene 1x/day; moisturize skin with urea moisturizer after bathing; decubitus change 2/2 hours; install and maintain air mattress; observe the areas of bony prominences; apply Glasgow and Braden scale 1x/day; wash NET before and after medication/diet administration; provide heated blanket; reduce light and noise in the environment; guide about disease and therapy; supervise NET fixation, nasal hygiene, and sleep and rest.

Evolution: During the follow-up, she remained restricted to bed with a Braden scale<sup>13</sup>, disoriented in time and space (Glasgow 13-12), regular general condition, spontaneous breathing in room air, aphasic, intact skin, hydrated, normocolored, normothermic, presented fever on the 8th Day of Hospitalization (38°C), tachycardic, without pain, restless sleep since the 3rd Day of Hospitalization, feeding by NET in a continuous infusion pump (CIP) with good acceptance of the diet, emesis 1x in small amounts on the 3rd Day of Hospitalization, evacuation present in diapers (average of 2x/day) of liquefied consistency and yellowish color, diuresis by IUC removed on the 5th Day of Hospitalization for

Table 1. Main Nursing Diagnoses raised for the patient with Autoimmune Encephalitis, São Luís- MA, Brazil, 2022.

| Nursing Problems                       | BHN                             | Degree of Dependence   |
|--|---------------------------------|--|
| Dry mucous membranes                   | Hydration                       | FA <sub>2</sub> O <sub>1</sub> S <sub>1</sub>                |
| Lowering of the level of consciousness | Neurological regulation         | FA <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |
| Seizures                               | Neurological regulation         | FA <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |
| Hyperthermia                           | Thermal regulation              | FA <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |
| Aphasia                                | Communication                   | A <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub>  |
| Restless sleep                         | Sleep and rest                  | FA <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |
| Nasoenteral tube feeding               | Nutrition                       | FA <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |
| Indwelling urinary catheter diuresis   | Bladder elimination             | FA <sub>1</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |
| Bed restriction                        | Locomotion                      | FA <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |
| Skin fragility and dryness             | Cutaneous and mucosal integrity | FA <sub>2</sub> O <sub>1</sub> S <sub>2</sub> E <sub>1</sub> |

Source: Authors, 2022.  
1 the main nursing diagnoses were surveyed.

evaluation of spontaneous elimination, without success and replaced on the 6th Day of Hospitalization, PVA with jelco 22 in upper right member changed on the 2nd and 6th Day of Hospitalization, CSF was collected on the 8th Day of Hospitalization by the medical team and material sent for laboratory analysis, on antibiotic therapy with Meropenem (7 days), he had seizures daily in the daytime period and administered intravenous diazepam for control, limbs with reduced mobility and preserved peripheral perfusion, SV remained in the following ranges: BP:140X90-110X70 mmHg; FC:144-98 bpm; FR:18-16; Tax: 35.8-38°C; SpO<sub>2</sub>:97-98%; Capillary blood glucose: 85-109.

Prognosis: After care, the patient continued to show total dependence on hydration, nutrition, elimination, locomotion, hygiene and communication needs. Until the last day of follow-up by the students, the clinical picture remained unchanged, but without worsening and demanding comprehensive care from the entire team.

**DISCUSSION**

In this report, psychiatric alterations were observed, such as: alteration of perception, personality, insomnia and agitation. Such manifestations were previously described in the study by Guasp & Dalmau

(2018) which showed, for the prodromal condition, symptoms of hallucinations, insomnia, paranoid ideas, psychosis and agitation. Also for the same study, the initial therapeutic indication was the use of corticosteroids associated with immunoglobulin therapy, the same performed for our patient.<sup>8</sup>

Similar to our case, there was also a case of a 17-year-old patient where he started with behavioral changes, disorientation and amnesia. Magnetic resonance imaging revealed an area of striatum-capsular hypersignal on the right, similar to what was found in our case, where cranial MRI showed hypersignal on T2/flair with cortical dysplasia. Studies indicate that, for AE, in about 50% of patients, nonspecific T2 hypersignal in the regions of the hippocampus, cortex, basal ganglia and frontobasal region can be evidenced on imaging.<sup>9,10,11</sup>

Regarding nursing diagnoses, nursing problems, basic human needs affected and the degree of dependence of the individual on the care of the team were raised. It was observed that the patient, among several manifestations, presented difficulty in maintaining balanced posture, inability to carry out her meals and oral/body hygiene, with the need for physical mobility and hygiene affected, the same observed in the study by dos Santos & Viana (2019), who identified as a diagnosis in their research:

impaired physical mobility in patients with AE, related to neuromuscular and musculoskeletal impairment characterized by uncoordinated and spastic movements.<sup>12</sup>

Rosin et al. (2016) in a study developed in a public teaching hospital in the interior of Paraná with neurological patients, hospitalized in medical and surgical clinics, presented as main nursing diagnoses:

impaired bed mobility (mobility), deficit in self-care for bathing (body/oral hygiene), deficit in self-care for food (nutrition) and impaired physical mobility (locomotion), in addition to prescribed care such as: skin care, pressure injury prevention and neurological monitoring similar to that found and prescribed in our case.<sup>13</sup>

In an observational study carried out by de Souza and Kato (2019) with individuals treated at Hospital São Lucas, of the Pontifical Catholic University of Rio Grande do

Sul, it was identified that 50% of patients had a condition considered severe, followed by 16.8% considered moderate and who needed intensive and semi-intensive care, respectively<sup>14</sup>, the same seen in our report, since the patient needed comprehensive care from the nursing team and she was waiting for an intensive care bed to be transferred until the last day she was followed up.

It is worth noting that the approach and performance of nursing professionals in the management of patients with neurological disorders should be based on the specificity of each case, in addition to being evidence-based with continuous improvement and training so that care practice is performed efficiently.<sup>15</sup>

## CONCLUSION

The NCS gives nursing professionals

greater autonomy, organization and more favorable results in the care of patients with autoimmune encephalitis. In this report, despite occasional improvements observed during follow-up, little favorable clinical evolution of signs and symptoms was observed, but there was no worsening of the condition. The care and care plan established were executed and monitored as to its applicability and effectiveness. It could be seen that the applicability of the Nursing Process in clinical practice by nursing students during their practical activities contributed to a greater understanding and assimilation of the theoretical framework learned throughout the course period. The interface between theory and practice makes the teaching-learning process more dynamic, interactive and understandable to nursing students.

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