

Symptomatic large infrarenal abdominal aortic aneurysm with concomitant pelvic tumour

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Introduction

The management of abdominal aortic aneurysm (AAA) with the presence of intra-abdominal tumour is controversial and the management plan remains a challenge to the clinician. Most of the literatures published has been focusing on the option of management and the risk involved with either a staged approach or a simultaneous approach to the management of concomitant AAA and intraabdominal malignancies.

We report a case of symptomatic huge abdominal aortic aneurysm with incidental finding of a huge pelvic tumour.

Case Presentation

An 86-year-old lady, presented with a complaint of left-sided abdominal pain for one-week duration. The pain was pricking, not relieved with simple analgesics and occasionally radiating to the back. Abdominal examination revealed a pulsatile mass occupying her left side of abdomen with slight tenderness on palpation. Her distal pulses were palpable with good volume.

CT angiography of abdomen revealed a huge fusiform aneurysm of the infrarenal abdominal aorta, measuring 7.5 x 8 cm with no evidence of contrast leakage (figure 1). There was an incidental finding of a huge multiloculated cystic mass at both adnexa measuring 12.9 x 13 x 15 cm, possibly of ovarian origin (figure 2).

Her tumour markers were taken following the findings of the CTA to rule out potential malignant pelvic tumour. Ca 125, bHCG and alpha-fetoprotein all within normal value. Further staging assessment of the mass were carried out such as chest X-ray, sigmoidoscopy revealed no significant abnormality. A referral was made to the gynaecologist for a combined surgery. In view of the huge pelvic tumour, a planned perioperative ureteric stenting was performed 4 days earlier by the urologist.

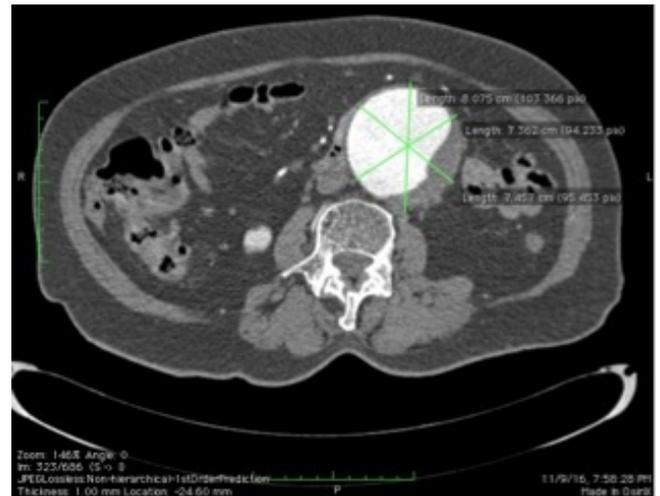


Figure 1. 8cm infrarenal AAA



Figure 2. The infrarenal AAA in relation with the pelvic tumour

Bilateral salphingo-oophrectomy was carried out by the gynaecologist. After a vigorous wash of the abdomen cavity, the 8 cm aneurysm was repaired with a bifurcated in-lay graft. The infrarenal clamping time was about 45 minutes. The peritoneal fluids were sent for cytology assessment as well as culture and sensitivity test. The postoperative period was uneventful and she was discharged after 8 days with antiplatelet. Her first post-operative clinic assessment one month after that was uneventful. Her renal profile was unchanged from the pre-operative readings. Histopathological report of the ovarian tumour revealed a benign serous cystadenofibroma of both of the ovaries.

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Discussion

The occurrence of AAA and visceral malignancy increases with advancing age. At the time of open AAA repair, the chance to encounter intra-abdominal malignant disease has been found in up to 4% of patients [1]. Surgical treatment remains the best option of management on these two potentially life-threatening conditions, but the best appropriate timing of intervention remains controversial. Graft infection basically remain the main concern when the aneurysmal repair performed simultaneously with other non-vascular intraabdominal procedures [2]. The key point for simultaneous approach open surgery is choosing the best timing for the intervention, balancing with risk of aneurysmal rupture and complication from the intraabdominal malignancy such as obstruction and bleeding. Repeat anaesthesia in a staged procedure carries a risk especially in patients at advanced age groups [4].

The occurrences of AAA with concomitant intraabdominal malignancy are seldom encountered. Majority of the reported cases are associated with colorectal malignancy, bladder tumour and haematological malignancy including tumour of the aorta itself. However, most patients are generally asymptomatic, and one lesion is often discovered incidentally during imaging assessment of the other lesion [2]. The decision for surgery either through a one-staged or two-stage procedure will depend on the behaviour of each disease. A ruptured symptomatic AAA require an urgent emergency surgery. However, elective repair of an AAA with co-existent large abdominal tumour often carries dilemmas in decision making and eventual management. For an instance, the resection of the colorectal tumour may render the aortic graft to become infected if a single stage procedure were carried out. Overall, the behaviour and invasiveness of the tumour also needs to be evaluated in detail prior making the final decision regarding the sequence of surgical intervention [4].

The discovery of pelvic tumour in this case was only encountered during the initial imaging assessment of her pulsatile abdominal mass. She had minimal symptoms until the time of presenting to hospital. Thorough assessment of the pelvic tumour has revealed a benign lesion biochemically and radiologically except for the size.

A two-stage procedure if it were to be performed, would carry additional risks to the patient. For instance, proceeding with the AAA reconstruction first could pose significant challenges during surgical exposure and vascular control due to the extreme size of the pelvic tumour. Furthermore, the extreme size of the tumour may actually carry the risk of intra-operative iatrogenic rupture thus predisposing to tumour spillage and contamination. The tumour if deemed to be malignant, may cause recurrent deposit near the graft, and expose it to the risk of thrombosis. If the pelvic tumour were to be excised first, the second-stage procedure for reconstruct-

ion of the AAA would also be deemed difficult due to the scaring of the abdominal cavity and the retroperitoneum [3].

Conclusion

In conclusion, managing an AAA in an elderly patient with concomitant tumour carries its own risks in relation to the patient's physiological reserve, the size of the AAA and tumour behaviour. In such cases, endovascular intervention such as EVAR (Endovascular Aneurysm Repair) would be a good option of surgery and complication such as heart failure and graft infection can be prevented. Unfortunately due to the acute angulation of the iliac artery in this case has made the option out of the way.

A thorough perioperative discussion and plan with the involved units plays an important role for the success of such major surgery. Presence of invasive malignant tumour may render the AAA to be treated conservatively provided there's no evidence of leaking or rupture. Conversely, in the presence of a presumed benign tumour, an informed decision needs to be made regarding staged or simultaneous resection and repair. Primary determinants in the eventual decision regarding staged or simultaneous surgery depends on patient's physiological reserve to tolerate prolonged surgery, size of the AAA and tumour biology.

Finally, take home messages for a better care of patient in such circumstances will include thorough perioperative discussion with the involved units for a good postoperative result which also depends on patient's overall physiological reserve and anatomical consideration of the lesion.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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Learning Points:

- A thorough perioperative discussion and plan with the involved units plays an important role for the success of such major surgery.
- Option for a single versus 2-staged procedure in such patient depends on patient's overall physiological reserve and anatomical consideration of the lesion.