

MATERIALS OF THE 10th ASIAN CONGRESS OF NEUROSURGICAL NURSING



10th Asian Congress of Neurological Surgeons

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NOP-01[Neurosurgical Nursing] THE 3 C'S OF NEUROSURGICAL NURSING

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INTRODUCTION

OBJECTIVE:

Nursing is a demanding yet rewarding profession. Neurosurgical Unit is a unit where nurses embrace a holistic, coordinated, multidisciplinary approach to meeting patients and family's needs and expectations, thereby ensuring patient safety and patient and staff satisfaction. Therefore nurses play a vital role in facilitating a shift towards a more patient-care focused environment

METHOD: The 3 C's of neuroscience nursing of CARING, COMPASSION AND COMMUNICATION is very vital in neuroscience nursing. The mission of every neuroscience nurse is to be a leader in providing compassionate, individualized, culturally appropriate quality nursing care, focusing on the unique needs of our neurosurgical patient population and their families'.

RESULTS: Communication has always been the cornerstone of nursing care, so much so that it is almost impossible to describe what nursing is or what nurses do without reference to terms such as listening, communicating, reporting and observing. However, compassion is also linked along with confidence, competence, conscience, commitment and comportment. If nurses claim to genuinely care for their patients, then without compassion their caring may be incomplete and lacking. This could help to explain why some nurses are technically competent, but do not seem outwardly compassionate. Ultimately, "compassion impels and empowers nurses to not only acknowledge, but also act".

CONCLUSIONS: The shift towards patient-centered care is the priority in health care today. Providing quality care with the 3 C' that is highly efficient and patient-friendly while being cost-effective is difficult, but not an impossible task.

NOP-02[Neurosurgical Nursing] EMBOLIZATION

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INTRODUCTION

OBJECTIVE: Endovascular coiling is an invasive procedure performed by an interventional radiologist, also known as coiling or endovascular embolization. It is a procedure to block blood flow into an aneurysm. Coiling may also be used to treat a condition called arteriovenous malformation, or AVM.

METHOD: The coils used in this procedure are made of soft platinum metal, and are shaped like a spring. These coils are very small and thin, ranging in size from about twice the width of a human hair (largest) to less than one hair's width (smallest).

RESULTS: Neurological assessment and hemodynamic monitoring is crucial to detect any deterioration and vasospasm. Hypotension should be treated promptly to maintain adequate cerebral blood flow and to prevent 2^o insults to the brain.

CONCLUSIONS: Therefore, nurses play an important role in nursing these patients in order to prevent morbidity and mortality.

NOP-03[Neurosurgical Nursing] NURSING CARE OF A POST CRANIOTOMY PATIENT

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INTRODUCTION

OBJECTIVE:

Postoperative care is the management of a patient after surgery. This includes care given during the immediate postoperative period, both in the operating room and post anesthesia care unit as well as during the days following surgery.

METHOD: The goal of postoperative care is to ensure that patients have good outcomes after surgical procedures. A good outcome includes recovery without complications and adequate pain management. Another objective of postoperative care is to assist patients in taking responsibility for regaining optimum health.

RESULTS: The relationship between the patient and the nursing staff is extremely dynamic and personal. The patient places his trust in the nursing staff and they, in return, must utilize all their knowledge and skills to ensure the patient's well-being and assist in his return to good health and independence. This is accomplished by developing therapeutic relationship between the patient, his family, and the health care professionals.

CONCLUSIONS: This talk will cover some important issues pertaining to post operative care after a craniotomy.

NOP-04[Neurosurgical Nursing] PREVENTION OF NOSOCOMIAL INFECTION IN THE NEUROSURGICAL UNIT

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INTRODUCTION

OBJECTIVE: Nosocomial infections, also called "hospital-acquired infections", are infections acquired more than 48 hours after admission.

METHOD: Prevention of nosocomial infections is the responsibility of all individuals and services providing healthcare, which includes:-

- decreasing aspiration by the patient
- preventing cross-contamination or colonization via hands of personnel
- appropriate disinfection or sterilization of respiratory-therapy devices
- education of hospital staff and patients

RESULTS: Nurses should be familiar with practices to prevent the occurrence and spread of infection, and maintain appropriate practices for all patients throughout the duration of their hospital stay

CONCLUSIONS: Therefore, implementation of patient care practices for infection control is the role of the nursing staff.

NOP-05[Neurosurgical Nursing] MANAGEMENT OF EXTERNAL VENTRICULAR DRAINAGE

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INTRODUCTION

OBJECTIVE: The brain and spinal cord are surrounded by cerebro-spinal fluid (CSF), which helps to protect them. The areas in the brain that contain this fluid are called ventricles. Sometimes CSF needs to be drained away from the ventricles, for reasons that are explained. External ventricular drainage (EVD) is a temporary method of doing this.

METHOD: The EVD system uses a catheter (a thin, plastic tube), which is placed in the ventricle of the brain. This is connected to a drainage system outside the body. The drainage system works by using gravity. This means the amount of CSF that can drain away depends on the position of the drip chamber or cylinder beneath the ventricles

RESULTS: No matter the reason for the insertion, the safe care of the EVD system is critical to the patient's well being. The EVD system will be explained in detail, as well as the hourly care and assessment. Trouble shooting of the system will be discussed as well. In addition, how to obtain a sample of CSF from the buretrol port will be explained

CONCLUSIONS: Nursing care and management of patients with EVDs is predominantly aimed at preventing the occurrence of complications and collaboration with the medical teams is essential to establish prescribed parameters which are based on individual assessment of the patient's clinical status

NOP-06[Neurosurgical Nursing] NURSING MANAGEMENT OF TRACHEOSTOMY (A NEUROSURGICAL POINT OF VIEW)

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INTRODUCTION

OBJECTIVE: A tracheostomy is a surgical opening into the trachea below the larynx through which an indwelling tube is placed to overcome upper airway obstruction, facilitate mechanical ventilatory support and/or the removal of tracheo-bronchial secretions

The essential principles when caring for patients with a tracheostomy are based on maintaining patient safety, facilitating communication and preventing complications associated with the procedure

METHOD: Nurses caring for tracheostomised Neurosurgical patients should be skilled and competent in all aspects of care. They should be able to detect partial and total airway obstruction and should also have the necessary skills to secure an airway if this occurs.

RESULTS: Effective communication can be a challenge with some patients with tracheostomies, and written and other non-verbal communication strategies are necessary.

CONCLUSIONS: Therefore, nursing Neurosurgical patients with a tracheostomy can be challenging. Since such patients are becoming more common in acute areas, nurses must ensure that knowledge and skills are maintained both from a theoretical and practical perspective



EP-350[Neurosurgical Nursing]

Features of nurse care in endovascular neurosurgical operations

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INTRODUCTION

OBJECTIVE: To provide qualified nurse care endovascular surgery cases of cerebral vascular pathology. Care features are: monitoring of vital functions and indicators for 12 hours after the operation, observation of the zone of punctured femoral artery. Activities aimed at improving the patients condition and prevention of complications in the early postoperative period and early detection of them.

METHOD: From 2008 to 12.2013 850 endovascular cases were performed in cerebrovascular diseases. Nursing care was conducted in accordance with the plan of treatment and care. An important element in the early postoperative period is the observance of strict bed regimen for at least 7 hours after surgery, preventing the formation of a hematoma in the femoral artery puncture area. Features of nurse care in endovascular procedures are:

1. Conversations with patients about the preparation for the operation.
2. Shaving and hygiene activities of
3. Participation in the nursing assessment and prevention of thromboembolic complications.
4. Monitoring of vital signs: Blood pressure, heart rate, respiratory rate every two hours.
5. Tell and look after the patients about strict bed regimen after the surgery
6. Strict adherence to the plan of preoperative and postoperative care.

RESULTS: Care in accordance with standards of operating procedures gives a favorable outcome and recovery.

CONCLUSIONS: The treatment of patients with vascular disease of the brain is a complex process and requires a multi-disciplinary approach. Nursing care is an integral part of a successful treatment outcome of patients with cerebrovascular disease.

EP-351[Neurosurgical Nursing]

Modern view for nursing care

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INTRODUCTION

OBJECTIVE: To improve the quality of medical care through nurse care, treatment, providing a high level of safety for patients with neurosurgical diseases.

Ways to improve the quality of care for patients with neurosurgical diseases. The National Center for Neurosurgery introduced a number of changes of the legal and professional status of the nurse.

METHOD: Correlation between nurses and patient amount, i.e. five patients per nurse. We developed a separate structure, parallel to the doctors. Introduced new forms of medical notes for nurses. Developed and implemented standards of operating procedures for nurses, together with doctors, we developed information brochures for patients.

RESULTS: The achievement of these changes is the organization of the nurse care so that one nurse is taking care after the patient from admission to discharge in order to improve patient care and make his stay more comfortable.

CONCLUSIONS: Policy change management of nursing staff contributed to improve the quality and raise the prestige of the nursing service.

EP-352[Neurosurgical Nursing]

Preanalytical phase of immunohistochemical research in neuromorphology

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INTRODUCTION

OBJECTIVE: In recent years due to the initiation of new standards for verification and treatment of malignant tumors of the nervous system there is an increase of requirements for accurate and timely diagnosis of these diseases. As it is known, cancer diagnosis is based on reliable pathological verification of neoplastic process. The whole process of carrying the immunohistochemical preparations can be divided into 3 stages: preanalytical, analytical and postanalytical. The aim is to study the protocol of taking the immunohistochemical preparations, to choose and adapt protocols for the work.

METHOD: More than 15 protocols of preparing are studied, considerable attention was paid to the peculiarities of preanalytical stage.

RESULTS: We conducted more than 100 immunohistochemical researches. Preanalytical stage was carried out by assistant-histologist. 10% neutral (buffered) formalin was used as a lock. Fixation was conducted at room temperature, no less than 12 and no more than for 24 hours. The alcohol of ascending concentration was used in installation. As the illuminator we use 0-xylol. Sections were placed on glasses which were covered with poly-L-lysine.

CONCLUSIONS: Pre-analytical stage of immunohistochemical researches is the most essential moment in complicated technical process of preparations production. During this stage appeared defects will involve incorrect and nonspecific immunohistochemical reactions that lead to wrong verification of neoplastic process by pathologist doctor.

EP-353[Neurosurgical Nursing]

Prevention of hospital-acquired infection in the surgical clinic

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INTRODUCTION

OBJECTIVE: The organization of control and prevention of hospital-acquired in the surgical clinic.

METHOD: The program of prevention and control of hospital-acquired infection in JSC "National Center of Neurosurgery" is routine practice.

This program includes:

1. definition of major factors and groups of hospital infection development's risk;
2. monitoring of an epidemiological situation;
3. measures of fight and infections' prevention with held events' assessment;
4. increase of disinfection and sterilizing actions' efficiency;
5. training of the medical personnel in infectious control bases, hygiene of hands, prevention of professional infection.

RESULTS: There is a mechanism of activity's coordination on control over infections and on their prevention, including clinical and not clinical personnel of clinic. As a result of development of the program for prevention and control of hospital-acquired infection the medical personnel in the work base completely on the program for prevention and control of hospital-acquired infection.

CONCLUSIONS: The main role in prevention of hospital-acquired infection belongs to the medical personnel. Observance of the basic rules on sanitary and epidemic mode and rules on care of the patient is a valuable component in successful approach to effective treatment, prevention of hospital-acquired infection, improvement of quality of life and support of patients and their relatives.

EP-354[Neurosurgical Nursing]

Strategy for the prevention of infections and the care of central venous catheter by nursing professionals

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INTRODUCTION

OBJECTIVE: Increase of the required level of knowledge, skill and abilities of nursing professionals in the care of central venous catheter.

METHOD: Wound infection at the puncture site of the central venous catheter is the actual problem today. Puncture site of the central venous catheter plays an important role. For example (according to the literature) femoral catheter infected more often than the jugular and subclavian vein. We examined 326 patients in 2010-2012, which were punctured and catheterized by vena femoralis - 120 patients, vena subclavia - 57 patients, f.jugularis - 60 patients for the period from 5 to 18 days (for continuous infusion therapy). Among the patients there were 200 men and 126 women, mean age of patients was 43+ -35 years. To prevent infection the careful care and control is required, which needs the timely replacement of dressings and daily inspection. With this purpose was developed the algorithm of dressings for the prevention and monitoring of central venous catheter, on the main issues of infection control filling the form 08-1.

RESULTS: In our studies wound infection was observed on 3 patients, which is 0.92%. As a result of compliance with the algorithm we were able to reduce the number of nosocomial infections.

CONCLUSIONS: The basis of the work of nurses is to prevent the emergence and further spread of nosocomial infections.

Education of the personnel is a key to reduce the frequency of nosocomial infection.

EP-355[Neurosurgical Nursing]

Modern processing technology of medical devices in health care facilities

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INTRODUCTION

OBJECTIVE: Efficiency of medical products processing in the SSC

METHOD: thorough inspection, culling, mechanized cleaning of medical devices in the washer - disinfectant, meticulous care using spray with sterile oil, packaging, sterilization and forwarding of all of these processes is fully conductive in central sterilization department by employees of SSC. Widespread in the world is the use of the washer - disinfectant. If safety of single-use medical devices is guaranteed by the manufacturer, the safety of reusable medical devices depends on the measures like high quality cleaning, disinfection, pre-sterilization cleaning and sterilization. Transportation of the used appliances from operating room to CSSD is done in a dry form without contact with any disinfectants.

RESULTS: appliances that have been hand-cleaned retained 20% of the micro flora, and tools that have been cleaned by machined retained only 0.5 % of the micro flora. This means that use of machine cleaned appliances reduces infections patients' nosocomial infection.

CONCLUSIONS: 1) disinfection excluded in places - departments

2) freed time for nurses to perform direct duties

3) reduced the amount of disinfectants

4) minimized the chemical aggression of modern expensive surgical appliances

5) minimized the contact of nurses with disinfectants and the likelihood trauma in primary disinfection tool, which prevents occupational contagion.

EP-356[Neurosurgical Nursing]

Physiotherapy exercises for patients with a spine injury and a spinal cord

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INTRODUCTION

OBJECTIVE: Restoration of motive function, sensitivity, improvement of patients' life's quality, prevention of contractures.

METHOD: Various techniques of physiotherapy exercises are used in the course of rehabilitation of patients with a spinal trauma. However, stage-by-stage gymnastic has the most important meaning, process of stage-by-stage motive development of newborns is put in fundamentals of this gymnastics. It means that a patient learn to turn over from a back on a stomach and from a stomach on a back independently, learn to sit down, to sit without support, also to learn standing and movement on all fours, training of verticalization and walking with support, and then without support. At the same time the passive gymnastic used too for relaxing and strengthening of spastic muscles, improvement of microcirculation and prevention of contractures. Also the respiratory gymnastic is used together with these methods.

RESULTS: The using of these methods improves considerably of patients' life's quality by acquisition of self-service skills, so promotes prevention of contractures, to restoration of the lost motive functions.

CONCLUSIONS: Early application of the physiotherapy exercises complex will allow emergence of early positive results in motive dynamics of the patient that increase of motivation and a self-assessment of the patient necessary for further rehabilitation of the house promotes, to decrease in intensity of a pain syndrome and to improvement of the psychological status of the patient.

EP-357[Neurosurgical Nursing]

Care of patient after transpedicular fixation of the spine

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INTRODUCTION

OBJECTIVE: The purpose of the paper is to provide a qualified patients care and monitoring after spinal surgery, aimed to improve their activity and prevent possible postoperative complications and their subsequent rehabilitation at our center.

METHOD: From 2011 to 12.2013y, 368 operations on transpedicular fixation of the spine, was performed.

Fixation - this surgical procedure is performed to stabilize two or more vertebrae of the spine. The construction is fixed with screws and titanium rods. After the, compression of the nerve root is removed, inside the disc, between the two vertebrae, intervertebral disc prosthesis is introduced

and fixed by pedicle screws. Before the operation is carried out the upcoming intervention, the risks and benefits of the possible complications of this type of intervention are discussed. The nurse is looking after postoperative patient activation, as well as control over the use of funds patient support when traveling in the early hours after the abolition of bed rest. The activity is monitored throughout the period of hospitalization from the first day after surgery.

RESULTS: The transpedicular spine fixation without any complications is a good prerequisite for the start of early rehabilitation. By giving the characteristics of each patient and the principles of early postoperative rehabilitation, we have achieved effective prevention of postoperative complications, as well as shortening the early rehabilitation of patients.

CONCLUSIONS: The role of the nurse: Provide quality medical care to work together with doctors to respect patient and keep his dignity, to exercise control over the conduct of early postoperative rehabilitation.

EP-358[Neurosurgical Nursing]

Supervision and care of patients with violation of the mental status

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INTRODUCTION

OBJECTIVE: Prevention of suicide behavior at patients with violation of the mental status.

METHOD: According to the algorithm of nurse's actions in JSC National Center of Neurosurgery, at manifestation of the patient mental status' violation the specialist of nurse business, if it is necessary together with treating or the doctor on duty, carries out the suicide behavior development's assessment of risk. After that they plan the necessary actions. Firstly, it is necessary to isolate patient, then it has to look after patient every 2 hours, and if it is possible, will give an individual post for him. Close the window in the chamber. To exclude access to pricking and cutting subjects. Also, it must to fix the dates in the case of diseases. If the specialist of nurse business tries to communicate with such patient, he has to speak quietly, by using an adequate lexicon. If the aggressive behavior continues, for the safety it can be available the methods of deduction of the patient by more than two medical employees or the methods of patient's fixation on motionless frame of his bed. The control of his body's state, fixators and patient's physiological requirements are carried out at least each two hours.

RESULTS: Application of algorithm of nurse's actions at manifestation of the patient mental status' violation allows to reduce number of suicide attempts at patients with cognitive violations.

CONCLUSIONS: It is necessary to carry out measures to prevent the implementation of self-destructive behavior, when patient's conditions can lead to injure his health

EP-359[Neurosurgical Nursing]

Prevention of blood transfusion reactions and complications

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INTRODUCTION

OBJECTIVE: To provide prophylaxis and prevention of transfusion reactions and complications. To conduct the observation of recipients during transfusion and in post-transfusion period, monitor vital signs.

METHOD: Today, with the introduction of the new organizational structure, standards and technologies of the practical activity of the nursing staff, the use of information technology duties of nurses when conducting transfusion therapy definitely goes to a new level. Introduced new standards for transfusion therapy help to reduce risks, improve safety and quality of care holding a blood transfusion. To prevent the occurrence of transfusion reactions and complications, blood transfusion is performed directly at the bedside.

RESULTS: At all stages of blood transfusion trained nursing professionals are involved in the process to assist the physician, as well as during other operations. This type of evaluation helps to identify the level of training of nurse practitioners, allows to analyze the work of the head nurses in staff training, as well as motivates nurse practitioners for self-development.

CONCLUSIONS: Due to the fact that the transfusion of blood products is widely used during surgical procedures associated with large blood loss during surgery and in the postoperative period, a nurse practitioner should have specific knowledge on transfusion therapy. Acquired advanced knowledge and skills help nurse practitioners to reduce all kinds of reactions and complications, related to blood transfusion, since trained nurse practitioner provides invaluable assistance to a physician and plays an important role in the prevention and detection of post-transfusion reactions.

Prevention

Профилактика ГПТО в ЛПУ

1. Использование эритроцитов только с заместительной целью

- Замещение кровопотери
- Лечение хронической анемии

2. Иммунологическое обеспечение при переливании эритроцитосодержащих сред

3. Информированное добровольное согласие пациента на применение аллогенной крови и ее компонентов

4. Альтернативы донорским эритроцитам: аутодонорство, стимуляция эритропоэза, нормоволемическая гемодилюция, искусственные переносчики газов крови (перфторан)

blood



Blood as a risk factor



Patient identification



EP-360[Neurosurgical Nursing]

The role of operating nurse in conducting standardized procedures during neurosurgical operations

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INTRODUCTION

OBJECTIVE: To evaluate the role of an operating nurse in providing quality care and patient safety in neurosurgical interventions within the framework of implementation of the JCI international standards.

METHOD: from March 2013 to March 2014 in the Operating Unit more than 2,000 operations on the brain and spinal cord were conducted, during the period of introduction and undergoing through the JCI accreditation process in the JSC "National Center of Neurosurgery". The operating nurse takes a particular important role in conducting the procedures such as the marking of the surgical site and a "Time-out", which were developed, approved and implemented. The Operating Unit medical staff is responsible for documenting (marking of the surgical site, patient identification) the patient's readiness after admitting him/her from clinical units. The special paper form such as (AXL-01) "The pre-operative verification and the "Time-out procedures" is filled

RESULTS: precise and documented implementation of further procedures such as patient identification, marking of the surgical site, and conducting a "time-out", the presence and readiness of all members of the operating team, correct name of the surgery, availability and readiness of the necessary tests, medications, medical equipment and tools certainly has led to a significant improvement in the quality of patient care, and most importantly to their maximum safety.

CONCLUSIONS: There is a continuing development with the participation of national and international mentors such as conducting Master Class sessions. The nurses from the Operating Unit advance their professional skills in foreign clinics regularly.

EP-361[Neurosurgical Nursing]

Neurosurgical care for patients in the postoperative period

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INTRODUCTION

OBJECTIVE: The purpose: to determine the nurse's role in the postoperative period.

1. To learn neurosurgical nursing features.
2. Identify the problems of the neurosurgical nursing.
3. Clarify the nurse's role in postoperative patients care.
4. Suggest the ways to optimize nurse's professional work.

METHOD: questioning of nurses, a comparative analysis, patients' health surveillance. The postoperative care is aimed at the functional recovery, postoperative wound healing and prevention of possible complications.

A questionnaire was developed to learn the department's nurses' work. It helped to reveal the problems of the nurses' work. Also patients' conditions (physical, psychological) were observed during the process of care. Nurses' have a high level of training and skills that confirmed by work experience and qualification grade. In addition to postoperative patients care, sometimes at the request of relatives nurses visit patients at home, teach and train them and their relatives in self-service skills, massage, physical (bodily) exercises. Neurosurgery department nurses are routinely take part in feeding patients, changing of underwear and bed clothing, hygienic care of the patients' skin and oral cavity, treatment of surgical wounds.

RESULTS: The postoperative care is aimed at the functional recovery, postoperative wound healing and prevention of possible complications.

CONCLUSIONS: 1) Nurse plays the role of performer, instructor, innovator;
2) Neurosurgical department nurse must help patients' to alleviate their suffering, find contact even with the most seriously ill one's, feel the patient's mood, carry out medical prescriptions.

**EP-362[Neurosurgical Nursing]****The role of X-ray operating nurses during endovascular operations**

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INTRODUCTION

OBJECTIVE: Organization of work in the angiography room, preparation and accounting of consumables needed for endovascular operations. Sterility control kit tools, medical products. Compliance with the disciplinary regimen, as well as compliance with all applicable rules and procedures for the safety of personnel and patients from radiation exposure.

METHOD: In most cases, to perform endovascular intervention anesthesia is not required, local anesthesia is often performed at the femoral artery puncture zone. This allows performing intervention even in patients with severe concomitant diseases, which is contraindicated for traditional open surgery. To prevent postoperative complications, nurse role in the control of sterile zone is very important.

RESULTS: JSC "National center for neurosurgery" during 2013 was conducted:

- Endovascular operations (embolization of brain aneurysms, arteriovenous malformations, carotid stenting) - 270;
- Selective - cerebral angiography (diagnostic tests) - 315;
- Radiofrequency destruction of the trigeminal nerve branches - 57.
- As well as radiation safety following events were held:
- Dosimetry and related facilities;
- Control of operating parameters of X-ray machine;
- Monitoring the effectiveness of individual and mobile means of radiation protection;
- Individual X-ray monitoring.

CONCLUSIONS: Quality work of operating nurse in the angiography room, her knowledge of the necessary consumables, stages of the operation, compliance with all applicable rules and skills are an indicator of well-coordinated work of the doctor and nurse that provides quality health care and patient safety.