



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2556187>Available online at: <http://www.iajps.com>

A Case Report

REPAIR OF RUPTURED SUPRARENAL ABDOMINAL AORTIC ANEURYSM IN MIDDLE AGE FEMALE WITH NO RISK FACTORS : A CASE REPORT.**Khaled Mohammed Alnwaijy¹, Norah Dhafer Alshehri², Amani Salem Alatawi²,
Maram Saad Alrubayyi²**¹Consultant Vascular and Endovascular surgery at King Salman Armed Forces Hospital-
Northwestern Region, Tabuk., ²Medical interns at Tabuk university.**Abstract:**

One of the important public health condition is Abdominal aortic aneurysm that affect males between 1.3% and 12.5% in males, and females between 0.0% and 5.2% [3]. Appearance generally in women later than men by 10 years [4].

Other more frequent risk factors associated with abdominal aortic aneurysm are: age, gender, hypertension, family history and coronary artery disease [7].

Here we present a case of 43 years old female previously fit with no medical history, having abdominal aortic aneurysm. Patient managed by a bifurcated aortic polytetrafluoroethylene graft . Our recommendation is that to use the simplest reconstruction and packing in critical and life saving cases another issue that ligation of left renal vein at level of inferior vena cava not always safe and has to be repair if the situation permit.

Keywords: *Rupture of Suprarenal Abdominal aortic aneurysm.*

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Please cite this article in press Khaled Mohammad Alnwiji et al., Repair Of Ruptured Suprarenal Abdominal Aortic Aneurysm In Middle Age Female With No Risk Factors : A Case Report., Indo Am. J. P. Sci, 2019; 06(02).

INTRODUCTION:

Abdominal aortic aneurysms (AAAs) are frequent and life-threatening condition. The definition of aneurysms is focal dilatation in an artery, with at least a 50% increase over the vessel's normal diameter. Thus, enlargement of the diameter of the abdominal aorta to 3 cm or more fits the definition.

Degeneration in the media of the arterial wall, which is causing slow and continuous dilatation of the lumen of the vessel. Less common causes include infection, cystic medial necrosis, arteritis, trauma, inherited connective-tissue disorders, and anastomotic disruption.

Abdominal aortic aneurysms generally more common in elderly white men. Most strongly risk factor appears with AAA is smoking. Also, increasing age and male gender, other factors include increased height, weight, body mass index, and body surface area. Female sex, African American race, and the presence of diabetes mellitus are not associated with AAA [1,2].

Mostly the detection of AAA as an incidental finding on diagnostic imaging obtained for other medical reasons.

This case of supra-renal abdominal aortic aneurysm repair with Left renal vein was ligated, in this case at the level of inferior vena cava with subsequent of left kidney congestion and venous infarction to be discussed in this case.

CASE REPORT:

43 year old female patient previously fit with no medical history .Transferred to our emergency

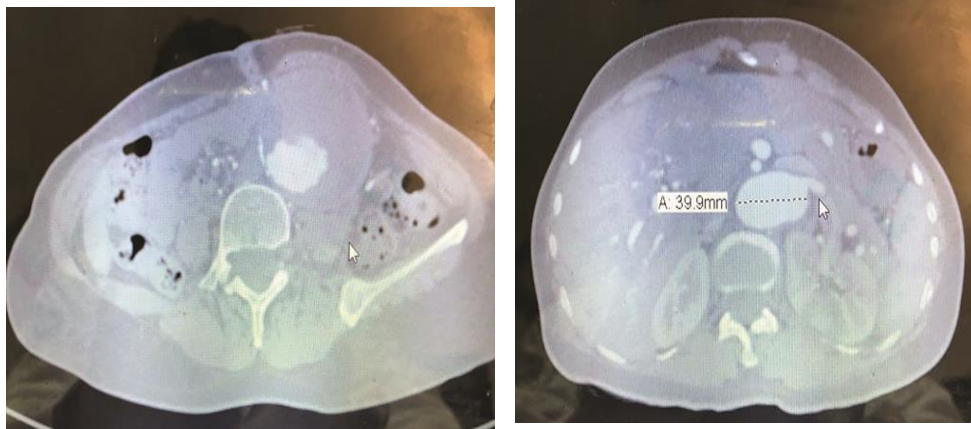
FIGURES:

Figure 1, 2. Renal arteries originating from aortic sac.

department after having sudden abdominal pain radiating to the back and a fainting attack with low blood pressure 70/45, tachycardia , expansile swelling in her left side of the abdomen from the costal margin to the left iliac fossa. with a CT done outside showing dilated abdominal aortic extending to above the renal arteries origins to both iliac arteries . The patient was admitted and emergency repair of the abdominal aortic aneurysm by a bifurcated aortic graft PTFE graft (18*9) to both femoral arteries and to better aneurysmal exposure left renal vein was ligated and cut in flush with its origin with inferior vena cava .We saved the patch of the anterior wall of the aorta contain the origin of superior mesenteric artery and renal artery and oversaw it to the graft and the patient was in disseminated intravascular coagulopathy because of hypovolemic shock and massive transfusion that time. So, abdominal packing was done and removed after 48 hours . The patient post operatively ICU management with low renal out put .She experienced acute renal failure and underwent hemodialysis that was resolved after managed conservatively and regained her normal renal functions and stopped the dialysis sessions . during her stay experienced attack of per rectal bleeding , upper and lower. Gastrointestinal endoscopies done showing diffuse sigmoid ulcers which was managed conservatively CT with contract showing dissecting thoracic aorta to the level of celiac trunk with no extravasation and normal perfusion. Patient regained her normal bowel habits. Patient post operation was healthy with normal urine and stool , Afebrile and normal vital sings.

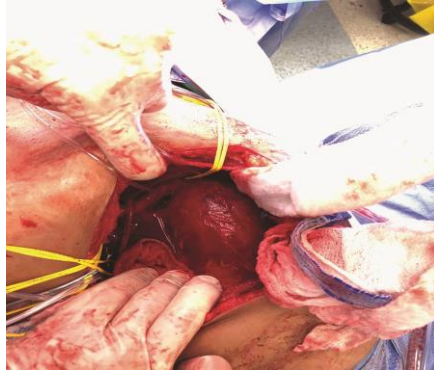


figure 3. sac of tha aortic aneurysm



Figure 4. Aneurysmal repair with (18*9) PTFE graft.

DISCUSSION:

One of the important public health condition is Abdominal aortic aneurysm that affects males between 1.3% and 12.5% ,and females between 0.0% and 5.2% [3]. Appearance generally in women is later than men by 10 years [4].

Over age 65 % AAA represents about 1% of deaths in males, causing more than 175,000 deaths worldwide[5].

The rupture of AAA represents high mortality rate between 60% and 80%, Before AAA rupture the early diagnosis and treatment is important[6].

Age, gender, hypertension, family history and coronary arteries disease are most common risk factors for AAA [7].

Prompt intervention is necessary in cases of impending rupture. To establish a plan for definitive therapy it required an emergent consultation with a vascular surgeon.

Blood pressure control is important for stabilization of unruptured aneurysms[8]. ‘hypotensive hemostasis’ In the cases of aneurysm rupture, has anecdotally been shown to improve patient outcomes [9]. In the conscious patient and systolic pressure is at least 50–70 mmHg the physicians should consider deferring fluid resuscitation [10]. Rapid exsanguination into the abdominal cavity may result from resuscitation with large fluid volumes. Larger transfusion volume requirements as well as large retroperitoneal hematomas have been associated with increased risk for abdominal compartment syndrome, identified by intra-abdominal hypertension and multi-organ dysfunction[11].

In our case there was no risk factors for AAA. In regarding to management emergency repair of the abdominal aortic aneurysm by a bifurcated aortic graft PTFE graft (18*9) to both femoral arteries and to better aneurysmal neck approaching left renal vein was ligated and cut in flush with its origin with the inferior vena cava and we saved patch of the anterior

aortic wall with the origin of the superior mesenteric artery and renal arteries to save time as the patient was critical ill and in disseminated intravascular coagulopathy and we packed the retroperitoneal to get a chance of control DIC.

CONCLUSION:

The rupture of abdominal aortic aneurysm represents high mortality rate between 60% to 80%, before its rupture the early diagnosis and treatment is important [6]. The risk factors that associated with abdominal aortic aneurysm are: age, gender, hypertension, family history, and coronary artery disease[7].we advise using of the simplest repair by using patch containing renal and superior mesenteric arteries in

critical cases and consider left renal artery repair in all cases.

Conflict of Interest:

The author has no conflict of interest.

Disclosure:

The author did not receive any type of commercial support either in forms of compensation or financial for this case.

Ethical Approval:

Obtained.

ARMED FORCES HOSPITALS
ADMINISTRATION
NORTHWESTERN REGION, KSA

إدارة مستشفيات القوات المسلحة
بالمملكة العربية السعودية
بالمملكة العربية السعودية

ACADEMIC AFFAIRS

RESEARCH ETHICS COMMITTEE APPROVAL

NAME OF PRINCIPAL INVESTIGATOR: **KHALED MOHAMMED ALNWIJY**

ETHICS ID NUMBER: **R&REC-2019-251**

TITLE: Repair of Ruptured Suprarenal Abdominal Aortic Aneurysm in Middle Age Female with no Risk Factors: A Case Report.

CO-INVESTIGATOR: Norah Dhafer Alshehri, Amani Salem Alatawi, Maram Saad Alrubayyi

The above-noted proposal has been submitted for expedited ethics review and found to be ethically acceptable. The proposal includes:

- The Ethics Approval Form**
- Research Proposal**
- Data sheet collection.**

Please note that this approval is subject to the following conditions:

- Consent for participant agreement to be enrolled in the trial and access to personal information in chart review is required. Participation in the questionnaire is considered as approval of the participant.
- A Progress Report must be submitted by the year end, containing the following information:
 - The number of subjects recruited;
 - A description of any protocol modification;
 - Any unanticipated problems involving risks to subject or to others, withdrawal of subjects from the research, or complaints about the research.
 - A summary of any recent literature, findings, or other relevant information, especially information about risks associated with the research.
 - The expected date of termination of this project.
- A final report must be submitted to the research office at the completion of the project.
- The research project must be published under the name of our hospital with the name of the investigators and also need to mention had approval from the Research & Research Ethics Committee.

Please note that you have been named as the principal collaborator on this study because students are not permitted to serve as principal investigators. Please accept the Board's best wishes for success in your research.

15 JAN 2019
DR. KHALID AL QUAER
Chairman Research Ethics Committee

NASREEN H. AL KHALAF
ASST. STAFF ATTENDANT
ACADEMIC AFFAIRS 15 JAN 2019
COL. DR. BANDAR ALI AL QAHTANI
Asst. Hosp. Dir. For Academic Affairs

KACST Reg. No: HO-07-TU-002 Date: 16/12/1434

Date: 02 November 2019

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