

Nursing Neurosurgery Session



NS-1

急性期から在宅まで脳卒中において求められる看護師 急性期病棟を担当している立場から

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当院の脳卒中脳神経センターは、SCU12床、一般病棟42床を合わせた57床で構成されている。当センターでは脳卒中患者に対し入院日より医師の指示のもと、理学療法士、作業療法士、言語療法士によるリハビリテーションが開始されている。SCUに勤務する看護師はリハセラピストとともに早期リハビリテーション、早期離床に積極的に取り組んでいる。

脳卒中治療ガイドライン2015では、不動・廃用症候群を予防し、早期の日常生活動作（ADL）向上と社会復帰を図るために、十分なリスク管理のもとにできるだけ発症後早期から積極的なリハビリテーションを行うことが強く勧められる（グレードA）といわれている。当院では脳卒中患者の病型に合わせた離床開始基準を作成しベッドサイドで早期離床を行っている。ベッドサイドでリハビリテーションを行うことで十分なモニタリングができ、重篤化回避を図ることができる。看護師も一緒に参加しリハセラピストと協議をすることで、リハビリテーションで獲得した動作を即ADLに結びつけることができる。重症度の高い患者ほど医師、看護師、リハセラピストなど多職種との情報共有、連携を密にとり介入していくことが大事である。

当院では脳卒中患者に対し、脳卒中リハビリ手帳を作成している。患者・家族らが脳卒中再発予防を入院中から行えるよう取り組んでいる。また、脳卒中ホットラインというシステムがある。退院後の生活や脳卒中再発の疑いで判断に迷った際に、当院のSCUに24時間いつでも連絡ができる通信手段を用い対応している。

脳卒中患者に対する看護師の役割、脳卒中チームで行う早期リハビリテーション、早期離床に対する取り組みについて当院での実際について報告する。

NS-2

回復期リハビリテーション病棟に求められる看護師 ～多職種連携と生活再構築の支援～

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回復期リハビリテーション病棟は、脳卒中などを発症し急性期病院での治療を終えた患者さんに対し、リハビリテーションを集中的に提供する病棟である。当院は、3病棟150床全て回復期リハビリテーション病棟であり、早期の自宅復帰を目指したりハビリテーションを提供している。

回復期リハビリテーション病棟では、限られた期間で患者さんの障害の回復と生活の再構築を行う。多職種でチームを作り、連携して患者さんの目標を達成する。当院では職種の枠を越えた相互乗り入れ型のチームアプローチを実践している。療法士は病棟配属され、職種間の隔たりをなくすために全スタッフは同一のユニフォームを着用している。ミーティング・カンファレンスなどは全職種で行い、多職種での情報の共有を行っている。モーニングケア・イブニングケアは看護スタッフのみでなく療法士も介入する。看護師は、回復期リハビリテーション協会が提唱する「ケア10項目宣言」をもとにケアを行っている。朝起床したら寝衣から普段着に着替え洗面所で顔を洗うなど、病前に患者さんが日常的に行ってきた生活を取り戻す援助を行っている。また、訓練時間以外の余暇時間には看護師による歩行訓練なども行い、職種に囚われないケアを行っている。患者さんのADL能力の向上を図るためには、訓練時の「できるADL」を病棟生活での「しているADL」にする必要がある。そして、病棟生活の中での「できた」という成功体験を積み重ねることで、ADL能力の獲得だけでなく自信の回復にもつながる。また、患者さんを24時間通して看ている看護師は患者を一番理解できる職種であり、病棟生活の中で起こる心身の変化や、患者さんのニーズをチームに発信している。

回復期の患者さんの多くは、障害受容に至るまでに今後の人生や、自宅復帰、社会復帰に対し大きな不安を抱える。看護師は、日々のリスク管理、全身状態や再発予防のための疾病管理を行い、精神面のサポートも行う。患者さんは障害と向き合う時、いつもは頑張っている患者さんでもくじけそうになる時がある。24時間をともにする看護師は、患者さんの思いを汲み取り、気持ちに寄り添うことで精神面を支えている。

回復期リハビリテーション病棟で過ごす期間に、どのようなリハビリテーションやケアを受けるかによって患者さんの人生が変わる。再び社会へ戻る患者さんが、最も良い状態で退院できるように支援している。

NS-3

脳卒中において求められる看護師の役割～在宅療養～

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わが国では高齢化とともに医療機関の機能分化が進んできている。そのため、脳卒中も急性期、回復期、維持期でかわる医療機関が異なり、それぞれが連携をしながら療養を支援するようになってきている。その中で在宅は維持期に該当し、長期にわたって支援を継続することになる。

介護保険制度が開始され、15年以上が経過し、訪問リハビリテーション、訪問看護等のサービスが整えられ、定着してきている。しかし、在宅での制度上の問題から、回復期から維持期である在宅へ移行したのち、リハビリテーションの機会が減り、回復期でできるようになった日常生活動作（ADL）が低下してしまうことがある。摂食嚥下障害においても同様で、病院では食べることができた食形態が、感染症や脱水から摂取することができなくなり、そのまま誤嚥性肺炎などの合併症を併発する場合も少なくない。結果、脳卒中の再発ではなくても生命の危機に直面してしまうことがある。

訪問看護師は脳卒中患者の日常生活動作（ADL）の低下予防、再発予防、異常の早期発見等を目的に、全身状態の観察、服薬管理、リハビリテーション、家族支援等幅広い範囲でかかわっている。さらに、緊急時には自宅にかけつけられるように24時間対応体制をとっている訪問看護ステーションが多くなっている。また、在宅ではそれぞれの個別性が非常に重視されるため、一人ひとりにオーダーメイドでのケアプランで対応している。訪問看護師は生活の視点をいかし、日常生活動作の中で行えるリハビリテーションを患者とともに多職種を巻き込みながら考えていくようにしている。さらに、「口から食べられなくなったときにどうするか」ということを本人、家族で話し合う機会を持つように勧めたり、考えるための情報を提供したりしている。

このような在宅での現状から、脳卒中において求められる看護師は、全身状態の観察やリハビリテーションのケアを提供することはもちろん、ケアマネージャーとともにケアマネジメントを行い、調整役を果たすことも役割であると考えられる。また、長期の在宅療養を支える家族の支援、意思決定支援も重要な役割であると考えている。

NS-4

脳卒中に関連する診療看護師(NP)の役割

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藤田保健衛生大学大学院では2012年より、急性期・周術期NP(Nurse Practitioner)の養成が開始された。現在までに19名の修了生が輩出され、22名が在学中である。2014年修了生がNPとして勤務し始め、今年で4年目になる。これまでは幅広い知識と技術の習得を目的に多くの診療科をローテートしてきたが、今年度より専門性の高い知識の習得とNPとしての役割の確立のため、NP3年目から診療科を固定して勤務している。当院で8名のNPが勤務し、4名のNPが診療科を固定して勤務している。救急総合内科に1名のNPが固定し、ERとICUを兼務している。ERでは、walk in、救急車対応を行い、診察、検査・画像などから患者状態をアセスメントし、医師に報告して診断・治療に参加している。

2016年10月～2017年3月、平日日勤(9時～17時)は、ERにNPが1人常駐した。NPが担当した症例合計261件、月平均43.5(±9.4)件であった。担当した症例のJTASの割合は緑24%、黄62%、赤13%、青1%であった。担当したER症例の転機は帰宅52%、入院48%であった。NPが担当した各診療科へのコンサルテーションはNPが行なっている。入院した診療科の割合は脳外26%、循内16%、救急15%であった。平日日勤のER受診患者は平均20.4(±4.0)件/日であった。ERのメンバー構成は医師3～4名、研修医2名とNP1名である。NPが担当しているのは平均2.3(±0.3)件/日であった。期間中、頭部CTを実施した症例が112件あった。内、脳梗塞12件、脳出血4件、SAH2件、CSDH2件、AEDH1件、ASDH1件であった。

また昨年度、選択ローテーションとして、NCUを2ヶ月ローテートした。NCUでは、カンファレンスの参加、回診、ER対応、手術助手などを経験した。ローテート期間に、CSDH 8例、SAH 1例、開頭血腫除去術 2例、脳室ドレナージ 2例の手術助手を経験した。処置は挿管3例、気管切開助手4例、CV挿入2例、t-PA 5例を経験した。画像については、みる機会が増え、医師に質問し学ぶ事ができ、自信に繋がったと考える。

NPの役割として特定行為を行うことに注目されることが多いが、現場では特定行為を行う時間は決して多くない。各診療科においてNPの役割が異なるが、医師・看護師のみならず、チーム医療の一員として、フレキシブルに活動する事がNPの役割として重要であると考えられる。

N-1

ICG Role ; Neurosurgery Nursing Aspect

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The science and technicque of present day neurosurgery are developing Fast. ICG is one of the technology often used in vascular neurosurgery which give better out come (less morbidity, less brain injury and other complication) Neurosurgical nursing is one important part from neurosurgery team, Who will work side-by-side with neurosurgeons. The Application of ICG Technology in surgery in involving neurosurgery nurses.

This topic will discuss Nursing Aspects of the application Of ICG

N-2

Clipping of Cerebral Aneurysm: Neurosurgery Perioperative Nursing Responsibility in Hospital Kuala Lumpur, Malaysia

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Perioperative nursing plays a vital role in preparation of clipping of cerebral aneurysm. Aneurysm is derived from the Latin word which means dilatation. It refers to weakening in the wall of the vessels causing localized dilatation or ballooning of the blood vessel. Three types of cerebral aneurysm are classified; berry, saccular, and fusiform. Perioperative nursing activity and responsibilities are described especially during pre- operative period, specific perioperative nursing role such as; scrub nurse, circulating nurse, general anaesthesia nurse in operation room preparation, instrument and implant preparation, safe surgery save life checklist completion, and general anaesthesia preparation are discussed.

During intra-operative period, scrub nurse role in preparing, handling and selection of aneurysm clips and applicators prior clipping are described. Role of circulating nurse's responsibility in documentation of temporary clips application 'duration' prior to clipping is vital. While general anaesthesia nurses monitor haemodynamic of the patients throughout the surgery.

Post-operative nursing responsibility of scrub nurse such as knowledge in application of dressing for different approaches of aneurysm clipping, and circulating nurses monitoring drainage of radivac drain and dressing of the surgical site. General anaesthesia nurse postoperatively assisting anaesthetist to continue monitor the patient haemodynamic before sending back to Neuro ICU.

N-3

Surgical Strategies and Management of Cavernous Malformations

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Cerebral Cavernous Malformation (CCMs) are vascular lesions made up of pathological capillary vessels bundled together.

CCMs are relatively common, affecting approximately 1 in every 200 individuals and accounting for 8% to 15% of all vascular malformations of the central nervous system (CNS). Cavernous malformations can either be familial form which often manifests as multiple lesions in the setting of family history or sporadic form where patients rarely have more than two lesions, and family history is typically absent.

Most common lesions occur in the brain, majority in supratentorial and minor in infratentorial to include brainstem. Approximately 3%-5% are discovered as intramedullary spinal cavernous malformation.

Most patients are asymptomatic. Only 20%-30% of CCM patients will be symptomatic in their lifetimes, presenting to medical attention most common during their third to fifth decades of life. Symptoms such as headache, seizures, and focal neurological deficits due to lesion expansion following events such as thromboses and haemorrhages.

Curative management is only achieved with complete surgical resection of CCM. Medical management is focused on seizure control and symptomatic relief of headaches. Radiosurgery treatment is controversial. Successful immediate lesion resection eliminates a patient's haemorrhage risk. Up to 80% of patients achieve seizure control postoperatively.

The most serious complications of CCM of natural history is the intracerebral haemorrhage. Posterior fossa cavernomas are reported to be 6.75 times more likely to present with a bleed and the haemorrhage rate is higher compared to other lesions in other locations which can result in debilitating deficits.

Four major criteria assist in determining when surgery is appropriate. 1) lesions that rise to the pial surfaced based on the T1-weighted MRI 2) lesions with repeated haemorrhages causing progressive neurological deficit 3) lesions with acute haemorrhages extending outside the lesion capsule 4) significant mass effect produced with large intralesional haemorrhage.

The main goal in managing Cerebral Cavernous Malformation is to balance the risks of surgery with those of natural history of the disease. Each CCM patient must be considered on an individual basis. Surgery is considered only when total resection can be achieved because lesion remnants can grow and haemorrhage as well.

N-4

Brain Aneurysm – Surgical Techniques and Treatments

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The advent of cerebral aneurysm surgery owes a countless acknowledgment to the drive of innovative neurosurgeons who premeditated and created the use of clips to close the neck of aneurysm. However, due to the lack of instrumentation and equipment (i.e. microscope, sophisticated clips), it became impossible and challenging to treat cerebral aneurysm until the beginning of the past centuries. From separating the thin-walled aneurysm from arterial flow while preserving the regular patency of the parent artery and adjacent branches by using a V-shaped malleable silver clip on 1937 by Walter Dandy, to the development of endovascular coiling through the combination of a quantity of modernization that took place between 1970 and 1990 in the area of electronics, neurosurgery and interventional radiology. Technology continues to improve to maintain a good quality of life to human beings. Advanced technology for improved surgical outcomes involve surgical clipping and coil embolization. Surgical clipping is an open technique that involves stopping of the aneurysm blood flow. It is a well-established treatment option that requires precision and a deep understanding of the structure of the brain. Nowadays, neurosurgeons have access to technology called infrared 800 which facilitates quick visualization of blood flow with the assistance of fluorescence technology which delivers neurosurgeons with real time images during surgery to improve success rate and minimize risks. On the other end, coil embolization is a less aggressive interventional procedure that has been widely used for nearly 30 years. This method use tiny metal coils into the aneurysm thru a catheter. The coil fill the aneurysm blocking blood supply and causing it to shrink. At present, a new generation of endovascular devices is changing the treatment of wide neck aneurysm in the carotid artery, giving some patients a successful alternate method to clipping, coiling or stent assisted coiling for decades. Microsurgical clipping continued to be the gold standard foremost modality for treatment for cerebral aneurysms until endovascular therapy emerged in the 1990s. Endovascular treatment of cerebral aneurysm continuous to evolved with the development of new technologies.

N-5

Endovascular treatment carotico cavernous fistula-role of nurses

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Carotico cavernous fistula is a condition resulting in a connection between carotid artery & cavernous sinus. It present with proptosis, redness & ophthalmoplegia. Most common cause is trauma followed by ruptured of aneurysm in cavernous sinus. The presentation depends upon the arterial supply & venous drainage of fistula. Endovascular treatment is currently the most useful option for its management. It involves placement of micro catheter into the fistula and packing it with coils, glue and balloons. Flow diverters are also being currently used with encouraging results. The nurses play the major role in delivering hassle free procedure for the surgeon. For that she/he has to have good knowledge of catheters and coils along with proper care of others consumables. In view of this new upcoming mode of treatment nurses have to get adequate training so that they are familiar with the requirement of the procedures as well as complications associate with it.

Between January 2014 to July 2017, 35 patient of Carotico Cavernous Fistula were treated in our institution. Chemosis was present in 90%, proptosis in 85% and ophthalmoplegia was seen in 47%. Around 10% also presented with tinitus. Chemosis resolved in 86% immediately. Proptosis redressed in 84% and ophthalmoplegia improved in 30%. Intra procedure events included blockage of catheters, thrombolization and hemodynamic changes. Most of them were minor and manageable. To conclude Carotico Cavernous Fistula is a vascular condition that can be managed effectively with endovascular treatment.

N-6

THE ROLES OF NURSES IN NEURO CRITICAL PATIENT

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In the hospital nurses are the largest part and have an important role in providing nursing care.

General Nursing and neuro nursing particularly must have competence as a role for patient safety, staff safety and environment safety. The competency of nurses are attitude, skill and knowledge. This is proven by the competency test certificate. In Indonesia, especially in Siloam Hospitals the role of nurses in neuro area is to ensure the implementation of nursing services safely in carrying out its role as caregiver, patient advocate, coordinator, manager, educator, collaborator, researcher, and change agent.

Key word: the Role of Nurses, Patient safety

N-7

Surgical management of Cerebral Aneurysm: Perioperative Nurses Perspective

○ Caili Lin

Lin Caili

Neurovascular surgery, probably one of the most intricate and challenging sub-specialty in Neurosurgery, faces a constant evolution of technology and surgical techniques. Due to rapid advancements in this technical field, the surgical teams are continuously challenged to upkeep their knowledge of new surgical approaches and products. However surgical clipping remains as the gold standard treatment for cerebral aneurysms.

Given this wide range and complexity of surgical intervention in this era, it is essential for perioperative nurses to understand and constantly update their knowledge in Neurovascular surgery. This allows them to anticipate and respond to the intraoperative needs and potential surgical complication of the patient who undergoes surgical clipping.

Hence this talk entails the basic aspects and surgical management of cerebral aneurysms from a perioperative nurses perspective.

N-8

DECOMPRESSIVE CRANIECTOMY: NEUROSURGERY PERIOPERATIVE NURSING RESPONSIBILITY

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Decompressive hemicraniectomy with duraplasty is a surgical option for those experiencing large volume MCA stroke. When decompressive hemicraniectomy with duraplasty is performed, improvement functional outcome if the MCA stroke candidate is younger, the onset of increased ICP occurred less than 24 hours before surgery, and surgery is performed before clinical signs of herniation syndrome occur. The level of care required for these patients makes nursing care challenging. Decompressive craniectomy with duraplasty is designed to decrease intracranial pressure. Decompressive hemicraniectomy for severe ischemic stroke currently is being investigated in major clinical trials such as HAMLET, HeaDDFIRST, HeMMI, DECIMAL and DESTINY.

In neurosurgery perioperative nursing, nurses must know about preparation instrument and equipment use for decompressive craniectomy procedure in good condition and functioning. Nurses must be knowledgeable in nursing management and priority of the surgery in emergency setting. Perioperative nurses must prepare in advance for massive bleeding during intra-operative decompressive craniectomy surgery. Perioperative nurses also should know the complications and outcome of patient. Perioperative nurses must be expert in decompressive craniectomy procedure preoperative, intraoperative and post-operatively. In this procedure perioperative nurses should know how to handle allograft and maintain the sterility of allograft before storing in neurosurgical bone banking with documentation.

Malignant cerebral ischemia occurs in significant number of patients who suffer ischemic strokes. The mortality rate of malignant infarction is very high and usually related to progressive cerebral oedema and brain herniation. Early clinical detection and neuroimaging is helpful. In some cases, decompressive craniectomy is lifesaving especially if done early in young patients and results in satisfactory functional outcome. Dominant hemispheric infarction may benefit from decompressive craniectomy if some preservation of speech is present at admission.

N-9

Research on how to get knowledge and skill by using video material for a scrub nurse with regards to surgical clipping

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Objective

We would like to know the reason of the effectiveness of the video material to get knowledge and skill for a scrub nurse in clipping.

Methods

A survey was done on 8 scrub nurses who were divided into 2 groups. The first group was made to watch the video while the second group was given reading materials to gain surgical knowledge and skills before performing the surgical clipping.

Result

From the past researches done by other hospitals as well as our own, we can conclude that by watching video has immensely help the nurses to cope and perform better in surgical clipping.

Nurses, who only study the reading material, can not fully understand the details such as hand gestures of the surgeons and have difficulty visualizing the surgical procedure. Moreover, most of the nurses cannot see the actual surgical field from their perspective during surgery.

Therefore if the nurses watched the video beforehand, they will be able to understand the surgery better. Repeatedly viewing the video materials enables the nurses to have long term memory retention. Furthermore, it decreases the nervousness and anxiety of the nurses, allowing them to perform more efficiently.

Conclusion

Under normal circumstances, scrub nurses tend to feel nervous and panic while assisting surgeries. Nevertheless, by watching videos of the actual procedures helps them to remain calm during operations. Therefore, to have long term memory retention and assimilation, it is essential to watch the video numerous times in a conducive environment.

N-10

MANAGING THE STROKE PATIENT – A CASE PRESENTATION

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Nursing the stroke patients is very challenging experience because these patients have no control over themselves or their environment and thus are highly dependent on the nurses at the acute phase.

The skills required to care for stroke patients are nursed in a variety of clinical settings and therefore, it is necessary for all nurses to assess, plan and implement the nursing care of this vulnerable patient group.

Regular Glasgow Coma Scale assessment should be recorded, including pupil and limb assessment.

Maintaining clear airway and prevent from aspiration is vital during emergency priority.

On-going management - a framework of care that seeks to prevent disabilities, immobility give rise to many complications should be implemented.

Communicating with relatives can aid and enhance the nurse-patient relationship, psychosocial needs and involvement of family members in care will help to improve patients' outcome.

N-11

DELIRIUM IN NEUROLOGICAL PATIENTS AND SOME INVOLVED FACTORS IN NEUROSURGERY DEPARTMENT 1 VIET DUC UNIVERSITY HOSPITAL, HANOI, VIETNAM

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Background: Delirium is a common clinical syndrome characterized by inattention and acute cognitive dysfunction. In neurology context, a plenty of brain pathologies have been associated to delirium, such as subdural hematoma, stroke, acute cerebral infections, brain neoplasm, hydrocephalus.

Objectives: the aim of this study to investigate the percentage of delirium on neurological patients and find involved factors in Neurosurgery Department 1, Viet Duc University hospital, Hanoi, Vietnam.

Methods: this research is a descriptive study. Research instruments included the ICDSC (intensive care delirium screening checklists) questionnaire translated and validated (Cronbach's alpha = 0.909) and demographic data. Data were collected in one month (from May 2017 to June 2017) analysed using descriptive statistics, Pearson's product moment correlation.

Results: of 377 eligible patients, the median age was 41.1 ± 18.01 years old, almost patients were diagnosed with traumatic brain injury (TBI) (58.4%) and brain tumor (24.6%). Using the ICDSC questionnaire to assess, the study reported 30 patients (8%) could be not evaluated; 188 (49.9%) patients without delirium (ICDSC score = 0), 28 (7.4%) patients were termed 'subsyndromal delirium' (ICDSC score from 1 to 3) while 131 (34.7%) patients with ICDSC score ≥ 4 were diagnosed with delirium. These delirious patients included: hyperactive form (73%), hypoactive form (12%), mixed form (15%); 65.6% patients with delirium noted in the first admission day; the median day which delirium lasted: 4.38 ± 3.04 days; when discharged: 64.1% (84 patients) still remained with delirium, 32.8% (43 patients) without delirium; 3.1% (4 delirious patients) getting bad progression. Some involved factors: rate of patients getting delirium was higher in group of patients with lower Glasgow score ($p=0.000$); rate of patients getting delirium was highest in group of patients with TBI ($p=0.007$); the more number of combined injuries patients had, the more ability of occurrence of delirium patients got ($p=0.000$); rate of patients getting bad progression was higher in group of patients with delirium ($p= 0.01$).

Conclusion: A protocol should be developed to access properly from pain, agitation to delirium step by step in neurological wards.

Keywords: Delirium, ICDSC questionnaire, neurological patients, traumatic brain injury.

N-12

NURSING CARE FOR PATIENTS WITH STROKE AT NEUROSUGERY CENTER, VIET DUC UNIVERSITY HOSPITAL IN RECENT YEARS

○ Anh Ngoc Dao

VietDuc University Hospital

What is stroke?

Stroke

Cerebral vessels

Ischemic stroke

Hemorrhagic Stroke

A part of brain may not be perfused

Cerebral tissue starts to die

WARNING SIGNS OF STROKE

- Sudden numbness, weakness or paralysis
- Speak difficulty
- Sudden decrease or loss of vision
- Dizziness, loss of balance
- Sudden headache

I) OBJECTIVES OF NURSING CARE FOR PATIENTS WITH STROKE

- Management of vessential function: respiration, circulation, neurological system
- Rehabilitation of cognition mobility, reduction of sequela, improvement of life quality
- Prevention of complitations: pneumonia related to refluent, pressure ulcers, urinary tract infection,...
- Patients and patient family education

II. NURSING CARE FOR PATIENTS WITH STROKE

1) Management of respiration

a) Aim: spo₂>92%

b) Patients assessment: sign of hypoxemia?

c) Cave of artificial airway

2) Management of blood pressure

Hypertension Hypotension

Decrease blood pressure if MAP > 130mmHg or CPP > 85mmHg Increase blood pressure to ensure minimum systolic blood pressure \geq 90mmHg

3) Careful monitor of neurological function

- Level of counciousness: Glasgow coma scale
- Focal neurological signs.
- Sensory function
- Speech function

3.1) Salow function: GUSS scale

3.2) Function of mobility

- Assess patient's myotonas
- Support & guide patient's family to help patients in doing daily activities
- Cooperate with department of physiotherapy

4) Prevention of complication

- Pressure ulcers
- Pneumonia
- Urinary tract infection
- Intestinal tract infection

5) Patients & patient family education

- Teach patient family how to cave & support patients
- Explain abnormal signs needed to report
- Comfort & encourage patient family

N-13

AGITATION, SOME RELATED FACTORS, EFFECTIVENESS OF SOME WAYS OF USE OF SEDATIVE DRUGS IN PATIENTS WITH TBI IN NEUROSURGERY DEPARTMENT I, VIET DUC HOSPITAL.

○ Hang Thi Nguyen¹, Ngan Thi Nguyen¹, Hanh Thi Phung², He Van Dong¹

¹Viet Duc University Hospital,

²Hanoi Medical University

Background: Agitation after traumatic brain injury (TBI) is the frequently observed behavioral problem and is a challenge to care provider. **Objectives:** investigate the real state of agitation, some related factors and the effectiveness of some ways of the use of sedative drugs in patients with TBI in Neurosurgery department I, Viet Duc University Hospital. **Methods:** the Richmond Agitation-Sedation Scale (RASS) and a descriptive cross-sectional study and a prospective study were conducted on 378 patients with TBI. **Results:** 27.2% of all patients with TBI getting agitation at different levels from (+1) to (+3) on RASS scale; 50.5% of all patients with agitation had duration of time of agitation which was no more than 1 week. Some related factors: the more number of combined injuries patients got, the more ability of occurrence of agitation patient got ($p = 0.007$); higher rate of patients getting agitation in group of patients with lower cognition ($p = 0.000$)/ having focal neurological signs ($p = 0.001$)/ having hypokalemia ($p = 0.01$); higher rate of patients getting bad progression in group of patients getting agitation ($p = 0.005$). The protocol for sedation was not good: the effect of Phenobarbital and Diazepam on maintaining sedation lasted only around 1 hour while the agitation lasted for a much longer time; with the mixture of Fentanyl and Mydazolam, most of patients still got many episodes of agitation at levels from (+2) to (+3) on RASS scale during drug was infusing by electric syringe pump. **Recommendations:** propose a new better protocol for treatment of agitation after TBI; consider the use of RASS scale in nursing practice to improve the control of agitation and administration of sedative drugs.

Keywords: agitation after traumatic brain injury, Richmond agitation sedation scale.

N-14

QUALITY OF LIFE AMONG HEMORRHAGIC STROKE SURVIVORS IN CHINA: A LONGITUDINAL OBSERVATIONAL STUDY

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Background

Hemorrhagic stroke, with higher morbidity, mortality and disability, is the first place in the cause of death in China. The survivors are increasing likely to live with their impairments and disabilities. Therefore, the quality of poststroke life is closely related to the functional outcome, but there is still lack of evidence on status and factors contributing to quality of life among hemorrhagic stroke survivors in China.

Objective

To describe the prevalence of quality of life in patients with hemorrhagic stroke and explore the factors associated with the quality of life.

Patients and Methods / Material and Methods

Data was collected from 202 hemorrhagic stroke patients at discharge and 1 year after stroke. Quality of life was assessed via Stroke Specific Quality of Life Scale(SSQOLS). Multiple linear regression was used to identify the predictive factors of quality of life.

Results

Mean age of the patients was 53.0 ± 11.9 years, 53.5% was female, 57.4% was SAHs. The SSQOLS score was 164.2 ± 51.4 and 232.3 ± 23.7 at discharge and 1 year with significant difference. Regression revealed that neurological function, functional disability of patients were the most determinant factors, explaining 81.7% of overall variances for quality of life with other factors at discharge. The functional disability was the most determinants at 1 year after stroke.

Conclusion

The functional disability of patients should be focused on in rehabilitation. The caregiver burden, psychological health of patient should also be taken into consideration to improve the quality of life.

N-15

Constraint Induced Movement Therapy: A Rehabilitative Technique for Upper Limb Weakness.

○ Fiona Jane Nation

Registered Nurse

Clinical guidelines in Australia for stroke care suggest that patients should be mobilized and upper limb training should commence as early and as frequently as possible. As much physical therapy (physiotherapy and occupational therapy) with a minimum of one hour practice per day at least five days per week is currently best practice. Conversely, there is evidence emerging that condensed and repetitive physical therapy and sensory stimulation in the form of Constraint Induced Movement Therapy and modified Constraint Induced Movement Therapy techniques, are more conducive to accelerated recovery outcomes, particularly of the upper limb.

Rehabilitative methods for limb rehabilitation currently include passive and active limb mobilization, electromyographic biofeedback in conjunction with conventional therapy, electrical stimulation and sensory specific stimulation. A less common, yet effective modality Constraint induced movement therapy (CIMT) or modified CIMT (mCIMT) has evolved as being a therapeutic technique with successful outcomes with the aim of the technique to prevent or reduce a learned 'non use' of an affected upper limb which is frequently developed after stroke. Although functional benefits appear to be largely confined to those individuals with some active wrist and hand movement, the technique is proving successful when compared to alternative or no treatment. The therapy consists of a set of rehabilitation techniques designed to reduce functional problems in the most affected upper extremity of clients with stroke. The technique involves constraining movements of the less-affected arm, usually with a sling or mitt for 90% of waking hours, while intensively inducing the use of the more-affected arm. Concentrated, repetitive tasks and training of the more-affected limb is usually performed for six hours a day for a two to three week period.

This presentation will examine and outline the current techniques and case studies.

N-16

DETERMINANTS OF QUALITY OF LIFE IN HEMORRHAGIC STROKE SURVIVORS AFTER SURGERY:A 1-YEAR FOLLOW-UP STUDY

○ Wenjing Cai

Sichuan University

Background:

With the change of medical model, the quality of life after disease has been drawing extensive attention. Stroke seriously threaten human health and quality of life with high morbidity, mortality and disability. The quality of life study after stroke is growing important while difficult.

Objectives :

Stroke seriously influence peoples life and health with high morbidity , mortality and disability. With high morbidity , mortality and disability, the quality of life study after stroke is growing important while difficult.

With the change of medical model, the quality of life after disease has been drawing extensive attention. The study investigated changes in quality of life in hemorrhagic stroke survivors who undergo surgical treatment during hospitalization and its determinants.

Method:

A total of 145 patients with hemorrhagic stroke who undergo surgical treatment during hospitalization participated this study . Patients were followed up at discharge, 3months, 6months, and 1 year after stroke. The stroke specific quality of life(SS-QOL), Barthel Index(BI) and Scandinavian Stroke Scale(SSS) were used to assess quality of life, activities of daily living and neurological function, respectively.

Result :

(mean age 53.1; 56.3% males). The mean SSQOLS score at discharge was 154.42 ± 41.14 , of which the most influenced areas were, in order, the energy, ability to work and family roles. From the time of discharge to one year, the quality of life and the neurological function were both improved. The determinants of quality of life are Age, sex, marital status, educational level, complications, activities of daily living.

Conclusion:

Activities of daily living was associated with quality of life, indicating that interventions targeting maintaining and further improving activities of daily are important. And we should pay more attention to the support and care of elderly, female, low education, mateless, with other complications and low ability of activities of daily living, thus to improve their quality of life.

N-17

Caregiving burden in Chinese caregivers of patients with hemorrhagic stroke at discharge and 1-year after stroke.

○ Wei Zhu

West China School of Medicine, Sichuan University

Background: A large proportion of stroke disabled survivors are supported by family members even from in-hospital period in China. A few studies focus on the burden of caregivers of hemorrhagic stroke patients at discharge and its change over time.

Objective: To assess the level of burden borne by caregivers and its change over time and to identify associated factors.

Methods: Data was collected from 187 pairs of patients with hemorrhagic stroke and their caregivers at discharge and 1 year after stroke. Caregiver burden was assessed on the Bakas Caregiver Outcomes Scale(BCOS). Socio-demographic and other characteristics of patients and caregivers were analyzed as potential predictors of the burden. Multiple liner regression was used to identify the predictive factors.

Results: The BCOS score was 47.412.7 and 58.98.3 at discharge and 1-year, with significant difference. Regression revealed that patients' depression, caregivers' self-rated burden and the self-satisfaction of caregiving with other identified factors explained 66.2% of overall burden.

Conclusion: Caregivers experienced considerable burden although it decreased over time. Interventions to reduce caregiver burden should be given before discharge in China.

N-18

LIFE AFTER STROKE...

○ KHATIJAH BEEVI M.S.M. SULTAN DULKARUNAIN

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KUALA LUMPUR HOSPITAL
MALAYSIA

The brain is a complex organ that controls various part body functions. If a stroke occurs and blood flow can't reach the region that controls a particular body function, that part of body won't work as it should be. There are two types of strokes. One is ischemic stroke , is created by a blood coagulation a vein in the cerebrum. The other types, called hemorrhagic stroke , is a vein that breaks into the cerebrum. Stroke is the third reason for death in the world. Around 25 percent of individuals who recovered from their first stroke will have another stroke inside five years. How do we prevent? Generally it is thought that stroke is preventable by paying attention to blood pressure levels, blood glucose levels, blood lipid levels, diet and body mass index can effectively prevent a stroke from occurring. For patients who have one cerebrovascular occlusion, they should pay attention to cerebral vascular occlusion in different blood vessels, which can occur again. For patients who have had sequel already, it was thought that there was no effective treatment to recover any functions, but they still can have rehabilitation training to keep muscle away from atrophy. With the development of science and technology, rehabilitations for patients who are suffering from stroke disability is now available. So let us discover all that can help them for a better future in the community.

N-19

早期リハビリテーション介入により意識レベルの改善が見られた事例

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【はじめに】

当院のICUではADLの低下予防や廃用性症候群の予防のため、入院直後から早期のリハビリテーションを行っている。脳血管疾患の患者は意識レベルが非常に低く、長期臥床傾向にある。しかし、理学療法士、作業療法士による専門的なリハビリテーションに加え、看護師が離床の介入を行うことで意識レベルの改善が見られた事例を経験し、そこから学んだことをここに報告する。

【看護介入】

期間：ICU入室中の14日間

対象：30代女性、AVM(SMGr1)及び脳動脈瘤破裂によるくも膜下出血(Gr5)。

内容：リハビリテーション以外の2時間毎のROM訓練、座位保持訓練、車椅子への移乗

【結果/考察】

入院時はGCS:E1、V1、M1で自発的な運動はみられなかった。ICU入院直後から「身体可動性障害」の看護計画を立案し、介入に「検温時に他動運動を受けることができる」を加え、情報共有を行いながらベッド上臥床状態でのROM訓練を行った。入室4日目からは、理学療法士、作業療法士によるリハビリテーションを開始した。その後安静度の拡大に伴ってベッドアップや背面開放端座位にし、1日2回リクライニング車椅子への移乗を継続的に行った。車椅子移乗当初、頭頸部の保持はできなかったが、刺激により開眼したり不明瞭ではあるが発語がみられたりと意識レベルの改善がみられた。微弱ではあるが離握手もでき足関節の背屈、底屈運動も可能となった。退室時にはGCS:E4、V5、M6へと向上が見られた。定期的なROM訓練や背面開放座位、車椅子への移乗などが脳への刺激となり意識レベルの改善がみられたと考えられる。ICUから一般病棟に退室後もリハビリテーションを継続し、最終的には杖にて自力歩行できるまで回復しリハビリテーション病院へ転院することができた。

リハビリテーションは関節拘縮予防や筋力低下予防のために行われていることが多いが、この事例の成果から、意識の改善にも効果があることを再認識した。

【おわりに】

入院早期よりリハビリテーション介入することは、ADL拡大はもとより意識レベル改善にも効果的である。今後も早期から看護介入を行い意識レベル改善、QOL向上に繋がっていきたい。

N-20

脳神経疾患患者への退院前・退院後訪問の必要性についての検討

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はじめに

2016年の診療報酬の改定により、退院後訪問指導料が新設され、当院看護部では退院前・退院後訪問に積極的に取り組んでいる。今回、脳神経疾患患者に対し、退院前・退院後訪問を実践し、検討を行ったため報告する。

症例・実践内容

① 20代男性 症候性てんかんによる低酸素脳症 手術治療目的で当院に入院し、治療後人工呼吸器離脱、経口摂取可能となった。障害者施設に戻ることで、退院後訪問を実施した。入院中の治療内容、看護ケア内容について施設スタッフに説明。全身状態の確認。提供される医療やケア、リハビリテーション内容の確認。呼吸訓練や経口摂取訓練の実施状況と注意点の確認。当院、施設、患者家族間で今後の療養の目標と展望について共有を行った。

② 70代男性 右中大脳動脈領域アテローム性脳塞栓症で入院、ADL再獲得目的でリハビリテーション科にて加療中。在宅退院予定となり退院前後訪問を実施した。動作確認(車椅子・ベッド移乗、家屋内での移動方法、トイレ動作)を行い、入院中に方法の変更が必要ないか検討した。また、失禁を認めるため下半身の清潔介助に関する指導を行い実践した。

考察

病院で指導した内容と患者の生活に大きな乖離があるか判断する必要があるが、実際の生活環境などを目にしない限り十分に理解することが困難である。また、施設であっても、提供されるケア内容は様々であり、また、医療・介護スタッフの人員や経験値により、提供されるケアが入院中と同等であるとは限らない。退院前・退院後訪問指導を行うことで、患者にとって適切なケアとは何か、今後の療養先での人的・環境的側面から十分に理解したうえで検討することが可能となった。

まとめ

患者の支援体制について適切にアセスメントを行うことで、どのような状況であれば、地域での生活が可能であるのかを、判断することができ、そのために退院前訪問は有用である。また、退院後訪問を行うことで、在宅や施設での生活の実際を知ることができ、入院中に指導した事項が、適切な内容、方法であったかを検討し、再調整する機会となる。

N-21

脳卒中急性期患者の栄養プロトコル使用の有効性の検討

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【背景】

脳卒中は、嚥下障害の原因疾患として最も多いことはよく知られている。また、嚥下障害の程度は軽症から重症まで幅広く、様々なケアを必要とする。当院、脳卒中センターでは、脳卒中発症し緊急入院した全ての患者に対して、嚥下障害スクリーニングテストを実施し、当センター独自に作成した脳卒中栄養プロトコル(以下プロトコル)に沿って一元化した栄養管理を行っている。脳卒中急性期患者に対してプロトコルを使用することの有効性を検討した。

【方法】

2014-2015年に当院、脳卒中センターに脳卒中を発症し入院した患者574名。脳卒中病型内訳:脳梗塞74%、脳出血18%、くも膜下出血8%、性別:男性59%、年齢72±13歳の症例に対して、入院時の嚥下機能:摂食・嚥下能力のグレード(以下Gr)、経口栄養摂取率、入院時に経管栄養となった患者の退院時の経口摂取移行率を調査した。

【結果】

入院時の嚥下機能の内訳は、Gr1-3(重症)21%、Gr4-7(中等症)17%、Gr8-9(軽症)46%、Gr10(正常)16%であった。重症嚥下障害患者でNG-T留置し栄養管理を行った108名(死亡症例除外)の症例のうち経口摂取へ移行できたのは56%、経管栄養開始までの期間は3.1±2.1日。全症例の退院時の経口栄養摂取率は91%であった。

【考察】

脳卒中発症直後に嚥下障害スクリーニングテストを行うことで、経口摂取が可能であるか否かの判断が早期にでき、プロトコルに沿って経口栄養摂取が困難な症例においても、NG-T留置により早期に経腸栄養の開始が可能となっていた。脳卒中治療ガイドライン2015でも発症早期から経腸栄養を開始することを勧められている(グレードB)。プロトコルでの一元化した栄養管理を実施することで栄養トラブルが減少し、退院時には90%以上の症例で経口摂取が可能であり、経管栄養患者のうち半数以上の症例で経口摂取へ移行できた要因であると考えられる。

N-22

当院脳神経外科病棟における脳卒中患者の覚醒刺激へのアプローチ

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【はじめに】

脳卒中急性期における患者は意識障害に伴い、自発性が低下し長期臥床状態になり、廃用症候群や合併症を併発するリスクが増加する。ベッドから離れて外界からできる限り多くの刺激を与え、大脳の活動を引き起こすきっかけを作ることが必要である。

当病棟では脳卒中急性期の覚醒不良患者に対して、外界からの刺激としてサーカディアンリズムや社会的交流に着目し、覚醒だけでなく、セルフケアの向上を促す取り組みを行っているためここに報告する。

【方法】

期間:2016年7月~2017年5月

対象:GCS(Glasgow Coma Scale)E2.V1.M4以上でバイタルサインが安定しており、感染予防対策の必要のない患者

内容:起床時のラジオ体操、ラウンジでの食事と口腔ケア、日中3時間のデイケアの実施、院内コンサートへの参加、身体拘束の縮小のための活動

【結果】

脳卒中患者147名のうち12名を除く91.8%の患者に実施でき、残りの8.2%の患者は体格が大きく、覚醒不良である患者であった。起床時からラジオ体操に参加し、日中はベッドから離れて過ごす時間を増やすことで、サーカディアンリズムの獲得ができた。危険行動のある患者や経管栄養の患者もラウンジで過ごすことで身体抑制を予防し、活動範囲を広げた。看護師からの刺激だけでなく、他患者の影響を受けることにより、社会性を取り戻し、覚醒を促すことができた。それにより、食事、整容の自立、ベッド上からトイレでの排泄へとセルフケアが向上した。

【考察】

入院生活は、治療、検査、リハビリ、食事が主であり、それ以外の時間はベッド上での生活となりがちである。これにより、覚醒不良の患者は昼夜逆転を引き起こし、日中の必要なリハビリが効果的に行えないなどという悪循環に陥る。私たちの取り組みによって患者のサーカディアンリズムを整え、社会的交流の場を増やし、自然な社会的参加ができるよう取り組んだ結果、覚醒時間の延長ができたと考えられる。

【結論】

私たちの取り組みを今後も継続していくとともに、実施できていない残りの約10%の患者へのアプローチの検討が必要である。

N-23

脳卒中患者に対するメンテナンスリハビリテーション入院の効果

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[目的]今回、A病院を経て在宅で維持期を過ごしていた患者に対し、短期間のリハビリテーション（以下リハ）を目的とするメンテナンスリハ入院（以下MR入院）を行った。その結果から、脳卒中急性期・回復期・維持期における、リハ介入について今後の課題を考察したので報告する。

[対象]対象：70歳代男性。6年前に椎骨動脈瘤による脳幹梗塞を発症。気管挿管から気管切開、介護度5、胃瘻造設となり介護度5で退院した患者。患者は、発声と経口摂取を目標として、メンテナンスリハ入院を希望した。セルフケアFIM（以下SCFIM）合計22点、コミュニケーションFIM（以下KKFIM）合計35点。

[方法]方法：事前評価を行い、医師、病棟看護師、リハセラピスト、呼吸ケアサポートチーム（以下RST）、脳卒中CNとともに5日間のリハプログラムを立案し、VF、呼吸状態、嚥下の評価及び訓練を実施した。

[結果]入院後気管カニューレをKOKENスピーチカニューレへ変更。発声練習、直接嚥下訓練を開始した。患者は、6年ぶりに会話、経口摂取を行うことができた。評価のため、入院日数延期し退院。退院時CMFIM35点、KKFIM35点。その後、経過観察したのち、1週間後再入院し、気管切開孔閉鎖術を施行。胃瘻による経管栄養を併用しながら昼食の経口摂取を確立し退院した。

[考察]今回脳卒中維持期の患者に対して、MR入院を実施したことで、発症から6年を経て気管切開孔閉鎖、声によるコミュニケーションの確立、経口摂取を実現することができた。脳卒中発症後も生活を通して患者・家族のリハは続いており、その変化についてMR入院を通して、継続して評価・介入したことで、今後の医療費の削減、および患者のQOLの向上に繋げることができた。急性期、回復期、維持期を通して継続して関わっていくことで脳卒中医療の質の向上につながることを示唆された。