

A Case Report on Subarachnoid Hemorrhage

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ABSTRACT:

Background: In many patients, bleeding is a warning sign, and continuous or recurrent haemorrhage necessitates a trip to the emergency room. Epistaxis is a frequent problem on its own, but when it is combined with otorrhagia, it may be a very painful experience. The diagnosis of the underlying etiology of spontaneous epistaxis and otorrhagia requires imaging evaluation. Brain computed tomography should be used to check for a ruptured aneurysm or an underlying subarachnoid haemorrhage (SAH). Computed tomography is one of the most advanced diagnostic methods for detecting the underlying cause of SHA. Magnetic resonance imaging, angiography and digital subtraction angiography are two types of angiography.. **Patients history :-** My patient 34 year old admitted on 11/7/2021 in AVBR hospital in neuro ICU. he has a chief complaint of severe headache, fainting, double vision, Nausea, vomiting & spontaneous otorrhagia and epistaxis. **Main symptoms & important clinical finding :-** patient has various investigation like careful history , physical examination , neurological examination ,Complete blood Count , CT Scan MRI etc .

Medical Management: - Medicine prescribed by doctors such as Diuretics are given to the patient such as injection Lasix, anti-hypertensive, Iv fluid given to patient such as dextrose to maintaining fluid balance. **Nursing perspectives:-** Monitor vital of the patient per hourly maintaining the IV fluid .prescribe medicine as per doctor order .

Conclusion :- My client 34-year-old men he was admitted in AVBR hospital on date 11-7-2021 With chief complaint of severe headache, fainting , double vision , nausea , vomiting & spontaneous otorrhagia and epistaxis etc. Patient had undergone all investigations and after that he was diagnosed as a subarachnoid hemorrhage.

Keywords - Epistaxis, Otorrhagia, Orthosia, Angiography.

INTRODUCTION :-

A subarachnoid haemorrhage occurs when a damaged artery on the brain's surface bleeds. This bleeding frequently results in a strong headache. It's a medical situation that requires immediate attention. A stroke is a kind of subarachnoid haemorrhage. It has the potential to induce long-term brain damage.¹

In North America, subarachnoid haemorrhage causes more than 30,000 cases of stroke each year, with a 4.4 percent fatality rate. Because a large percentage of instances of subarachnoid haemorrhage occur in young people and can range from benign to severe, an accurate diagnosis is critical to avert premature morbidity and fatality. For emergency care physicians, we describe a simple technique to evaluating, risk stratifying, and managing subarachnoid haemorrhages in the emergency department.²

Bleeding between the arachnoid and the pia mater is known as subarachnoid haemorrhage. Head trauma is the most prevalent cause of subarachnoid haemorrhage in general, however traumatic subarachnoid haemorrhage is normally treated as a separate condition. The most common cause of spontaneous (primary) subarachnoid haemorrhage is burst aneurysms. In around 85% of cases, a congenital cerebral saccular or berry aneurysm is the culprit. Bleeding may stop on its own. Aneurysmal haemorrhage can strike at any age, but it is most frequent between the ages of 40 and 65.³

Blood builds up between the arachnoid and the pia mater, causing subarachnoid haemorrhages, which can be fatal. The annual incidence of subarachnoid haemorrhage in the United States is from 10 to 14 per 100,000 people.⁴

Cerebral aneurysms > 5-7 mm are most likely to rupture. Approximately 1%-3% of patients visiting the emergency department for a headache are subsequently found to have a SAH. Trauma is the most common cause of SAH; however, non-traumatic SAH is found to result from a ruptured saccular aneurysm in 80% of cases. Patients with SAH require close monitoring and often require intensive care unit admission.

Patients information:-

My patient 34 year old admitted on 11/7/2021 in AVBR hospital in neuro ICU. he has a chief complaint of severe headache, fainting, double vision, Nausea, vomiting & spontaneous otorrhagia and epistaxis .

Patient concern & symptoms of patient :- My patient 34-year-old men he was admitted in A.V.B.R. Hospital with chief complaint of neck pain, severe headache, sensitivity to light nausea vomiting after physical examination and investigation doctor diagnosed a case of subarachnoid hemorrhage .

Medical family and psycho-social history:- patient have a normal fever and he take a medications on community bases. Patient belong to a nuclear family. His family income is 40,000 he oriented to time place, and person he co-operate with doctor nurses, as well as other patient also. In this family there is no any medical problems like Hypertension, Diabetes mellitus, asthma etc. There is no hereditary or genetic disorders in family.

He was mentally stable. He is oriented to date time and place and he is maintain good relationship with family member.

Relevant past investigation with outcome :- the patient have no any past investigations related to disease condition.

Clinical findings :

State of health – unhealthy

body build - thin

Height -170cm

weight - 60kg

vital sign :-

Temperature is 98°C

Pulse rate of 84 per minute

Respiration :- 24 breath per minute

Blood pressure of 130/70 mmHg

His vital signs were normal on physical examination, and his Glasgow coma scale score on admission was he had bilateral epistaxis and no pathologic findings on neurological evaluation. An otoscope revealed a normal tympanic membrane with bloody otorrhagia in the left external auditory canal during an ENT appointment.

He had further investigation for intracranial aneurysm or bleeding when the epistaxis stopped spontaneously and no findings on a nose inspection.

He had a brain CT scan, which revealed subarachnoid hemorrhage[SAH], and he was a candidate for brain CT angiography, which came back normal.

Clinical investigations: His vital signs on arrival and physical examination were as follows: blood pressure 110/78mmhg, pulse rate 80/min, respiration rate 16/min, O2 saturation in air room tem 96 percent, and glass low coma scale score 15 His right ear shows bilateral epistaxis and otorrhagia. His hemoglobin was 14 and his PT was 11 seconds INR;1 PPT;25 and second PPT ratio 36 bleeding time was 5 minutes. A consultation with an ENT was conducted. The otoscopy revealed a normal tympanic membrane with bloody otorrhagia in the left external auditory canal, with epistaxis stopping spontaneously and no nose could be found.

Timeline: patient was admitted in hospital for the sub arachnoid hemorrhage treatment he is treated with antidiuretics drugs antihypertensive drug.

Diagnosis Assessment:- On the basis of patient history collection, physical examination, complete blood count was done in CBC HB is 11.2 gm, WBC count 20000 /cu mm less than normal platelet count 185 lac and other investigation was done.

Diagnosis evaluation:- Diagnostic challenging No any challenging during diagnosis evaluation. After physical examination and investigation doctor diagnose as a subarachnoid hemorrhage.

Therapeutic intervention:- Hospitalization is necessary for supportive care, as well as to control bleeding and prevent brain injury. Surgery or catheter-based therapy are two options for treatment. Diuretics are given to the patient such as injection Lasix, anti-hypertensive, Iv fluid given to patient such as dextrose to maintaining fluid balance.

He was look all treatment and outcome was good. he is sign and symptoms was reducing. No any change in therapeutic interventions.

Complication are seen in Seizures, medical complication, death, brain herniation.

Nursing Perspectives: -

Monitor vitals of the patient per hourly maintaining the IV fluid Patients admitted to a neuro intensive care unit (ICU) will endure pain, and nurses will be responsible for administering analgesics. In the midst of the ongoing opioid crisis, it's unclear how nurses can address the need for pain relief while also personalizing analgesic administration.

Nursing interventions :-

- initial intervention
- ensure patients air way
- undertake steps to stabilized conscious
- provide oxygen through the nasal mask
- control any external bleeding by the dressing
- carry out the intubations of the patients
- Ongoing interventions
- Vital signs
- Level of consciousness
- Oxygen saturation
- Cardiac rhythm
- Pupil size and its reactivity

Follow up and outcomes: patient conditions was improve important investigations and test result to preventing the progression of disease and trying to reserve sign and symptoms doctor advice to follow up, blood investigations, MRI, CT scan and other examination to know the disease progression.

Prognosis

About 35% of patients die after the first aneurysmal subarachnoid haemorrhage, and another 15% die after a recurrent rupture within a few weeks. A second rupture develops at a rate of roughly 3% each year after 6 months. Aneurysms have a poor prognosis, while arteriovenous malformations have a better prognosis. The greatest prognosis is when 4-vessel angiography detects no lesion, presumably because the bleeding source is minor and has shut itself. Neurologic impairment is common among survivors, even when treatment is at its best.

Discussion:

SAH is an acute cerebrovascular event characterized by bleeding into the subarachnoid space between the arachnoid layer and the pia mater, which has substantial consequences on the central nervous system and multiple other organs. The incidence of SAH is 2–22.5 per 100,000 [1,2]. Japan and Finland have the highest documented rates of aneurysmal SAH (aSAH), which occur at a rate of 16–22.5 per 100,000 per year. SAH occurs at a rate of 6 per 100,000 in the United States, resulting in 18,000 incidents each year. The incidence of aSAH is highest in people aged 55–60. ⁵

Perry and colleagues developed the Ottawa SAH rule using data from a multicenter cohort study in Canada.⁶ Neck pain/stiffness, loss of consciousness, onset after exertion, thunderclap headache, and limited neck flexion on examination are all clinical characteristics that have been linked to SAH. If any one or more of these clinical features are present, the patient must undergo computed

tomography (CT). A recent review of the literature yielded four studies across four countries externally validating the rule, involving a total of 3,317 patients.⁷ Sensitivity across all studies was 100% and specificity ranged from 7.6–13.6%.⁶

Approximately 10%-15% of patients die before reaching medical care. Even with appropriate care, the mortality rate from SAH is approximately 25%-50%. About one-half of patients who survive have significant morbidity.⁷

Subarachnoid hemorrhage are responsible for 10% of all cerebrovascular accidents, with fatality rates of up to 50%. The majority of subarachnoid hemorrhage are caused by burst saccular aneurysms at artery bifurcations within the Willis circle. Trauma or AV abnormalities are two more possible causes. Vasospasms, brain tissue infarction, seizures, and cardiac problems are all common complications of SAH.⁸ Different studies on trauma and brain injury were reviewed⁹⁻¹³.

In addition to the abrupt severe headache that occurs in 97% of cases, 50% of patients experience transitory loss of consciousness, and many have vomiting, meningeal irritation, nuchal stiffness, and photosensitivity. In one retrospective study of non-traumatic, spontaneous subarachnoid hemorrhages, 77 percent of patients had nausea or vomiting, 53 percent had loss of consciousness, and 35 percent had meningioma. A non-contrast head CT conducted within six hours after the onset of the headache has a sensitivity and specificity of about 100%. Patients should be examined with lumbar puncture and/or CT or magnetic resonance (MR) angiography after six hours.

Conclusion:

This patient was 34-year-old male, admitted in AVBR hospital on date 11-7-2021 with chief complaint of severe headache, fainting, double vision, nausea, vomiting & spontaneous otorrhagia and epistaxis etc. Patient had undergone all investigations and after that he was diagnosed as a subarachnoid hemorrhage. Timely diagnosis and treatment can prevent fatalities.

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