



Abdominal Aortic Aneurysm With Intracardiac Thrombus Formation: A Rare Finding In A Cadaver At Alfaisal University

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Case Presentation

An elderly Caucasian male on postmortem was noted to have Abdominal Aortic Aneurysm inferior to the renal arteries with extensive intracardiac thrombus formation. Associated findings included venous shunt between the femoral vein and subclavian vein, absent left kidney, endovascular stent in the abdominal aorta, extensive collaterals in the thorax, hypertrophied heart, enlarged lymph node, discoloration of the right side of the body and prominent appearance of capillary on the scalp.

Introduction

- Thrombosis is the process by which the blood clots occupying a space in the blood vessels and in the heart.
- Virchow's triad (Endothelial injury, hypercoagulability and stasis) is the basic predisposing factor for thrombi development
- Aneurysm can be defined as an abnormal, localized and permanent dilation of the blood vessels with respect to the original artery.
- It can complicate into rupture of the blood vessels into the peritoneal or retroperitoneal cavities with massive hemorrhage.
- Coexistence of Abdominal Aortic Aneurysm (AAA) with intracardiac thrombus is infrequent and develops in rare situations. The presence of both Abdominal Aortic Aneurysm and Intracardiac thrombus can be attributed to various etiologies such as: autoimmune and genetic.
- However, this creates a critical clinical problem because the clinical picture is broader and hence needs special management.

Purpose

- In this report, we present a case of Abdominal Aortic Aneurysm with intracardiac thrombus in a cadaver on routine dissection, and discuss possible explanations for such finding.
- Also, we will outline how such finding can support the significance of the traditional methodology for teaching medical students anatomy.

Methods

- Initially, the abdomen was dissected and exposed for studying the abdominal structures in an anatomy class.
- Later, the thoracic region was dissected as well and all the clinical abnormalities were examined and documented.
- Autopsy of the clot was obtained for histopathology analysis

Results

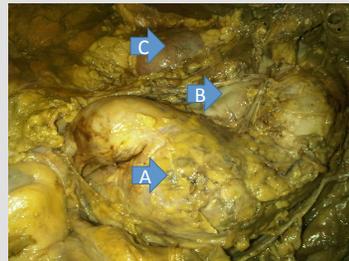


Fig.1
A, Gross appearance of abdominal aortic aneurysm inferior to the renal arteries. B, The aneurysm is compressing on the anterior side of the inferior vena cava which may cause stagnation of blood flow. C, Right kidney.

Results cont.

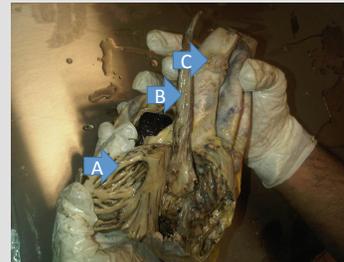


Fig. 2
A, exposed right atrium and appearance of the Musculi pectinati. B, gross appearance of the blood clot lateral to the C, superior vena cava .



Fig. 3
Appearance of extensive collaterals in the thorax near the superior vena cava as alternative mean for conducting blood to areas suffering less blood flow

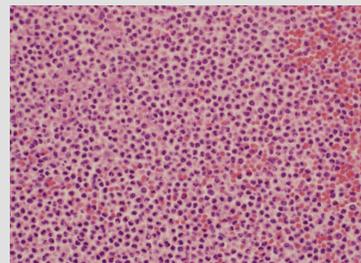


Fig.4
Section of the clot showed extensive infiltration of neutrophils indicating inflammation .

Discussion

- There is a debate among medical education experts on the usage of dissection or prosection for learning anatomy.
- However, the literature reveals that the majority of published articles are in favor of dissection.
- Also, the majority of the literature seems to be mostly based on experience and experts' comments, and less based on measurable data.
- Fortunately, our cadaver exhibited an excellent model that encompassed wide variation of findings which stimulated the students to inquire and ask questions more frequently.
- Student were introduced at early stage to crucial concepts in medicine such as: Aneurysm, clotting cascade, interaction between adjacent structures, collaterals development, compensatory mechanisms, and appreciation of variations amongst individuals.

Conclusion

- Coexistence of Abdominal Aortic Aneurysm (AAA) with intracardiac thrombus is infrequent and develops in rare situations.
- The presence of both Abdominal Aortic Aneurysm and Intracardiac thrombus can be attributed to various etiologies such as: autoimmune and genetics.
- Cadaver based teaching of anatomy is an excellent source for stimulating the students to develop their critical thinking skills.

References

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