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Nursing Problems of a Patient with ALS Syndrome — A Case Report

Problemy pielęgnacyjne u pacjenta z zespołem ALS — studium przypadku

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Abstract

Introduction. The motor-neurone disease Amyotrophic Lateral Sclerosis (ALS) includes slowly progressive disorders with a waveform which is the result of pathologies involving neurones in the cerebral cortex, brain stem and spinal cord. Its severe course is associated with damage to certain brain functions responsible for controlling important vital signs. ALS is an incurable disease that belongs to the neurodegenerative disorders. Due to the progressive nature of the disease, the nurse plays an important role in patient care — from the stage of diagnosis to palliative care. The main objective of the study is to present nursing problems and tasks undertaken by a nurse in the process of nurturing a patient with ALS.
Case Report. A man, 42, admitted to the Rehabilitation Clinic of the University Clinic Centre in Gdansk, due to the massive para paresis, upper extremity paralysis more pronounced on the left side. On the basis of clinical picture, there was a suspicion of ALS.
Discussion. The presented ALS case with laboratory abnormalities having uncertain meaning (ALS-LAUS syndrome) was characterised by an unusually fast progressing course.
Conclusions. The importance of the role of a nurse in the care of the patient with ALS is confirmed by the conclusions reached in the presented case description: 1) The patient was found to have limited physical fitness, communication problems, high risk of developing pressure ulcers and complications associated with immobility. 2) Due to the significantly reduced efficiency of self-service, the patient required a holistic nursing care with regard to activities of daily living. 3) After the hospitalisation the patient required continuity of comprehensive care ensured by the family and support institutions related to home respiratory care. **(JNNN 2015;4(4):170–177)**
Key Words: Amyotrophic Lateral Sclerosis, nursing care, respiration artificial

Streszczenie

Wstęp. Choroba neuronu ruchowego Stwardnienie zanikowe boczne (ALS), obejmuje zaburzenia o powoli postępującym przebiegu, będącym następstwem patologii obejmujących neurony kory mózgowej, pnia mózgu i rdzenia kręgowego. Ten ciężki przebieg związany jest z uszkodzeniem określonych funkcji mózgu, odpowiadających za kontrolowanie istotnych czynności życiowych. ALS jest chorobą nieuleczalną, zaliczaną do schorzeń neurodegeneracyjnych. Ze względu na postępujący charakter choroby, pielęgniarka pełni istotną rolę w pielęgnacji pacjenta — od etapu diagnozy, aż po opiekę paliatywną. Celem pracy jest przedstawienie problemów pielęgnacyjnych i zadań podejmowanych przez pielęgniarkę w procesie pielęgnowania pacjenta z zespołem ALS.
Opis przypadku. Mężczyzna lat 42 przyjęty do kliniki Rehabilitacji Uniwersyteckiego Centrum Klinicznego w Gdańsku z powodu masywnego niedowładu kończyn dolnych oraz niedowładu kończyn górnych, bardziej nasilonego po stronie lewej. Na podstawie obrazu klinicznego wysunięto podejrzenie ALS.
Dyskusja. Przedstawiony zespół ALS z nieprawidłowościami laboratoryjnymi o niepewnym znaczeniu (zespół ALS-LAUS), występujący u pacjenta charakteryzował niezwykle szybki postępujący przebieg.
Wnioski. Potwierdzeniem istotnej roli jaką pełni pielęgniarka w opiece nad pacjentem z ALS, są wnioski sformułowane w przedstawionym opisie przypadku: 1) U chorego stwierdzono ograniczenie sprawności fizycznej, trudności w porozumiewaniu się, duże ryzyko wystąpienia odleżyn i powikłań związanych z unieruchomieniem. 2) Z powodu znacz-

nie ograniczonej wydolności samoobsługowej pacjent wymagał całościowej opieki pielęgniarskiej z zakresie czynności dnia codziennego. 3) Chory po zakończonej hospitalizacji wymagał zapewnienia ciągłości kompleksowej opieki ze strony rodziny oraz instytucji wspierających związanych z prowadzeniem respiratoterapii domowej. **(PNN 2015;4(4):170–177)**
Słowa kluczowe: Stwardnienie Zanikowe Boczne, opieka pielęgniarska, oddychanie sztuczne

Introduction

In the case of many diseases of the nervous system [1], the effects of the disease lead to long-term disability and in many cases to death. Severe and progressive course of disease of the nervous system is often associated with damage of the important functions of the brain responsible for controlling important physiological functions such as respiration, circulation etc. [1,2]. Therefore, the crucial role of the nurses in the care of neurological patients must be stressed. Nursing interventions that are undertaken for patients suffering from severe neurodegenerative diseases require nursing experience and skills in handling patients with disorders of consciousness, dysfunction of vital signs, motor skills and motor coordination or higher cognitive processes [3]. One of such diseases is amyotrophic lateral sclerosis.

Sclerosis Lateralis Amyotrophica (Latin) [4], in English Amyotrophic lateral sclerosis (ALS) [5], also called Charcot's disease, Lou Gehrig's disease, motor neuron disease, is an incurable disease, ranked among neurodegenerative disorders, where the pathological process affects upper and lower motor neuron [5–16]. Incidence is estimated to be about 5/100 thousand individuals in the population [11–13,16,17]. Beginning of illness falls on 6th and 7th decade of life [11], but the disease can begin at different ages — in about 10% of the cases the disease develops before age 40, and in 5% of cases — before age 30 [11,14,17]. Men get sick 2 times more likely than women [11,14,17,18]. The aetiology and pathogenesis of the disease are not known [14]. There is a lot of pathogenic concepts which can be divided into the genetic, the endogenous (metabolic, hormonal receptor, cytotoxic etc.), the exogenous (theory of heavy metals), the immunological ones and viral theory [14, 15,17]. As to pathology, degeneration of primary anterior horn cell, pyramidal cells of the cerebral cortex and pyramidal tract is stated [17,18].

Clinically ALS can be divided into the bulbar palsy and the pseudo-bulbar palsy, the form with seizure of only lower motor neurone (progressive spinal atrophy), or extremely rare — seizure of the upper motor neurone [10,14]. Damage to the upper motor neurone manifests itself as spastic paralysis of the lower limbs [17], excessive reflexes, clonus, as well as the presence of pathological symptoms indicative of seizure of pyramidal tract such as the Babinski and Hoffman reflexes [15,17], while the lower motor neurone damage is revealed by weakness and atrophy of muscles, and the presence of fasciculation [10,14,16–18]. Pseudo-bulbar syndrome (dysphagia, dysarthria spastic), signifies the seizure of both sides of the corticobulbar tracts (damage to the upper motor neurone) running into the nucleus of glossopharyngeal nerve, vagus and hypoglossal nerve. Damage occurs at different levels of the corticobulbar tract: at the level of the motor cortex, internal capsule, midbrain or synaptic bridge before switching to the lower motor neurone [10,16–18]. The bulbar palsy is present in the event of damage to cranial nerve nuclei located in the medulla. This concerns nerves: IX, X, XI and XII on their way to the midbrain nuclei, which indicates damage to the lower motor neurone. The bulbar palsy symptoms include: dysphagia, dysarthria limp, and paresis palate. Slurred speech, distorted pronunciation of labial sounds and sounds involving tongue may occur as well as dystrophy of tongue muscles and fasciculations. All the striated muscle tissues, including diaphragm, are paralysed and atrophy during illness. Eye movements are the longest spared functions [10,16,18]. Medial survival is 4–5 years. The condition of a patient at the last stage of illness is called locked-in syndrome. Death occurs from respiratory failure [10,16,18]. Unfortunately, there is not yet a cure for ALS disease. Specialised multidisciplinary care, proper nutrition, suitable psychotherapy and symptomatic treatment are fundamental. Pharmacological treatment includes medicine that has an effect on muscle contraction, spasticity, excessive salivation, pseudo — bulbar syndrome, pain, anxiety and mood alteration [10,14,16,18].

The main objective of the study is to present nursing problems and tasks undertaken by a nurse in the process of nurturing a patient with ALS syndrome with diagnoses, nursing intervention and activities in accordance of the ICNP criteria taken into account.

Case Report

A man, 42, admitted to the Rehabilitation Clinic of the University Clinic Centre in Gdansk on 18.02.2009, due to the massive para paresis, upper extremity paralysis more pronounced on the left side. On admission, patient was conscious with verbal contact, slow speech, serene mood. The patient was cardiovascular and respiratory stable. He didn't complain of pain. Temperature: 36,6°C. Requires help in every nursing and caring activity. Orally fed, functional status: mRs scale: 5, Barthel Index: 7.

The above status remained stable until the night from 22 to 23.02. 2009 when breathing difficulty occurred: hypopnea and difficulties in expectorating saliva, shortness of breath; functional status: mRs scale: 5, Barthel Index: 5.

Due to persistent respiratory failure the patient is moved to Adult Neurology Clinic of the University Clinic Centre in Gdansk on 23.02.2009 for further diagnostic reasons and for the sake of treatment of increasing symptoms. Evaluation on the admission to the neurological ward included the following systems:

— Cardiovascular system: AS — 85 ud/min, RR 142/80, oedema — absence, body temperature: 36.6°C.
— Respiratory system: respiratory failure, shortness of breath, number of breathes: 10/min, difficulties in expectorating saliva.
— Digestive system: condition after gastric ulcer perforation. Gastro intestinal reflux, constipation. Decreased appetite. BMI calculation not possible due to bad functional condition of the patient.
— Genitourinary system: urination to a urinal, the amount is normal, proper colour.
— Musculoskeletal system: restricted mobility due to quadriplegic paralysis predominantly in the left limbs, massive muscular dystrophy in the muscles of the upper and lower extremities, more severe on the left size, with fasciculations.

Other:

— Sight: normal
— Consciousness: full awareness
— Skin: clean, dry, no damages
— Pain: not reported

The patient required help in all nursing and occupational activities. Neurological examination produced evidence of jaw jerk reflex, tongue muscles atrophy with fasciculations, absence of abdominal and cremasteric reflexes. The weakening of the tendon reflexes in all limbs, the tendency to symptoms of Babinski on the right.

Gradual worsening of the patient's condition was observed during hospitalisation. On 27.02.2009 his condition was severe: although breathing on his own, required help in all nursing and caring activities. Immunoglobulins 46 g were initiated in continuous infusion for 6 hrs. Infusion was well accepted without complications giving a slight improvement of clinical condition. As a result, the patient was able to urinate into a urinal on his own.

The next day (28.02.2009) the infusion in the same dosage was provided, nevertheless any improvement of the patient's clinical condition was not observed. IV lg therapy lasted for 5 days and the infusion was repeated 2 weeks after the initial dose.

On 02.03.2009 the patient was moved to intensive neurological care unit due to dyspnoea aggravated during speech. Presbyphagia was also observed. The patient lost control over physiological needs. The patient experienced overall discomfort. SpO2 96% with Oxygen was administered. Arterial catheter was inserted. Arterial blood gas was performed. Body temperature was 37.8 deg C. Vital signs were checked within 24 hrs period.

On 03.03.2009 the patient was in severe condition: cardiovascular efficiency, respiratory inefficiency (compensated), consciousness with contact in GCS 15 scale: 4/4 5/5 6/6, dysphagia, dysarthria, upper limbs paresis with massive atrophy, lack of abdominal and cremasteric reflexes.

On 04.03.2009 respiratory arrest took place and the patient was intubated and put on a medical ventilator on breathing replacement. The patient's cardiovascular system was stable. Sedation was given due to the full consciousness. It was done in the method of infusion therapy: Dormice with the infusion of 10 mg/hr.

Two days later (on 06.03.2009) the patient's condition did not change. The lumbar puncture was employed in order to collect cerebrospinal fluid. The central venous catheter was used. Tracheostomy procedure was performed. Because there was a possibility of autoimmune process, plasmapheresis administered twice was necessary. It was interrupted due to the signs of infection caused by E. coli, ESBL. The patient was bedridden there were a number of complications during hospitalisation (urinal infections, respiratory infections produced by E. coli ESBL and Acinntobacter baumanii, skin lesion, enteritis). Antibiotic treatment according to the anitbiogram results was administered a number of times. The patient was discharged from the hospital clinic on 23.09.2009. He had quadriplegic paralysis, was conscious, with nonverbal contact, fed by PEG, with respiratory failure (for home respiratory care).

On the basis of clinical picture, there was a suspicion of ALS. Really fast progression of the disease and young age of the patient was taken into account and he was examined in order to detect connective tissue disease or paraneoplastic syndrome. Gamma globulins were high, including IgE; there were antibodies from ANA group (antibodies to cell nucleus components). These abnormalities are treated now as having uncertain clinical importance ALS-LAUS. Tumor markers tests were negative.

Nursing care according to ICNP standards [19,20]

Diagnosis 1: Dyspnoea [10029433]

Focus: Dyspnoea [10006461]: Laboured movement of air in and out of the lungs, shortness of breath, associated with insufficient oxygen in the circulating blood, feelings of discomfort and anxiety.

Interventions:
1. Assessing Fatigue [10026086]
2. Monitoring Vital Signs [10026086]
3. Positioning Patient [10014761]
4. Encouraging Breathing Or Coughing Technique [10006834]
5. Monitoring Blood Oxygen Saturation Using Pulse Oximeter [10032047]
6. Administering Medication And Solution [10001804], plus axis Means: Inhalation Therapy [10010213],
7. Arranging Transport Of Device [10030493], plus axis Means: Respiratory Device [10016958] — Nebuliser [10012469]

Outcome: No Dyspnea [10029264]

Diagnosis 2: Risk For Aspiration [10015024]

Focus: Aspiration [10002656]: Inhaling gastric or external substances into the trachea or lungs.
Interventions:
1. Arranging Transport Of Device [10030493], plus axis Means: Suction Apparatus [10019029]
2. Monitoring Vital Signs [10026086]
3. Monitoring Respiratory Status [10012196]
4. Assessing Respiratory Status Using Monitoring Device [10002799]
5. Assessing Eating Or Drinking Behaviour [10002747]
6. Positioning Patient [10014761]
7. Encouraging Breathing Or Coughing Technique [10006834]
8. Maintaining Airway [10031674]

Outcome: Aspiration [10027177], No Aspiration [10028783]

Diagnosis 3: Dysphasia [10029802], *Communication Barrier* [10022332]

Focus: Dysphasia [10006457]: Expressive Aphasia: Inability to express words orally and Aphasia: Partial or complete inability to form or express words orally or in writing, not necessarily accompanied by a disturbance in understanding words and language. Aphasia [10002438] Defective or absent language function of using and understanding words.
Interventions:
1. Identifying Obstruction To Communication [10009683]
2. Assessing Ability To Communicate By Talking [10030515]
3. Assessing Family Coping [10026600]
4. Assessing Fear About Being a Burden to Others [10026254]
5. Assessing Self Image [10027080]
6. Checking Patient Identity [10030911]

Outcome: Effective Ability To Communicate [10025025]

Diagnosis 4: Impaired Respiratory System Process [10023362], *Impaired Gas Exchange* [10001177]

Focus: Ventilation [10020704]: Moving air into and out of the lungs with a certain respiratory rate and rhythm, depth of inspiration and strength of expiration. Gaseous Exchange [10008309]: Respiratory System Process: Alveolar exchange of oxygen and carbon dioxide, balance in ventilatory perfusion associated with effect on breathing, skin colour and energy level and plus axis action: Body Process Intervention [10034228]
Interventions:
1. Arranging Transport Of Device [10030493], plus axis Means: Respiratory Device [10016958]: Respirator [10016927]
2. Endo Tracheal Tube [10006868]
3. Checking Device Safety [10030924]
4. Managing Device [10031776]
5. Monitoring Signs And Symptoms Of Infection [10012203]
6. Monitoring Vital Signs [10032113]
7. Monitoring Blood Oxygen Saturation Using Pulse Oximeter [10032047]
8. Reporting Arterial Blood Gas Result [10016785]
9. Collaborating With Physician [10023565]
10. Maintaining Airway [10031674]
11. Ensuring Continuity Of Care [10006966]

Outcome: Positive Respiratory System Process [10028156], Effective Gas Exchange [10027993]

Diagnosis 5: Lack of Knowledge of Diagnostic Test [10021987]

Focus: Knowledge [10011042]: Specific content of thinking based upon acquired wisdom or learned information or skills, cognisance and recognition of information or axis action: Puncturing [10016152] — Inserting: Driving or forcing a needle into a blood vessel or body cavity to draw or remove substances. Explaining [10007370] — Informing: Making something plain or clear to somebody. Informing [10010162] — Telling somebody about something.
Interventions:
1. Teaching Patient [10033126]
2. Teaching About Disease [10024116]
3. Diagnostic Testing [10031140]
4. Evaluating Management of Specimen [10034024]
5. Managing Specimen [10011687]
6. Assessing Physiological Status [10030694]
7. Monitoring Physiological Status [10012183]
8. Monitoring Laboratory Result [10032099]

9. Explaining Event Or Episode [10007389]
10. Counselling Patient [10031062]

Outcome: Knowledge of Diagnostic Test [10021871]

Diagnosis 6: Urinary Incontinence [10025686], *Impaired Physiological Status* [10030035], *Risk For Impaired Fluid Volume* [10026951]

Focus: Urinary Incontinence [10026895], Continence Status: Involuntary passage of urine, failure of voluntary control over bladder and urethral sphincter. Status [10018793] — condition of person relative to others, the relative position of a person. Fluid Balance [10034114] — Effective Regulatory System Process.
Interventions:

1. Managing Urinary Incontinence [10031879]
2. Evaluating Genitourinary Status [10034011
3. Catheterising Bladder [10030884]
4. Managing Urinary Catheter [10031977]
5. Urinary Catheter Care [10033277]
6. Use Aseptic Technique [10041784]
7. Monitoring Signs And Symptoms Of Infection [10012203]
8. Collaborating In Fluid Therapy [10030948]
9. Collaborating In Electrolyte Therapy [10030930]

Outcome: Effective Genitourinary Status [10033745], Effective Fluid Balance [10033721], Readiness For Stable Fluid Balance [10001495], Adherence To Fluid Volume [10030171]

Diagnosis 7: Risk For Infection [10015133], *Infection* [10023032]

Focus: Infection [10010104], Pathological Process: Invasion of the body by pathogenic microorganisms that reproduce and multiply, causing disease by local cellular injury, secretion of toxin or antigen-antibody reaction. Cross Infection [10005404], Thrush [10019713] — Infection: Whitish coating associated with fungus infection, whitish spots or shallow ulcers.
Interventions:

1. Assessing Susceptibility To Infection [10002821]
2. Monitoring Signs And Symptoms Of Infection [10012203]
3. Administering Antibiotic [10030383]
4. Use Aseptic Technique [10041784]
5. Treating Skin Condition [10033231]
6. Skin Care [10032757]
7. Oral Care [10032184]

Outcome: No Infection [10028945]

Diagnosis 8: Risk for Pressure Ulcer [10027337]

Focus: Pressure Ulcer [10015612], Ulcer: Damage, inflammation, or sore to the skin or underlying structures as a result of tissue compression and inadequate perfusion.
Interventions:

1. Arranging Transport Of Device [10030493]
2. Assistive Device Therapy [10039158] plus axis Means: Air Ring [10002088], Feather Mattress [10007755]
3. Assessing Risk For Pressure Ulcer [10030710]
4. Assessing Pressure Ulcer [10040847]
5. Pressure Ulcer Care [10032420] plus axis Means: Wound Dressing [10021227], Gauze Dressing [10008378]
6. Skin Care [10032757]
7. Ulcer Care [10033254]
8. Positioning Patient [10014761]
9. Transferring Patient [10033188] plus axis Means: Lifting Apparatus [10011349]
10. Pressure Ulcer Prevention [10040224]
11. Managing Dietary Regime [10023861]
12. Ensuring Continuity Of Care [10006966]

Outcome: No Pressure Ulcer [10029065]

Diagnosis 9: Risk For Impaired Thermoregulation [10015244], *Impaired Thermoregulation* [10033560], *Hyperthermia* [10000757], *Hypothermia* [10000761]

Focus: Thermoregulation [10019644] Regulatory System Process: Controlling of heat production and heat loss through physiological mechanisms activated by hypothalamus, skin and body temperature. Fever: Impaired Thermoregulation: Abnormal elevation of body temperature, change in the set point of the internal thermostat, associated with increased respiratory rate, increased metabolic activity, tachycardia with a full bounding or weak pulse, restlessness, headache or confusion; rapid elevation of fever is accompanied by shivering, trembling, chills, pale and dry skin; crisis or drop in fever is accompanied by warm flushed skin and sweating. Fever [10007916] Impaired Thermoregulation: Abnormal elevation of body temperature, change in the set point of the internal thermostat, associated with increased respiratory rate, increased metabolic activity, tachycardia with a full bounding or weak pulse, restlessness, headache or confusion; rapid elevation of fever is accompanied by shivering, trembling, chills, pale and dry skin; crisis or drop in fever is accompanied by warm flushed skin and sweating. Hypothermia [10009547] Impaired Thermoregulation: Decreased ability to change internal thermostat, reduced body temperature, cool, pale and dry skin, shivering, slow capillary refill, tachycardia, cyanotic nail beds, hypertension, piloerection associated with

prolonged exposure to cold, dysfunction of the central nervous system or endocrine system under cold conditions or artificial introduction of an abnormal low body temperature for therapeutic reasons. Hyperthermia [10009409] Impaired Thermoregulation: Decreased ability to change internal thermostat accompanied by increased body temperature, warm dry skin, drowsiness and headache associated with dysfunction of the central nervous system or endocrine system, heat stroke, artificial introduction of high body temperature for therapeutic reasons.
Interventions:

1. Evaluating Response To Thermoregulation [10007195]
2. Monitoring Body Temperature [10012165]
3. Assessing Risk For Hyperthermia [10033905]
4. Assessing Risk For Hypothermia [10002809]
5. Fluid Therapy [10039330] plus axis Means: Fluid Therapy [10031321]
6. Measuring Body Temperature [10032006]
7. Promoting Positive Thermoregulation [10015817]

Outcome: Effective Thermoregulation [10033848], Body Temperature Within Normal Limits [10027652]

Diagnosis 10: Impaired Musculoskeletal System Function [10022642], *Paralysis* [10022674]

Focus: Paresis [10014075], Paralysis: Partial or total paralysis, incomplete or complete loss of loss of ability to move body part such as mouth, throat or eyelid. Paralysis [10014006] Impaired Musculoskeletal System Process: Abnormal condition characterised by loss of muscle function or loss of sensation or both, loss of ability to move body or body part accompanied by loss of bowel and bladder control, respiratory distress associated with injury, lesion of the neural and muscular mechanism or with trauma such as spinal cord injury, disease or poisoning.
Interventions:

1. Assistive Device Therapy [10039158]
2. Providing Safety Devices [10024527] plus axis Means: Bed Rail [10003201]
3. Evaluating Musculoskeletal Status [10034030]
4. Assessing Neurological Status [10036772]
5. Assessing Mobility [10030527]
6. Positioning Patient [10014761]
7. Checking Device Safety [10030924]
8. Fall Prevention [10040211]

Outcome: Effective Musculoskeletal Status [10033807]

Diagnosis 11: Self Care Deficit [10023410], *Impaired Ability To Perform Hygiene* [10000987]

Focus: Ability To Perform Self Care [10023729], Self Care [10017661] Self Performing Activity: Taking care of what is needed to maintain oneself, keep oneself going and handle basic individual and intimate necessities and activities in daily life.
Interventions:

1. Evaluating Care Plan [10031252]
2. Assessing Capabilities [10026040]
3. Assessing Self Efficacy [10024280]
4. Assessing Self Care [10021844]
5. Supporting Decision Making Process [10024589]
6. Assisting With Hygiene [10030821]
7. Assisting With Toileting [10023531]
8. Assisting With Self Care [10035763]
9. Oral Care [10032184]
10. Skin Care [10032757]
11. Dressing Patient [10031164]
12. Managing Impaired Coping Process [10031846]
13. Reinforcing Capabilities [10026436]

Outcome: Positive Ability To Perform Self Care [10025714], Able To Perform Hygiene [10028708]

Diagnosis 12: Impaired Mobility in Bed [10001067]

Focus: Mobility in Bed [10003181] Ability to Mobilise.
Interventions:

1. Assessing Capabilities [10026040]
2. Assessing Mobility [10030527]
3. Assisting With Mobility In Bed [10045972]
4. Transferring Patient [10033188]
5. Advancing Mobility [10036452]
6. Reinforcing Achievements [10026427]
7. Encouraging Rest [10041415]

Outcome: Able To Move In Bed [10029240]

Diagnosis 13: Lack Of Knowledge Of Medication [10025975]

Focus: Knowledge [10011042]; Knowledge Of Medication [10026659].
Intervention:

1. Knowledge Of Medication [10026659]
2. Teaching About Medication [10019470]
3. Evaluating Response To Medication [10007182]
4. Monitoring Response To Treatment [10032109]
5. Venipuncture [10016168] plus axis Means: Invasive Device [10034244]: Needle [10012509], Infusion Device [10033352]
6. Use Aseptic Technique [10041784]
7. Inserting Vascular Access Device [10034200]
8. Managing Medication [10011641]

9. Managing Negative Response to Treatment [10024429]
10. Explaining Event Or Episode [10007389]

Outcome: Knowledge Of Medication [10025968]

Diagnosis 14: Continuity Of Care Problem [10029759]

Focus: Continuity Of Care [10005072], Continuity [10005064].

Intervention:

1. Assessing Family Coping [10026600]
2. Evaluating Home Before Home Care [10041038]
3. Teaching Caregiver [10033086]
4. Assisting Health Care Provider [10030809]
5. Referring To Health Care Provider [10032567]
6. Discharge Planning [10006016]
7. Ensuring Continuity Of Care [10006966]
8. Assessing Caregiver Stress [10024222]

Outcome: Effective Continuity Of Care [10035507], Readiness For Discharge [10035666]

Discussion

The presented ALS case with laboratory abnormalities having uncertain meaning (ALS-LAUS syndrome) was characterised by an unusually fast progressing course. Within a few days from the moment of admission to the Neurological Clinic the condition of this patient worsened significantly. The severity of upper and lower limbs paresis increased, Additionally, there was respiratory failure with the patient being fully conscious. Temporal sedation and permanent respiratory therapy was needed. Health improvement did not occur. Response to the treatment was slight to none. Because the patient was fully conscious, it was extremely important to give him a sense of security, give him all the possible information about performed activities as well as to educate him about the disease. It was an extremely difficult task due to the irremediable and really severe character of the illness. At this stage, the activities could only include supporting of the patient in the process of diagnosis and therapy, giving permanent care, taking care of personal grooming and balanced diet as well as observing vital signs. The most important elements of caring for people with ALS are: prevention of complications such as: pulmonary infections, deep vein thrombosis, pulmonary embolism. Rehabilitation includes passive rehabilitation, cooperation with a speech therapist and a psychologist. The patient in the course of time from the onset of the first symptoms to the full diagnosis was hospitalised many times. This period of time was 2 years long. One could hypothesise that understanding of motor neurone disease among general practitioners is not sufficient enough. As the patient was discharged to home respiratory therapy, the nursing staff had to educate his family how to provide comprehensive palliative care of their family member.

Conclusions

1. The patient was assessed with limitation in physical fitness, problems with verbal communication, high risk of bedsores and other complications associated with immobilisation.
2. Due to the limited functional capacity and self-care ability, the patient required complete nursing service in daily activities.
3. After the hospitalisation the patient still required comprehensive care provided by his family and assistance of institutions giving home respiratory support.

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