



PARTICULARITIES OF NURSING IN ELECTROCONVULSIVE THERAPY

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Abstract: *Electroconvulsive therapy (ECT) has been a controversial topic, both in the general population and in the medical community since its initial implementation in 1938. Despite clinical applications and proven efficacy in psychiatric and neurological pathologies, such as schizophrenia, catatonia, psychotic disorders, depressive episodes, Parkinson's disease and psychiatric pathological conditions that occur during pregnancy or childbed, reluctance to apply ECT persists due to the low degree of information and professional training. The purpose of this article is to emphasize the importance of informing the medical team of the specific training in the provision of adequate nursing within the electroconvulsive therapy. These premises make an essential contribution to the smooth running of the therapeutic process. Taking into account the close interpersonal contact that the medical nurses have with the patient through the profession specifics, it is the appropriate framework to inform the patient and the family regarding the need to establish electroconvulsive therapy, the risks, but especially its benefits. In conclusion, there is a need to establish training courses for nurses so as to ensure the functioning of the therapeutic team as a unit.*

INTRODUCTION

Electroconvulsive therapy (ECT) is a therapeutic procedure used on a large scale in psychiatric services due to its proven effectiveness in many pathologies. This form of biological therapy dates back to 1938 when the professor of neuropsychiatry of Italian origin, Ugo Cerletti, together with Lucio Bini, his colleague and collaborator, laid the foundations of electroconvulsive therapy and demonstrated its clinical effectiveness.(1,2)

Although convulsive therapy originates from the discoveries of Ladislav Meduna, considered the inventor of convulsive therapy, the one who highlighted the impact of chemical changes at brain level, the mechanism of action of electroconvulsive therapy is still a mystery, thus a point of interest for neuropsychiatric researchers.(3,4,5,6)

Currently, there are three theories regarding the mechanism of action of electroconvulsive therapy, as follows: “Generalized seizure theory”, “Neuroendocrine-diencephalic theory” and “Anatomical-ictal combined theory”.(3,7)

Electroconvulsive therapy is administered by a multidisciplinary team formed by a psychiatrist, an anesthesiologist, two psychiatric nurses and one anesthesia and intensive care nurses.

An ECT compartment is composed by three distinct rooms as following: the waiting room, the ECT administration room and the recovery room- post-ECT room.

The psychiatric nurses play a very important part in assisting the team and the patient during ECT administration, one being present in the ECT administration room and one in the recovery room, assisting the patient until he is ready to be transferred to the psychiatric yard.

The anesthesia and intensive care nurses' role is to assist the anesthesiologist during the procedure and to supervise

the patient until conscious state is regained.

The need for specialised nurses, not only in electroconvulsive therapy field, but also in general psychiatry has been noticed over time, especially in the last years. Considering the particularities of psychiatric patients, it is only logical to also prepare the nurses accordingly to their needs.(6,7)

A psychiatric nurse needs the ability to continuously adapt to the emotional, as well as physical needs of the patient.(8)

The nurse is part of containment team, thus needing motor skills of defence and containment in order to ensure the safety of the patient and surrounding persons.

As dealing with mentally ill patients, conflicts may occur frequently. The psychiatric nurse should know elements of psychology, psychiatry and psychotherapy in order to de-escalate stressful situations.(9,10)

In addition to this, the nurse practicing in this domain needs interpersonal abilities in order to develop a therapeutic relationship with the patient and provide support to the family of the patient.

The role of healthcare nurse during the preparation and monitoring of the patient in order to administer electroconvulsive therapy is an important element that contributes to the proper running of the procedure. Given the longer-term interpersonal contact that the nurses have with the patient compared to the psychiatrist, a suitable, calm environment to an appropriate information and necessary support is provided.(11)

Among the nurses' attributions, one can mention: to inform the patient on the steps of ECT procedure but also to prepare him for the administration. This implies vital function evaluation (blood pressure, cardiac rhythm, temperature, oxygen saturation) and assistance for the patient before, during and after

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treatment by providing physical and psychological support.

Thus, the level of knowledge and attitude of nurses on electroconvulsive therapy is easily transmitted to the patient, who has the right to receive objective and correct information for the purpose of granting informed consent.(12,13)

Nursing in ECT and the role of specialized psychiatric nurses

I. Pre-ECT care

The nursing preceding ECT administration implies the nurses' competence in explaining the legislative norms to the patient and his caregivers, as well as the somatic and psychiatric status and the associated risks. In this sense, it is necessary to evaluate the cognitive status using an evaluation scale such as MMSE and psychiatric status through dialogue and observation. The perspective of the nurse contributes to the multidisciplinary evaluation through the perspective of close interpersonal contact with the patient.(14)

In order to provide the proper medical care, it is necessary for the nurses to consider possible traumatic events in the patient's history that could be a source of anxiety, to explain the technique of electroconvulsive therapy administration in addition to ensuring a safe, confidential and empathetic environment.(14)

Good knowledge of electroconvulsive therapy is required, as well as knowledge of the patient's socio-familial and cultural particularities. These elements provide information and moral psychological support for the patient and his family, respectively his legal guardian.(14)

Among the misconceptions regarding ECT are fear of pain, electrocution, memory loss, brain disorders, personality changes, lack of information and even death.(15,16)

The nurse has the task to verify the proper functioning and condition of the ECT and anesthesia machines, to identify possible technological defects and to announce the need for technical team intervention. The nurse also assures the functioning of the tracheobronchial aspiration devices, pulse oximeter, tensiometer, ECG machine, EEG machine, glucometer laryngostomy kit, capnograph and check if they are connected to the electrical outlet. Also, she has to verify if there is the external source of power, in order to ensure the functioning of the power supplied machines in crisis situations.

It is also in her obligations to ensure the complete stock of medication needed during the electroconvulsive therapy and in case of medical complications, and also, when it is necessary, to restore the stock.

The first step of the pre-ECT preparation is to verify the patient's identity and to attach a bracelet with his/her personal data on his/her wrist. Also, the phone number of one family member/ caregiver is necessary to be written on patient's file, in order to inform them of any complications that may arise. The medical documents must be filled out with detailed information regarding the somatic and mental status of the patient before electroconvulsive therapy, as well as personal information.

In case other persons, except the therapeutic team, such as medical or nursing students would like to take part as observers during ECT administration, the patient must be informed about their professional status, their role in the procedure and he/ she must give his/her informed consent.

Among the tasks of nurses in preparing the patient for the administration of ECT, we can also mention the assessment of any food or medication allergies and to specify them on the bracelet.

Ensuring that the patient stopped the food intake and oral hydration 6-8 hours before the administration of ECT and abstinence from smoking before 2 hours, as the psychiatrist and anesthesiologist required is essential in order to prevent

complications during anesthesia. It is also important to ask the patient if he was properly hydrated the day before treatment.

The nurse helps the patient to change from his regular clothing to hospital equipment, to ensure the storage of valuable personal items safely and to assess the removal of medical devices (hearing aids, orthopedics, contact lenses, glasses, dentures) and accessories in order to ensure the safety of the electric shock administration.

Disinfection and preparation of the necessary equipment, as well as consumables is part of the nurses' attributions, as well as the administration of the medication according to the medical indications.

Part of the pre-ECT preparation is the evaluation of vital functions, laboratory tests, evaluation of pregnancy, assessment of cognitive status using a cognitive assessment scale such as MMSE.

Placing a venous access line is also part of the pre-ECT preparation.

Also, part of the pre-ECT preparation for the nurse is that she/he has to attach cuff for blood pressure monitor, capnograph sensor, electrodes for ECG and EEG.

The nurse has a key role in this step of the procedure, providing the necessary support to the psychiatrist and anesthetist, as well as to the patient.(14,17,18)

II. Care during ECT

During the administration of the electroconvulsive therapy, the nurse has the role to ensure a safe and comfortable environment for the patient and for the good performance of the procedure, as well as placing the bite block while the psychiatrist is placing the electrodes.

Another role of the nurse is ensuring the proper oxygen therapy in order to prevent hypoventilation in the anaesthetic administration process.

In order to ensure the patient's safety, the nurse should monitor blood pressure, heart rate, blood oxygen saturation and expired CO₂ levels and to alert the therapeutic team if the patient's condition is unstable.

Another important task is assisting the psychiatrist in monitoring the duration of the convulsive crisis and the latency time between them, as well as the titration administered.

Assisting the therapeutic team according to their needs is a golden standard in ECT nursing technique.

After the ECT procedure is applied, the patient is transferred to the surveillance room on a trolley/bed with wheels.(14,17,18)

After this step, the next one is the post ECT technique in nursing care.

III. Post-ECT care

During the recovery period, careful supervision is necessary in order to identify possible complications. The patient is supervised until regaining the temporal-spatial, auto and allopsychic orientation, the recommended time being 2-4 hours. The tasks of nursing in this stage include several elements.

Placing the patient in a safe position is one of the most important factors in order to prevent the respiratory complications regarding hypersalivation or aspiration pneumonitis or respiratory arrest due to obstruction of the airways. In order to prevent this, the nurse's obligation is to provide airway permeability and oxygen administration along with monitoring of vital functions.

Also, the nurse has to periodically check the maintenance of the venous line to assure the quick access to the administration of intravenous medications if needed.

In this stage, one of the duties of the nurse is the periodic evaluation of the presence or absence of adverse

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reactions in order to document these on the patients' file and also, to react in time if any complications occur.

In case the patient becomes agitated or disoriented, the administration of the medication as prescribed has to be supervised by the nurse.

Also, the adequate psychological support has to be assured.

One of the most frightening adverse effects of ECT technique for the patients is the memory loss. In order to evaluate and prevent possible cognitive impairment of the patients, the medical team has to evaluate the cognitive function before and after ECT using subjective questions or cognitive assessment scales.

After the patient regains consciousness and all the post-ECT evaluations are completed, the patient will be guided to go to the area with the food supplies in order to be properly hydrated and fed with food (such as breakfast) in order to reassure the normal glycemic levels.

The nurse will remove the bracelet attached to patient's arm and, also will return all the personal belongings, valuables and, if the case requires, hearing aids, orthopedics, contact lenses, glasses and dentures.

After all the procedures are completed by the therapeutic team and the patient is well enough to be dismissed, the nurse has to schedule the patient for the next appointment for administering the electroconvulsive therapy and transfer the patient to the psychiatric department. (14,17,18)

CONCLUSIONS

Electroconvulsive therapy represents the first intention treatment in multiple psychiatric pathologies, but its effectiveness is dependent on the quality of medical care and the technique of the shock administration.

In this context, the human component plays a key role in properly informing the patient, respectively in accepting this form of therapy, the positive attitude of the nurses and the correct knowledge regarding the ECT and psychiatric pathology, having a substantial impact in this regard.

This way, the nurse can actively participate in the proper running of the electroconvulsive therapy procedure, decreasing of stigma associated with it, ensuring thus the understanding and acceptance of this type of treatment.

Her/his positive attitude towards the multiple aspects of ECT and the vast knowledge are essential in providing the patient with the necessary comfort, safe environment and need for information, thus integrating the nurse in the multidisciplinary therapeutic team.

The nurse is required to have proper knowledge in basic life support, somatic and psychiatric pathology in order to recognise any complications or adverse reactions that might occur. The nurse also has the duty to inform the patient about the possibility of obtaining other information about ECT from other sources, except ECT department.

The multidisciplinary team is formed by a psychiatrist, an anesthesiologist, an anesthesia and intensive care nurse and two psychiatric nurses. It is highly important to acknowledge the role of the psychiatric nurses.

Finally, there is a necessity for professional training of nurses in the field of psychiatry and electroconvulsive therapy, both from a medical point of view, as well as socio-familial and psychological point of view.

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