A Case Report of Integrated Chinese-Western Medicine Nursing Care for a Patient with Anti-NMDAR Encephalitis in the Recovery Phase

Authors: Li Rui, Yang Qianqian

Date: 2024-11-29T00:00:00+00:00

Abstract

This paper summarizes a case of severe anti-NMDAR encephalitis. Following first-line and second-line Western immunotherapy, anti-epileptic treatment, respiratory support, and other symptomatic treatments, the patient' s condition gradually stabilized. During the rehabilitation period, the patient received comprehensive intervention combining conventional Western nursing care with characteristic Traditional Chinese Medicine nursing techniques, including Chinese herbal decoction for replenishing qi, activating blood circulation, and unblocking collaterals; acupoint application for clearing heat and resolving phlegm; constipation massage and acupoint massage for promoting bowel movement and relieving distension; and Chinese herbal oral care for clearing heat, detoxifying, and preventing infection. After 29 days of treatment and nursing care, the patient' s activities of daily living, sputum characteristics, constipation status, and anxiety-depression state all showed significant improvement, and the patient was eventually discharged after recovery. This experience is summarized herein to provide a reference for clinical nursing practice.

Full Text

Nursing Report on Integrated Chinese and Western Medicine Care During the Rehabilitation Period of a Patient with Anti-NMDAR Encephalitis

Li Rui[1], Yang Qianqian[2]
[1]Department of Neurology, Beijing Huimin Hospital, Beijing, 100054;
[2]Department of Nursing, Beijing Huimin Hospital, Beijing, 100054

Abstract

This article summarizes the case of a severe anti-NMDAR encephalitis patient whose condition gradually stabilized after receiving first-line and second-line immunotherapy, antiepileptic treatment, respiratory support, and other symptomatic Western medical treatments. During the recovery period, the patient received comprehensive intervention integrating routine Western medical care with traditional Chinese medicine (TCM) nursing techniques, including Chinese herbal decoctions to tonify qi, activate blood circulation, and unblock collaterals; acupoint application therapy to clear heat and transform phlegm; tuina massage for constipation and acupoint massage to relieve constipation and abdominal distension; and TCM oral care to clear heat, detoxify, and prevent infection.

After 29 days of treatment and nursing care, the patient' s daily living abilities, sputum characteristics, constipation status, and anxiety and depression levels all improved significantly, leading to recovery and discharge. This experience is summarized below to provide a reference for clinical nursing practice.

Keywords: anti-NMDAR encephalitis; rehabilitation period; integrated nursing care; case report

Autoimmune encephalitis (AE) refers to a class of encephalitis mediated by autoimmune mechanisms. Currently, AE accounts for approximately 10% to 20% of encephalitis cases, with anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis being the most common subtype, representing about 54% to 80% of AE cases [1]. The main clinical manifestations of anti-NMDAR encephalitis include psychiatric and behavioral abnormalities, cognitive impairment, decreased recent memory, epileptic seizures, speech disorders, movement disorders, involuntary movements, decreased consciousness level and coma, and autonomic nervous system dysfunction [2]. Treatment includes immunotherapy, symptomatic treatment for seizures and psychiatric symptoms, supportive therapy, rehabilitation therapy, and tumor removal and other anti-tumor treatments for patients with concurrent tumors [2].

During the rehabilitation nursing process, healthcare providers often face a series of nursing problems related to central hypoventilation, autonomic nervous dysfunction, cognitive impairment, and medication [3-5]. This article aims to summarize the nursing experience of applying integrated Chinese and Western medicine nursing techniques in a patient with anti-NMDAR encephalitis to promote recovery, and the case report follows.

1. Clinical Data

1.1 General Information

The patient was a 43-year-old male who developed a headache on May 8 without obvious precipitating factors and self-administered medication. After May 11, the patient developed auditory hypersensitivity and psychiatric behavioral

abnormalities, mainly manifested as unexplained irritability, perceiving objects as two-dimensional, experiencing time as passing faster than normal, sensing movement speed as faster than normal, intermittently failing to recognize family members, and episodes of staring spells. On May 22, he visited a local mental health center. Due to worsening condition with loss of consciousness and episodic limb rigidity the following day, he was urgently transferred to the Neurological Intensive Care Unit of a tertiary Grade A hospital in Beijing. Lumbar puncture and other examinations were completed, showing NMDAR-IgG positivity in both cerebrospinal fluid (1:10) and blood (1:10), leading to a diagnosis of "severe anti-NMDAR encephalitis." After first-line and second-line immunotherapy, his condition gradually stabilized. On September 6, 2024, he was admitted to our department for further treatment with the chief complaint of "psychiatric behavioral abnormalities for 3 months, loss of consciousness with limb rigidity for over 2 months."

1.2 Physical Examination

Vital signs: Temperature 37.1℃, pulse 76 beats/min, respiration 23 breaths/min, blood pressure 106/53 mmHg.
Neurological examination: Conscious but with delayed responses. Disorientation to time, place, and person, with decreased comprehension, calculation, and memory abilities. Bilateral pupils were equal and round, 3 mm in diameter, with sensitive light reflexes and full eye movement. Facial symmetry was normal, tongue protrusion was centered. Muscle tone was normal in all limbs, with muscle strength grade V in both upper limbs and grade IV in both lower limbs. Tendon reflexes were ++ in all limbs, with negative bilateral pathological signs. Sensory and coordination examinations showed no abnormalities. Meningeal signs were negative.
Respiratory system: Decreased breath sounds in both lungs, with moist rales and rhonchi audible.
Cardiovascular system: Heart rate 76 beats/min, regular rhythm, low heart sounds, no murmurs heard.
Abdomen: Soft abdomen, no tenderness or rebound tenderness, liver and spleen not palpable below ribs, bowel sounds 3-4 times/min, no edema in lower limbs.

TCM presentation: The patient was conscious, in a tracheostomy state, with limb weakness, intermittent cough and sputum production, weak autonomous expectoration, indwelling gastric tube, normal urination, constipation, normal sleep, flushed complexion, red tongue with yellow greasy coating, and deep thready pulse.

1.3 Diagnosis and Treatment

TCM diagnosis: Depressive-manic disorder (癫狂病) - phlegm-stasis intermingling pattern (痰瘀互结证)
Western medicine diagnosis: Anti-NMDAR encephalitis

After admission, the patient received Level I nursing care, nasogastric feeding, and cardiac monitoring. Non-invasive ventilator-assisted ventilation was provided with intermittent nebulization (S/T mode, IPAP 12 cmH_2O, EPAP 6 cmH_2O, frequency 18 breaths/min, FiO_2 35%, inspiratory time 1.0 s).

Treatment plan: Western medicine treatment mainly included enteral nutrition support; phenobarbital 90 mg Q8h and clonazepam 1 mg Q8h for antiepileptic treatment; lorazepam 0.5 mg Q12h for anxiety relief; paroxetine 20 mg Qd for depression relief; and prednisone acetate 25 mg Qd for immunotherapy. TCM treatment primarily involved Chinese herbal decoction to tonify qi, supplement spleen and stomach, and unblock collaterals. Specific herbs included: Astragalus 60 g, Cinnamon Twig 18 g, White Peony Root 80 g, Jujube 20 g, Dried Ginger 10 g, Prepared Aconite 10 g (decocted first), Bupleurum 15 g, Honey-fried Licorice 6 g, Deer Antler 4 g (infused), Anemarrhena 15 g, Salvia 30 g, Bran-fried Bitter Orange 12 g, Platycodon 8 g. The herbs were concentrated in water, one dose daily, divided into morning and evening administrations. Tuina massage for constipation and acupoint application therapy for phlegm transformation were also administered. After 29 days of treatment, the patient showed significant improvement and was discharged on October 5.

2. Nursing Assessment

2.1.1 Activities of Daily Living

The Barthel Index was used to assess the patient' s activities of daily living. Scoring is as follows: 0 = independent living (100 points, good ADL function, no assistance needed); 1 = mild dysfunction (61-99 points, can independently complete some daily activities but requires some help); 2 = moderate dysfunction (41-60 points, requires substantial help to complete daily activities); 3 = severe dysfunction ($ $40 points, most daily activities cannot be completed or require complete care). This patient' s Barthel score was 0 points, indicating severe dysfunction.

2.1.2 Sputum Assessment

Sputum color, viscosity, and volume were evaluated using the grading system detailed in Table 1 . This patient' s sputum was assessed as grade 2, with appearance more viscous than grade 1, small amounts of sputum retained on the inner wall of the glass connector after suctioning but easily rinsed clean with water.

2.1.3 Cough Strength Assessment

Cough strength was assessed at admission using the 6-level grading system shown in Table 2 . The patient' s cough strength was grade 4, indicating a potentially successful chance for extubation.

2.1.4 Constipation Assessment

The constipation symptom evaluation scale (detailed in Table 3) includes assessment of defecation frequency, Bristol stool form, defecation time, abdominal distension, difficulty degree, and incomplete evacuation feeling, with total scores ranging from 0-18 points (higher scores indicate more severe constipation). This patient' s constipation symptom score at admission was 12 points.

2.1.5 Fall Risk Assessment

The MORSE Fall Scale was used to assess fall risk during hospitalization. The scale includes six items: fall history within 3 months, gait, walking aids, cognitive status, medical diagnosis, and intravenous infusion. Total scores range up to 125 points: >45 points indicates high risk, 25-45 points indicates moderate risk, and <25 points indicates low risk. This patient' s fall risk score at admission was 45 points, indicating moderate risk.

2.1.6 Anxiety and Depression Assessment

The Self-Rating Anxiety Scale (SAS) and Self-Rating Depression Scale (SDS) were used for assessment. Both scales contain 20 items. The SAS standard score is 50 points: 50-59 indicates mild anxiety, 60-69 moderate anxiety, and >69 severe anxiety. The SDS standard score is 53 points: 53-62 indicates mild depression, 63-72 moderate depression, and $ $73 severe depression [6]. This patient' s SAS score at admission was 69 points (moderate anxiety), and SDS score was 67 points (moderate depression).

2.2 Nursing Diagnoses

The nursing diagnoses for this patient were: (1) Ineffective airway clearance related to viscous sputum, excessive respiratory secretions, sputum retention in airways, and tracheostomy cuff; (2) Constipation related to spleen-kidney deficiency; (3) Anxiety related to slow disease recovery and recurrent condition.

2.3 Nursing Plan

Based on Western medical nursing including nutritional support, medication management, and chest care, TCM characteristic nursing techniques such as herbal decoctions, TCM oral care, acupoint application therapy, and constipation tuina massage were integrated to relieve symptoms including constipation, promote recovery, and improve self-care abilities in daily living.

2.4 Nursing Interventions

2.4.1 Conventional Nursing Care

2.4.1.1 Chest and Pulmonary Care

To improve ineffective airway clearance, the following nursing measures were

implemented: (1) Maintain ward temperature at 22-24°C and humidity at 80%-90%, with ventilation twice daily; (2) Assist patient in semi-recumbent position at 30-45°; (3) Monitor cuff pressure every 8 hours, maintaining it at 25-30 cmH_2O; (4) Turn patient every 2 hours, performing chest percussion from bottom to top and outside to inside for 3-5 minutes each time; (5) Use external vibration expectoration device with patient education on cooperation; (6) Administer nebulization for 20 minutes 2 hours before or after nasogastric feeding to fully dilute sputum; (7) After nebulization, maintain lateral position and place the percussion head on the patient' s back, setting frequency at 15-35 Hz, percussing from bottom to top and outside to inside for 10-20 seconds per area, for a total of 10 minutes per session (morning and afternoon) to loosen pulmonary secretions and facilitate expectoration.

2.4.1.2 Constipation Management

Due to reduced activity and decreased intestinal peristalsis causing constipation, the following measures were implemented: (1) Observe defecation cycle, frequency, stool characteristics, color, odor, and presence of abdominal distension or pain; (2) Provide nasogastric water $ $1500 ml daily and nasogastric sesame oil 25 ml twice daily; (3) Administer tuina massage and acupoint massage: patient in supine position, operator standing on the right side, using finger pressure to massage three abdominal acupoints (Shenque, Daheng, and Tianshu) for 5 minutes each until the patient felt soreness and distension [7]; then apply glycerin to palms and perform circular kneading with the thenar eminence along the colon pathway from right lower abdomen (ascending colon) to transverse colon to descending colon, repeated multiple times with approximately 1 cm skin depression, for about 3-5 minutes [8].

2.4.1.3 Anxiety and Depression Management

Patient anxiety was related to slow recovery and recurrent condition. Interventions included: (1) Using a writing board for effective communication with the tracheostomized patient, listening to concerns, providing psychological counseling, establishing good nurse-patient relationship, and building confidence to overcome disease; (2) Facilitating family contact and providing a mobile phone for daily video calls with his spouse, with visitation on Mondays, Wednesdays, and Fridays from 15:00-17:00 to create a warm family environment; (3) Actively greeting and communicating with the patient during shift changes and treatments, offering encouragement and praise for progress to build self-confidence.

2.4.2 TCM Characteristic Nursing

2.4.2.1 Acupoint Application Therapy

Fritillaria 10 g, Trichosanthes 10 g, Poria 10 g, and Houttuynia 10 g were ground into powder, mixed with mature vinegar into a paste, and applied as a TCM plaster to the Yongquan acupoint for 4-6 hours daily. Local skin was closely monitored for allergic reactions such as blistering, itching, or redness. If severe burning or needle-like pain occurred, the plaster could be removed early. The area was kept clean and dry.

2.4.2.2 Chinese Herbal Decoction

Based on the patient' s fatigue, limb weakness, abdominal resistance, intermittent gastric retention, and tongue/pulse findings indicating qi deficiency and blood stasis, a decoction was prescribed to tonify qi, supplement spleen and stomach, and unblock collaterals. The formula included: Astragalus 60 g, Cinnamon Twig 18 g, White Peony Root 80 g, Jujube 20 g, Dried Ginger 10 g, Prepared Aconite 10 g (decocted first), Bupleurum 15 g, Honey-fried Licorice 6 g, Deer Antler 4 g (infused), Anemarrhena 15 g, Salvia 30 g, Bran-fried Bitter Orange 12 g, and Platycodon 8 g. The herbs were concentrated in water, one dose daily, administered half an hour before breakfast and dinner.

2.4.2.3 TCM Oral Care

TCM oral care was administered to maintain oral hygiene and prevent ventilator-associated pneumonia. The formula included: Honeysuckle 20 g, Forsythia 20 g, Agastache 20 g, Eupatorium 20 g, Licorice 6 g, and Fermented tea 9 g. Oral care was performed using the cotton ball wiping method twice daily.

2.5 Nursing Evaluation

After integrated Chinese and Western nursing interventions, the patient' s activities of daily living, sputum characteristics, constipation severity, and anxiety/depression status all improved, as detailed in Table 4 .

Table 4: Efficacy Evaluation

Assessment	September 6, 2024 (Admission)	September 17, 2024 (Day 11)	October 5, 2024 (Discharge)
Barthel Index	0 (Severe dysfunction)	20 (Severe dysfunction)	65 (Moderate dysfunction)
Sputum Assessment	Moderate amount, grade 2, white viscous sputum	Moderate amount, grade 2, white viscous sputum	Small amount, grade 1, white sputum
Constipation Symptom Score	12	8	3
SAS Score	69 (Moderate anxiety)	58 (Mild anxiety)	45 (Normal)
SDS Score	67 (Moderate depression)	55 (Mild depression)	48 (Normal)

3. Results and Follow-up

The patient was discharged on October 5, 2024. Post-discharge follow-up was conducted to track prognosis, with instructions to take medication on time, perform rehabilitation exercises regularly, and regulate emotions. The patient

did not experience recurrent headaches, psychiatric behavioral abnormalities, anxiety, or involuntary movements, with only occasional staring spells. The prognosis was good, and both the patient and family expressed high satisfaction with the nursing measures.

4. Discussion

Anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis is a rare autoimmune encephalitis. Although its diverse etiology and clinical manifestations have attracted considerable attention, the pathogenesis remains incompletely understood, and diagnosis and treatment still have certain limitations [9]. The Chinese Expert Consensus on Monitoring and Treatment of Severe Autoimmune Encephalitis (2024 Edition) [10] indicates that early initiation of immunotherapy is beneficial for long-term prognosis in anti-NMDAR encephalitis patients, but severe cases often require extended stays in the neurological care unit.

Research also indicates that after acute symptoms subside, patients with anti-NMDAR encephalitis require prolonged recovery time for physical, psychological, and cognitive changes [11]. However, the TCM concepts of "unity of body and spirit" and "nurturing both form and spirit" represent advantages throughout the entire process of syndrome differentiation and treatment [12,13]. TCM characteristic nursing, based on principles of "holistic nursing" and "nursing according to syndrome differentiation,"enables individualized formulas and nursing plans that can shorten disease course and improve survival and quality of life [14].

In this case, the TCM diagnosis was depressive-manic disorder with phlegm-stasis intermingling pattern. Treating this condition requires simplifying complex presentations and addressing the main contradictions. Phlegm and stasis run through the entire disease course. According to different disease stages, the relative severity of phlegm versus stasis must be distinguished for formula selection. Only by completely eliminating both pathogenic factors, supplementing the spleen and stomach, nourishing the heart and calming the spirit, using warming medicinals for harmony, attacking and expelling phlegm, and treating phlegm and stasis simultaneously can the disease be cured [15]. Therefore, the entire formula likely aims to harmonize qi and blood, warm yang and disperse cold, soothe the liver and relieve depression, and activate blood and resolve stasis. Astragalus, jujube, and honey-fried licorice tonify qi and nourish blood; cinnamon twig, dried ginger, and prepared aconite warm yang and disperse cold; bupleurum and white peony soothe the liver and relieve depression; salvia and bran-fried bitter orange activate blood and resolve stasis; while platycodon helps to ventilate the lungs and expel phlegm.

The patient' s condition involved intermingling of phlegm turbidity and heat pathogen disturbing the heart spirit. Fritillaria clears heat, transforms phlegm, relieves cough, and detoxifies while dispersing nodules; trichosanthes clears heat, transforms phlegm, expands the chest, disperses nodules, and moistens in-

testines to promote bowel movements; poria promotes diuresis, seeps dampness, strengthens the spleen, and calms the heart; houttuynia clears heat, detoxifies, reduces abscesses, and promotes pus discharge. The combination of these herbs can clear heat, transform phlegm, disperse chest nodules, promote diuresis, and calm the spirit. Furthermore, Yongquan acupoint, a commonly used point on the Kidney meridian of foot-shaoyin located on the sole, treats kidney system diseases, difficult defecation, and dysuria. Selecting Yongquan for acupoint application aims to harmonize yin and yang, unblock meridians, guide fire back to its source, and clear heat and transform phlegm.

Acupoint massage focused on Shenque, Daheng, and Tianshu points to regulate spleen-kidney deficiency. Shenque, located at the center of the navel, harmonizes the intestines and stomach and strengthens the foundation. For constipation caused by spleen-kidney deficiency and intestinal malnourishment, massaging Daheng and Tianshu points on the abdomen can effectively relieve symptoms [7]. Constipation tuina can relieve constipation by adjusting intestinal peristalsis, altering colonic slow waves, and promoting abdominal blood circulation [16].

Poor oral hygiene is an independent risk factor for ventilator-associated pneumonia (VAP) [17]. Chinese herbal preparations have heat-clearing, detoxifying, antibacterial, and anti-inflammatory effects. As oral care solutions, they can effectively prevent VAP in mechanically ventilated patients, with advantages including low drug resistance development and good taste [18,19].

In summary, integrating conventional Western nursing techniques with TCM characteristic nursing techniques demonstrates significant advantages in treating anti-NMDAR encephalitis patients during the rehabilitation period. This case study not only validates the unique value of TCM in nursing care for anti-NMDAR encephalitis patients during recovery but also emphasizes the importance and indispensability of comprehensive TCM nursing beyond medication. However, it should be noted that due to the limited sample size of this case analysis, the conclusions have certain limitations. Therefore, more in-depth and extensive research is needed to comprehensively evaluate the application effects of TCM nursing in anti-NMDAR encephalitis patients during rehabilitation and to provide more solid evidence for clinical application.

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Note: Figure translations are in progress. See original paper for figures.