



Abdominal Aortic Aneurysm- A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Introduction: Abdominal aortic aneurysms more commonly affect men than women and are estimated to affect 4% to 8% of men older than age 60 years. Mortality because of a ruptured AAA is high, but elective repair is an effective and relatively safe intervention.

Case Presentation: A 69-year-old male patient comes to the outpatient department with a complaint of abdominal pain from 2-3 months back.

Interventions- The treatment of patients was started immediately after admission. The surgical repair of Aortic Stent Placement for Pseudoaneurysm was done under general anesthesia on date 12 June 2021.

Conclusion: In this report, we mainly focus on expert surgical management and excellent nursing care helped in managing the complicated case very nicely. The patient response was positive to conservative and nursing management. The patient was discharged without postoperative complications and satisfactory with recovery.

Keywords: Abdominal aortic aneurysms; aortic stent; pseudoaneurysm; mortality.

1. INTRODUCTION

The Abdominal aortic aneurysm is more common in males than women [1]. Ruptured abdominal

aortic aneurysms are the 13th leading cause of death in the United States.[2] Abdominal aortic aneurysms are fatal in 80% of the cases when ruptured. Hypertension has been considered a

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potential risk factor for abdominal aortic aneurysms [3]. An arterial aneurysm is a weakening of the artery wall with progressive dilatation to 150 percent or greater of its normal diameter [4]. Abdominal Aortic Aneurysms {AAA}, the most prevalent type of artery aneurysm, is clinically relevant when its diameter exceeds 3 cm but In most individuals, the diameter of the normal abdominal aorta is approximately 2.0 cm (range 1.4 to 3.0 cm). Abdominal Aortic Aneurysms are most often encountered inferior to the renal arteries. They can, however, extend beyond the aortic bifurcation and proximally above the celiac trunk. The AAA has been deemed the "most prevalent possibly life-threatening finding" that can be discovered at a chiropractor's office. [5] Male sex, advancing age, tobacco usage, family history, and most likely hypertension are all risk factors for Abdominal Aortic Aneurysm. [6] Here we report a case of 69 years old patient with an abdominal aortic aneurysm.

2.2 Diagnostic Assessment

Table 1. Showing investigations of the patient

Investigation	Patient Value
Blood Investigation	
Hemoglobin	11.1 gm/dL
Total RBC Count	4.48 cells/mcL
Total WBC Count	6400 per microliter of blood
Haematocrit	34.1%
Mean Corpuscular Hemoglobin Concentration (MCHC)	32.6 g/dL
Mean Corpuscular Volume (MCV)	76.1. 1fl
Mean Corpuscular Hemoglobin (MCH)	24.8 picograms (pg)
Total Platelet Count	2.88 per microliter of blood
Monocytes	04
Granulocytes	75
Lymphocytes	20
Red Cell Distribution Width (RDW)	17.4
Eosinophils	01
Basophils	00

2.3 Therapeutic Intervention

Table 2. Treatment

Name of Drug	Dose	Route	Frequency	Drug Action
Inj. Taxim	1GM	IV	BD	Antibiotic
Inj. Metrogyl	100ML	IV	BD	Antibiotic
Inj. Heparin	3000IU	IV	TDS	Anticoagulant
Tab. Ecosprin	150MG	Oral	OD	Antiplatelet
Tab. Clopitab	75MG	Oral	OD	Antiplatelet
Tab. Omnacortil	40MG	Oral	OD	Antiallergic
Tab. Pan 40	40MG	Oral	OD	Antacid
Tab. Chymoral forte	100000AU	Oral	OD	Antioxidant

2. PATIENT AND OBSERVATION

2.1 Patient Information

A 69-years-old male was admitted to Acharya Vinobha Bhave Rural Hospital Wardha, Maharashtra, India on the date 6 June 2021 with complaints of abdominal pain in the last 2-3 months. Now come with a complaint of breathlessness on exertion chest pain from 10 days and another history of illness is patient having hypothyroidism and hypertension since from 1 month, she taking the medication regularly.

2.1 Vital Signs

The vital sign of the patient was temperature 99⁰ F, the pulse rate: 86 beats/min, Respiratory rate: 26 breathe/min and Blood Pressure was 110/70 mm of Hg.

3. MANAGEMENT

3.1 Surgical Intervention

The surgical repair of Abdominal Aortic Aneurysm: The Aortic Stent Placement for Pseudoaneurysm was done under general anesthesia on date 12 June 2021. The surgical procedure was done with all aseptic precautions and under local anesthesia for left radial artery puncture with radial access set and 5F sheath placed.

3.2 Operation Information

Operation is done on dated 12/06/2021, operation name is Aortic Stent Graft Placement for Pseudoaneurysm with local anesthesia.

3.2.1 Steps of operation

- Under all aseptic precaution and local anesthesia left radial artery punctured with radial access set and 5F sheath placed.
- Marker pigtail 5F was inserted into an ascending thoracic aorta.
- Checked angiogram obtained demonstrating aortic pseudoaneurysm arising from an infrarenal portion of the abdominal aorta.
- Right femoral artery exposed and puncture done with 18G puncture needle, 6F sheath inserted over guidewire,
- 5F cobra catheter inserted over Terumo guidewire up to ascending aorta.
- Terumo guidewire exchanged with lunderquest guidewire.
- Stent graft delivery system endurent II 23 mm x 70 mm and Endurent II 23 x 49 mm advanced over lunderquest wire.
- Position confirmed, stent-graft developed and delivery system.
- Check aortogram obtained showing stent-graft across pseudaneurysm.
- No endoleak noted.
- Closure and arteriotomy (right common femoral artery) done using Prolene 6-0 suture.
- Drain inserted into the subcutaneous plane and skin closure did use skin stapler.
- The procedure went uneventfull. - patient tolerated the procedure well.

3.3 Nursing Diagnosis

1. **Anxiety-related to the Impending surgery/ Multiple tests and procedures**

Goal: To reduce anxiety

3.4 Nursing Intervention

- Assess the Patients anxiety level with the help of an anxiety scale.
- Recognize that you are aware of the patient's anxiety.
- Removed the unnecessary external stimuli.
- Provide a calm and quiet environment to the patient.

2. **Knowledge deficit related to the unfamiliarity with surgical procedures and hospital care**

Goal: To improve knowledge

3.5 Nursing Intervention

- Assess the level of knowledge about his disease condition.
- Encourage the patient to ask queries regarding disease conditions and treatment regime.
- Answer the questions asked by the patient.

3. **Decreased cardiac output related to the disease condition**

Goal: To maintain cardiac output.

3.6 Intervention

- Assess the general condition of the patient.
- Monitor the sign of decreasing signs of cardiac output such as tachycardia, restlessness.
- Assess the hemodynamic status of the patient.
- Monitor ECG changes.
- Administered medications as prescribed by doctors.

4. **Ineffective tissue perfusion related to the disease condition**

Goal: To maintain adequate tissue perfusion.

3.7 Nursing Intervention

- Assess the general condition of the patient.
- Assess the level of pain and area of pain.
- Monitor capillary refill time.
- Check and record urine output.

3.8 Nursing Management

The postoperative patient was on a ventilator for one day. For that, the patient was postoperatively

under strict observation of on-duty staff. Intravenous fluid administered as per calculation & Administered medication as prescribed. Observation and reading of the character of the drainage were done postoperatively. Intake and output were maintained 2 hourly. Vital signs were recorded strictly. Monitor Blood Pressure, central venous pressure and Oxygen Saturation of the patient. Check the proper position of the transducer, check for a surgical site for a sign of bleeding and infection. The overall response to treatment of the patient was positive and patient condition improved progressively.

3.9 Therapeutic Diet Plan

Provide fruits, vegetables & whole grain as well as lean meat in the diet. Restrict/ reduce the salt and cholesterol-containing food intake in the diet.

4. DISCUSSION

This was a case report that is very common in western countries among males above age 65 years prevalence of 4-7%, although the prevalence is decreasing in the last few years. [7,8] In a large number risk of ruptured abdominal aortic aneurysms with high mortality 80% fatal. Abdominal aortic aneurysms must be early-stage identification, follow the treatment and then treat with surgical repair [9].

The true congenital primary aneurysm of the abdominal aorta is an extremely rare condition. Indeed, this case report only the abdominal aortic aneurysms is in an elderly patient [10]. Secondary or acquired aneurysms are in infants and children are more frequently than the primary congenital aneurysm of the abdominal aorta. Staphylococcus is the most common organism since the advent of umbilical artery catheterization in the 1970s. [11,12].

The treatment of an aneurysm of the abdominal aorta in the neonate or young child requires additional consideration concern. 5 to 10 mm graft material (synthetic or allograft) is used to repair infrarenal aortic aneurysms [13,14].

5. CONCLUSION

In recent years, an increasing number of studies on surgical and medical management of abdominal aortic aneurysms have been published.

In this case report, the patient was alright some months before but from 2-3 months he was started abdominal pain and he was taken medication from the private clinic but pain reduces for some time only after undergone a thorough investigation of the patient's diagnosis with abdominal aortic aneurysms. This case report contributes to the knowledge giving towards the medical areas to advance care given.

CONSENT

While preparing case reports for publication patient's informed consent has been taken from his guardian.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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