A CASE REPORT ON: BASILAR ARTERY ANEURYSM WITH CANCER

Amit Bobade¹, Dipali Ghungrud², Indu Alwadkar³, Manoj Patil⁴, Swapna morey⁵

¹G.N.M. 2nd year, Florence Nightingale Training College of Nursing. Datta Meghe Institute of Medical Science (D.U.) Sawangi (M) Wardha,
²Nursing Tutor, Florence Nightingale Training College of Nursing Sawangi (Meghe) Wardha,
³Principal, Florence Nightingale Training College of Nursing Sawangi (Meghe) Wardha,
⁴Research Consultant, Department of Research and Development, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Wardha,
⁵Clinical Instructor, Department of Medical-Surgical Nursing, Smt. Radhikabai Meghe Memorial College of Nursing, Datta Meghe Institute of Medical Sciences, Sawangi, Wardha, Maharashtra.

Email: amitbobade22@gmail.com
DOI: 10.47750/pnr.2022.13.S07.154

Abstract

Introduction: Basilar artery provide oxygenated blood to the brain. The vertebral basilar system, which supplies blood to the posterior region of the Willis circle and joins with blood provided to the anterior half of the Willis process from the internal carotid arteries, is made up of the two vertebral arteries and the basilar artery. At the medulla oblongata and pons of the abducens nerves, the two vertebral arteries merge to form the basilar artery. The basilar artery’s diameter ranges from 1.5 to 6.6 mm. When the midbrain ascends superiorly in the basilar sulcus of the ventral pons and separates into the posterior cerebral arteries, the midbrain and pons come together. Present complaint and investigation: A 53-year-old female was hospitalized in rural hospital Wardha with complaints of breathing difficulty, lower limb swelling, nausea, and vomiting and chest pain, mucus in the throat and lungs, and loss of appetite since 12 days. Investigation: Haemoglobin is decreased by 10.7gm, WBC count 11,000 per microliter, Total R.B.C. count increased by 5.84 million /cell, M.C.H. level Decreased 70fl, MCH is decreased by 22.8 Pico-gm. Therefore CT report should be interpreted in correlation with clinical & pathological findings. Past History: He had been admitted eight days before outside the hospital for the same complaints. The patient had complaints of Intraventricular Haemorrhage on treatment after investigations and the physical examination diagnosed basilar artery aneurysm with cancer. Conclusion: The prognosis of disease severity can be fair by timely treatment and management of cancer and basilar artery aneurysm.

Keywords: Aneurysm, basilar artery, circle of Willis, prognosis.

INTRODUCTION

Although basilar artery aneurysms are the most frequent kind of neovascularization in the posterior fossa, they account for just 3 percent to 5 percent of all cases. B similar aneurysms can be successfully treated with angiographic injection using electrolytically detachable coils in the correct individuals¹. A very uncommon site for intracranial aneurysms is the cerebral ventricular system. A distant branch of the choroidal arteries and significant components of the circle of Willis, such as the basilar artery, is where most ventricular aneurysms develop (B.A.) ². There is one way to define secondary trigeminal autonomicecephalic. Although these characteristics have not yet been connected to basilar aneurysms, neuronal connections in the caudal brain stem may serve as a bridge between the two³. Despite the use of endovascular or microsurgical techniques, treating basilar apex aneurysms, which account for 5%–8% of all cerebral aneurysms, is still difficult and demanding⁴.

The arterial segment that connects the origin of the basilar artery to the origin of the superior cerebellar artery is known as the basilar trunk artery. The basilar tip and superior cerebellar artery aneurysms are by definition not included in the category of basilar trunk⁵. D spite of the fact that aneurysms in the basilar artery (B.A.) trunk are uncommon, some of them are regular saccular aneurysms at the beginning of the perforating branch. At the same time, the majority are dissection aneurysms involving a portion of the B.A. trunk. B aneurysm craniotomy clipping is a high-risk surgery because the B.A. trunk is physically deep. The primary treatment method is endovascular therapy (EVT)⁶. A very uncommon site for intracranial aneurysms is the cerebral ventricular system. All ventricular aneurysms come from the circle of Willis’ principal branches, including the basilar artery and the distal extension of the choroid arteries. A very (BA). An aneurysm at the basilar apex is treated, which makes up
about 5% to 8% of all cerebral aneurysms, regardless of endovascular, remains challenging and complex, or the use of microsurgical procedures.

To identify individuals at high risk of late rebleeding and aneurysm recurrence following coil embolization, periodic angiographic follow-up is indicated. The patient in this case showed symptoms of autonomic dysfunction, which are frequently linked to stimulation of trigeminal innervated areas, as well as a headache brought on by a basilar artery aneurysm. A secondary trigeminal autonomic cephalgia could be defined like this. These traits have not yet been linked to basilar aneurysms, but there are neural connections in the caudal brain stem that could mediate a relationship between the two. Given the likely nature and purpose of the trigeminal-autonomic linkages, we cannot pretend to understand why this specific lesion caused their activation when other lesions of a similar character do not always result in this clinical presentation. However, the patient's exhibition offers a helpful human validation of animal experiments that shows the physiology of the trigeminal-autonomic reflex.

**PATIENT INFORMATION**

Patient-Specific Information:

A 53-year old female child was admitted to M.I.C.U. at rural hospital Wardha. With the chief complaints of irritability and later complained of Intraventricular hemorrhage, basilar artery aneurysm, and hypertension. After physical examination and investigation doctor diagnosed cancer with a basilar artery aneurysm. The patient had taken Medication D Penicillamine, Trihexyphenidyl, Haloperidol 5mg, Tab Clonazepam 0.5mg.

Primary concern symptoms of the patient:

The current case was brought to the medical OPD with complaints of hypertension, basilar artery aneurysm, and Intraventricular hemorrhage. The patient's overall health was unsatisfactory, therefore the patient shifted to the medical intensive care unit with symptoms of headache and nausea.

Medical family and psychosocial history:

The patient's cancer history lasted three years. The patient comes from a middle-class family and is clear of any illnesses like cancer, diabetes, or hypertension. Had kept a good rapport with the medical staff and nursing. The present case had a history of cancer with a basilar artery aneurysm. He took the treatment regularly.

Clinical finding:

General examination

Unhealthy status of heath not in good condition overall. Unaware state of consciousness

Pallor: + the vital is

Vital parameter:

Blood pressure: 90/70 mmhg Temperature: afebrile Pulse: 88beats per minute Respiration: 20 breathe per minute SpO2:90%

CVS: S1S2+

P/A: soft non-tender Decubitus: supine

**DIAGNOSTIC ASSESSMENT:**
7.2% in Total RBC count: 2.39 Total WBC count: 9900 Total platelets count: 20.9 MCHC: 34.2 MCV: 87.6 HCT: 20.9 Lymphocytes: 20

TRERAPEUTIC INTERVENTION:

The present case took the medical management with TAB.CLONAZEPAMLM 0.5mg, TAB. PENICILLINE, TAB. TRIHENLIP, TAB. HALOPERIDOL5mg.

NURSING PERCEPTIONS:

Maintained IV Fluid and electrolyte balance, monitored vital signs 2 hourly.

DISCUSSION:

At the tertiary rural Hospital Wardha, a 53-year-old female was admitted to the M.I.C.U. with complaints of hypertension, basilar artery aneurysm, and Intraventricular hemorrhage. Her health status was not good. The patient was transferred to the MICU with complaints of headache and nausea. The patient had a moderate outcome following a physical examination and investigations, regular medication use, and investigations. She was admitted to Rural Hospital for additional treatment. The arterial section between the basilar artery's beginning and the superior cerebellar artery's source is known as the "basilar trunk artery." Only 2.1% of all cerebral aneurysms are basalic trunk artery aneurysms (B.T.A.), which are sporadic diseases. BTAs have been known by several names over the years, including fusiform aneurysms, dolichoectatic arteries, and serpentine aneurysms. They have a small male predominance, are typically diagnosed in people around the age of 60, and are linked to significant morbidity and fatality rates. About one-fourth of cases have several B.T.As found.

Although they are identified in 1% of the population, basilar artery aneurysms account for around 5% of all cerebral aneurysms and are more frequently detected in the posterior circulation8. At the bifurcation, a sizable basilar artery aneurysm is discovered. However, in our case, the patient also showed bilateral sixth cranial nerve palsy and spastic quadriparesis, a rare discovery that may have been produced by the mass impact of the basilar artery aneurysm’s tip, which compressed over the pons and midbrain and resulted in quadriaparesis9.

10% to 20% of all cerebral aneurysms are posterior circulation aneurysms. The basilar tip is the most typical location of genesis for these aneurysms, followed by the result of the posterior inferior cerebellar artery (PICA) 10. The significant goals of the various treatment plans chosen were the removal of aneurysms and the production of CSF to lower ICP and alleviate the mass effect11.

Even yet, endovascular therapy is more frequently used to treat patients with B.A. apex aneurysms, however, this approach has a greater incidence of recurrence than microsurgical care12. The likelihood of such a B.A. aneurysm should always be considered when making a differential diagnosis for third ventricular growths that have a mass effect13-18

Ventricular-Spheno-Fluid drainage is essential for further efficient therapy and a positive result. For this wide-neck aneurysm occlusion14, various endovascular methods, such as neck bridging and balloon and stent-assisted coiling, are currently available. The four BTA subtypes—acute dissecting aneurysm, segmental fusiform ectasia, saccular aneurysm, and chronic mural bleeding ectasia—variate in prevalence, natural history, clinical manifestation, and therapeutic strategies19-25

A bulging or inflating in a blood vessel in the brain is known as a brain aneurysm. A popular illustration of an aneurysm is a fruit that is hanging from a stem. A brain aneurysm could rupture or leak, which would cause a brain hemorrhage (hemorrhagic stroke). A ruptured brain aneurysm typically develops between the brain and the delicate tissues that envelop the brain. T is a subarachnoid hemorrhage, a specific kind of hemorrhagic stroke. Aneurysm ruptures quickly turn life-threatening and necessitate immediate medical attention.

However, the majority of brain aneurysms don't rupture, harm the body, or manifest any symptoms. These aneurysms are frequently found during examinations for other disorders. Any disease that can affect any region of the body is referred to as cancer. She refers to neoplasms and malignant tumors. The rapid development of aberrant cells that outgrow their normal
borders, infect nearby bodily parts, and eventually spread to other organs is what defines cancer. The term "metastasis" refers to this action. Tumor metastasis is the primary cause of cancer patient death26-41

Conclusion

When a few of the body’s cells proliferate unchecked and spread to other internal organs, cancer develops. Cancer, which may appear almost anywhere in the body’s billions of cells, calls them home. In actuality, when the body requires new human cells, it divides the ones it already has, a process known as cell proliferation and multiplication. Cells die and are replaced by new ones when they are harmed or grow old. This painstaking procedure can occasionally go wrong, allowing damaged or abnormal cells to proliferate when they shouldn’t. These cells can be cancerous or not (benign) Cancerous tumors may spread to distant parts of the body, infiltrate nearby tissues, or do both (a process called metastasis). Malignant tumors are another name for cancerous tumors. Solid tumors are a hallmark of many cancers, while blood illnesses like leukemia often do not. Non-cancerous tumors do not penetrate or spread to the tissues in their immediate proximity. After removal, malignant tumors may come back, whereas benign tumors typically do not. But occasionally benign tumors, like those of the brain, can become extremely large, show apparent symptoms, or even be fatal. Ability to grow into tumors, which are tissue lumps.

REFERENCES

7. Saeki N, Rhoton AL. M iscrosurgical anatomy of the upper basilar artery and the posterior circle of Willis. J nournal of nurosurgery. 1 77 May 1;46(5):563-78.
23. Goyal, Chanak, Vivek Goyal, and Waqar M Naqvi. “A Rare and Unusual Case of Trisomy 10p with Terminal 14q Deletion: A Multidisciplinary