ORIGINAL ARTICLE

Most frequent nursing diagnoses in patients admitted to the Epilepsy Unit

Maria Palanca Cámara

Unidad Multidisciplinar de Epilepsia Refractaria, Hospital Universitario y Politécnico La Fe, Valencia, Spain

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KEYWORDS
Epilepsy; Diagnosis; Physiological monitoring; Education; Nursing care

Abstract

Introduction: Epilepsy is a neurological disease consisting of abnormal electrical discharges in the brain that produce a clinical condition, affecting 1–3% of the population. The Multidisciplinary Epilepsy Unit of the Hospital Universitario y Politécnico La Fe de Valencia, since 2006, has conducted studies with prolonged video-EEG monitoring of patients diagnosed with refractory epilepsy. The role of the unit is to provide these patients with both a diagnostic and a treatment solution.

Objective: This study aims to determine, using NANDA-NIC-NOC language, the basic needs of these patients and to assess how the quality of nursing care can be improved in this type of patient, during their admission and afterwards.

Methodology: Data were collected from a sample of 46 patients monitored in the unit between May and September 2013, and by using nursing assessment, data was obtained on the percentage occurrence of diagnosis.

Results and conclusions: The patients are very limited socially and occupationally, with added risks specific to the disease that we must not forget. The nursing role should be to standardise their situation as much as possible so that they can lead as full a life as possible, have proper health education, and prevent further injuries during admission (falls, etc.). From our experience, the epileptic patient support program from the Epilepsy Association of the Community of Valencia, and its incorporation into the Programa Respira for admission to the monitoring unit, gives good results.

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E-mail addresses: tapirawa@icloud.com, tapirawa@yahoo.es

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PALABRAS CLAVE
Epilepsia; Diagnóstico; Monitorización fisiológica; Educación; Cuidado de enfermería

Diagnósticos enfermeros en pacientes ingresados en la Unidad de Epilepsia

Resumen
Introducción: La epilepsia es una enfermedad neurológica consistente en descargas eléctricas del cerebro de forma anormal que producen una clínica, llegando a afectar a entre un 1-3% de la población. La Unidad Multidisciplinar de Epilepsia del Hospital Universitario y Politécnico La Fe de Valencia realiza, desde el 2006, estudios con monitorización prolongada por videoelectroencefalograma a pacientes diagnosticados de epilepsia refractaria. Desde la unidad, se busca dar una solución a estos pacientes tanto en el diagnóstico como en el tratamiento.
Objetivo: Con este estudio se pretende dejar constancia, mediante el lenguaje NANDA-NOC, de cuáles son las necesidades fundamentales de estos pacientes y valorar en qué se podría mejorar la calidad asistencial enfermera en ellos, tanto durante el ingreso como después del mismo.
Metodología: Se recogieron datos en una muestra (N = 46) de pacientes monitorizados en la unidad entre mayo y septiembre 2013, a través de la valoración de enfermería, obteniendo datos de porcentaje de aparición del diagnóstico.
Resultados y conclusiones: Son pacientes muy limitados social y laboralmente, con unos riesgos añadidos propios de la enfermedad que no debemos olvidar, y la función de la enfermera debería ir encaminada a normalizar lo más posible su situación para que puedan llevar una vida lo más plena posible, y a hacer una correcta educación en salud y evitar daños mayores durante el ingreso (caídas, etc.). Desde nuestra experiencia, el programa de apoyo al paciente epiléptico desde la Asociación de Epilepsia de la Comunidad Valenciana y su consolidación en el programa respira durante el ingreso en la Unidad de monitorización, da buenos resultados.

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Introduction
An epileptic crisis is the clinical manifestation of abnormal electrical discharges in the brain from a group of neurones (focal seizure) or the whole brain (generalised seizures). 1
It has been estimated that there are approximately 50 million people worldwide who suffer or have suffered from epilepsy at some time in their lives. Calculations suggest that epilepsy affects around 1% of the population and that between 1% and 3% of the population will suffer from an epileptic seizure in their lives. 2 In Spain, although there is a lack of data regarding prevalence, it has been calculated that there are some 400,000 epilepsy patients. Around 5%-10% of the population will at some time experience a seizure and up to 20% will suffer from recurrence of the same. Hospital admittance for epilepsy accounts for 35 patients out of every 100,000 admitted, with a mean cost of €6,935 per patient with refractory epilepsy 3; i.e., those patients who do not respond appropriately to the antiepileptic drugs, which have been taken correctly and for a considerable time, since the presence of seizures persists with relatively high frequency and/or prevents them from leading a normal life. 4

A Multidisciplinary Epilepsy Unit has existed in the Hospital Universitario y Politécnico La Fe of Valencia since 2006, and it has been endorsed by the Ministry of Health as a unit of national reference (CESUR Centre) since December 2010. In this unit they essentially treat cases of drug-resistant epilepsy with prolonged video-EEG monitoring. Both surface electrodes applied with the international 10:20 system are used and also invasive electrodes (oval foramen electrodes, deep electrodes or subdural electrode blankets), aimed at:

- Assessment the possible treatment alternatives (vagus nerve stimulator, resective surgery, etc.).
- Implementing a precise pharmacological adjustment.
- Correct diagnosis of the condition (non epileptic seizures, type of epilepsy).

The nurse, as the bedside professional, is the link with the patient, and a specific healthcare plan will help to improve the patient’s quality of life.

Objectives

- Be aware of the situation of the patients admitted to a multidisciplinary epilepsy unit through nursing evaluation.
- Establish which nursing diagnoses and interventions are the most standard in these patients.
- Establish several nursing objectives and interventions to propose quality care in these patients from the NANDA, NOC diagnoses, the NOC and NIC indicators with their activities, measurable through the NOC indicator scales and the NIC activities.
### Table 1 NANDA-NOC-NIC in patients in the Epilepsy Unit.

<table>
<thead>
<tr>
<th>%</th>
<th>Diagnosis NANDA</th>
<th>NOC</th>
<th>NOC indicator</th>
<th>NIC</th>
<th>NIC activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Risk of falls r/t deterioration of mental state, history of falls</td>
<td>Detection of risk Safe health care environment</td>
<td>Identify possible risk to health (190802) scale m Use of protocols of practice based on proof (193425) scale f</td>
<td>Prevention of falls Teaching: disease process</td>
<td>Identify cognitive or physical disabilities of the patient which may increase the possibility of falling in a given environment. Instruct the patient to minimise the risks of their disease</td>
</tr>
<tr>
<td></td>
<td>Risk of aspiration r/to reduction in level of consciousness</td>
<td>Self control of convulsions Performance of the main carer: direct care</td>
<td>Describes the precipitating factors of the convulsions (162001) scale m Awareness of the disease process (220503) scale f</td>
<td>Identification of risks Management of convulsions</td>
<td>Give instructions on risk factors and plan risk reduction Guide movements to prevent lesions</td>
</tr>
<tr>
<td>100</td>
<td>Malaise m/b expressing feeling uncomfortable r/t lack of environment control and lack of situational control</td>
<td>State of physical comfort Anxiety level Sleep</td>
<td>Physical well-being (201002) scale a Anxiety verbalised (121117) scale n Quality of sleep (404) scale a</td>
<td>Reduction of anxiety Environmental management: well-being</td>
<td>Explain all procedures Make patient comfortable</td>
</tr>
<tr>
<td>76.1</td>
<td>Willingness to improve self care m/b expressing desire to increase independence in maintaining health and well-being</td>
<td>Health promoting behaviour</td>
<td>Use behaviours to prevent risk (160201) scale m</td>
<td>Help to change oneself</td>
<td>Help the patient to identify the effects of target behaviour on their social and environmental ambiances</td>
</tr>
<tr>
<td>41.3</td>
<td>Ineffective development of the role m/b change in perceptions of the role, conflict with the system r/to inappropriate socialisation of the role, neurological defects</td>
<td>Acceptance of their state of health Adaptation of physical disability Social interaction skills</td>
<td>Recognises the reality of their health situation (130008) scale m Change life style to fit in with disability (130804) scale m Relationships with others (150212) scale m</td>
<td>Increase support systems Promote family normalisation Improve confrontation</td>
<td>Support and family respite programme ALCE Encourage family to continue habits, rituals, and normal routines Promote relationships with people who have common interests and objectives</td>
</tr>
<tr>
<td>30.4</td>
<td>Tendency to adopt risk behaviour for health m/b minimising change in state of health r/t negative attitude towards health changes</td>
<td>Acceptance: state of health</td>
<td>Modifies the change in health situation (130017) scale m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Material and method

To accomplish the above said objectives a retrospective, observational study was conducted which included all the patients admitted to our epilepsy unit between the months of May and September 2013 (No. = 46).

The nursing evaluation was used by following the Virginia Henderson’s nursing theory model, which is standard in our hospital.

The data were obtained from the nursing evaluation which was performed on admittance and the epilepsy file which was made by the nursing unit, where specific data
Most frequent nursing diagnoses in patients admitted to the Epilepsy Unit

![Diagram of Epilepsy Pathology]

**Figure 1** Distribution of patients by pathology.

were collected on the condition (type of seizure, age when condition presented for the first time, frequency of seizures, precipitating factors of a seizure).

Once the nursing evaluation data were collected, percentages of appearance within the group were obtained, fixing as relevant those which appeared in at least 30% of the studied sample.

The patients signed a general consent form on hospital admittance permitting any data obtained from their monitoring to be used for medical and educational ends.

**Results**

The study sample (No. = 46) was obtained from all patients admitted into hospital between the months of May and September 2013 in our Multidisciplinary Epilepsy Unit. 43.48% of the sample were men and 56.52% were women, with a mean age of 35.7 years. From them, 4.35% were assessed using invasive electrodes (deep electrodes) and the remaining 95.65% with surface electrodes. Of those patients assessed with surface electrodes, 6.52% presented with general epilepsy—i.e. affecting the whole brain. 60.87% presented with a focal epilepsy, i.e. the seizure was focused on one area of the brain. 2.17% were patients who were being re-monitored because they had not had epileptic seizures during previous hospital stays. 4.35% were patients who had undergone surgery for epilepsy who continued presenting with seizures. 19.57% had seizures which were non epileptic, and 2.17% had not presented with any type of seizure (Fig. 1).

The patients were assessed by the Virginia Henderson 14 needs model and the history of nursing for epilepsy, where data regarding the condition itself were collected, among which the precipitating factors were useful for our objective, as the limiting factors. We established the factors which appeared in at least 30% of the sample, from which the following results were obtained:

1. Risk of falls related to deterioration in mental state and prior history of falls, (100%).
2. Risk of aspiration related to reduction in level of consciousness (100%).
3. Malaise motivated by expressing a feeling of being uncomfortable related to lack of environmental control and lack of situational control (100%).
4. Willingness to improve self-care motivated by expressing desires to increase independent in maintaining health and well-being (76.1%).
5. Ineffective development of the role motivated by alteration in perceptions of role, conflict with the system related to inappropriate socialisation of the role, neurological defects (41.3%).
6. Tendency to adopt high risk behaviour for health motivated by minimising change in state of health related to negative attitude towards health changes (30.4%).

**Discussion**

In view of the results obtained, several NOC were established with their respective indicators and several NIC with their respective nursing activities aimed at providing a solution to these problems.3-7 (Table 1).

Observing the table we may see that nursing activities for these patients should be particularly aimed at providing education and support regarding the disease and its evolution, since there is still a great lack of knowledge about the condition in itself and its limitations to both patient and family.

In our hospital there is a pioneering project undergoing consolidation, conducted by the Epilepsy Association of the Community of Valencia. We are working together, establishing patient support from the Patient Services and Information and with the “Programa Respira” to families where the patient has been admitted into the monitoring unit. They are covering several of the areas detected in this study, and particularly social aspects and acceptance of the disease.

**Conclusions**

Despite the small study sample, it may be said that the social aspect is of major importance in this type of patient, for whom their disease limits their relations with family members (inability to fulfill their role) and places strain on their social and working lives due to the major stigma still attached to these people because they suffer from epilepsy. As a result, they often hide their disease and acquire risky patterns of behaviour (driving etc.) to feel more accepted and even to gain employment.

Due to this, reassurance, information and education have to be the basic keystone for nursing care of these patients. Within the unit and during monitoring, our work as nurses has to aim at prevention of risks from epileptic seizures, such as falls and aspirations, and also the provision of psychological support to patients and their family members.

Patient associations carry out psychological support work and promote health through patient services, as is
happening in the Community of Valencia, thanks to the Epilepsy Association of the Community of Valencia, They have recently implemented a programme for family respite inside the hospital, for patients admitted for monitoring. This is currently undergoing consolidation, but above all may have a positive effect for the family.

**Conflict of interests**

The author has no conflict of interests to declare.

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