Massive chylous ascites following an elective repair of an abdominal aortic aneurysm: A case report

Al-Khusheh M., Blach O., Button M.

ABSTRACT

Introduction: Symptomatic postoperative chyloperitoneum is a rarely reported complication of elective abdominal aortic aneurysm surgery (AAA). Treatment, conservative versus invasive, could be challenging.

Case Report: We present a case of severe chyloperitoneum following seemingly uncomplicated elective repair of an 8 cm infra-renal AAA, in a 69-year-old male. Patient presented with a progressively increasing abdominal distension and small amount of milky white discharge around the transverse incision wound three weeks postoperatively. We discuss the diagnostic process, different management strategies attempted and outcome in light of the existing literature and our own experience.

Conclusion: While an adequate trial of conservative measures should precede any surgical intervention, our case report shows that early consideration of peritoneovenous shunt insertion for refractory chyloperitoneum provides excellent and sustained results.

International Journal of Case Reports and Images (IJCRI)

International Journal of Case Reports and Images (IJCRI) is an international, peer reviewed, monthly, open access, online journal, publishing high-quality, articles in all areas of basic medical sciences and clinical specialties.

Aim of IJCRI is to encourage the publication of new information by providing a platform for reporting of unique, unusual and rare cases which enhance understanding of disease process, its diagnosis, management and clinico-pathologic correlations.

IJCRI publishes Review Articles, Case Series, Case Reports, Case in Images, Clinical Images and Letters to Editor.

Website: www.ijcasereportsandimages.com

CASE REPORT

PEER REVIEWED | OPEN ACCESS

Massive chylous ascites following an elective repair of an abdominal aortic aneurysm: A case report

Al-Khusheh M., Blach O., Button M.

ABSTRACT

Introduction: Symptomatic postoperative chyloperitoneum is a rarely reported complication of elective abdominal aortic aneurysm surgery (AAA). Treatment, conservative versus invasive, could be challenging. **Case Report:** We present a case of severe chyloperitoneum following seemingly uncomplicated elective repair of an 8 cm infra-renal AAA, in a 69-year-old male. Patient presented with a progressively increasing abdominal distension and small amount of milky white discharge around the transverse incision wound three weeks postoperatively. We discuss the diagnostic process, different management strategies attempted and outcome in light of the existing literature and our own experience. **Conclusion:** While an adequate trial of conservative measures should precede any surgical intervention, our case report shows that early consideration of peritoneovenous shunt insertion for refractory chyloperitoneum provides excellent and sustained results.

Keywords: Aortic aneurysm, Chylous, Chyloperitoneum, Peritoneovenous shunt

How to cite this article

Al-Khusheh M, Blach O, Button M. Massive chylous ascites following an elective repair of an abdominal aortic aneurysm: A case report. Int J Case Rep Imag 2016;7(4):278–281.

Article ID: Z01201604CR10636AM

doi:10.5348/ijcri-201648-CR-10636

INTRODUCTION

Chylous ascites is a rare complication of abdominal aortic aneurysm (AAA) surgery with a few cases reported in literature. Due to their anatomical relation with the abdominal aorta, cisterna chyli injury is more common following open AAA repairs when compared to other surgeries.

We present a case of severe chylous ascites following elective AAA repair in a 69-year-old male who gradually developed abdominal distension following discharge from hospital. A conservative approach was followed by a successful peritoneovenous shunt insertion. This less invasive treatment avoided the patient having relaparotomy and ligation of leaking lymphatic vessel.

CASE REPORT

A 69-year-old male presented three weeks post-seemingly uncomplicated elective open repair of an 8-cm infra-renal AAA, with progressively increasing

Al-Khusheh M.¹, Blach O.¹, Button M.¹

Affiliations: ¹Brighton and Sussex University Hospitals.

Corresponding Author: Mr Moutaz Al-Khusheh, Royal Sussex County Hospital, Brighton & Sussex University Hospitals, Eastern Road, Brighton, BN2 5BE; Email: mbkhusheh@hotmail.com

Received: 31 May 2015

Accepted: 28 July 2015

Published: 01 April 2016

abdominal distension and small amount of milky white discharge around the transverse incision wound. Computed tomography angiogram (CTA) showed minor fatty stranding around the aneurysm sac suspicious of graft infection, treated with a course of tazocin and teicoplanin, a superficial abdominal wall collection and extensive ascites (Figure 1). The collection was drained.

Blood tests were grossly normal, except for hypoalbuminemia. An ascitic tap showed fluid triglycerides level of 36.4 mmol/L (3224.1 mg/dL), confirming a diagnosis of chylous ascites. No dietary changes were recommended by the dietician and the patient was discharged with an outpatient follow-up.

The patient was then re-admitted a month later for USS guided drainage of the worsening abdominal chyle collection; 20.7 liters of chyle were drained in total and a drain was left in situ. He was put on a high protein/medium TAG diet and advised to reduce oral fat intake. Patient was then discharged home. However, here-presented within two weeks with dyspnea, decreased drain output, abdominal distension and CT scan showed re-accumulation of ascites (Figure 2). Further four liters of chyle were drained under USS guidance. In view of the chylous ascites refractory to conservative treatment, and to avoid major operation which has considerable risks to this patient with high body mass index (BMI) and several comorbidities, a peritoneovenous shunt was inserted, with no further complications or re-accumulation of ascites, and no need for lymphangiography or re-operation, result sustained 6 months later, where patient was asymptomatic at the follow-up clinic and ultrasound scan showed no reaccumulation of the ascites.

DISCUSSION

In the context of abdominal aortic surgery, injury to the lymphatic trunk with a subsequent lymphatic leak usually follows extensive retroperitoneal space dissection, such as during repair of ruptured or inflammatory aneurysms [1–3]. Although not an uncommon complication, it rarely leads to symptomatic chyloperitoneum or chylous ascites, with fewer than 50 cases reported in the last 50 years [4].

Presentation varies based on the severity of the chyle leak, from progressive abdominal distension, pressure-related dyspnea, to widespread edema and paralytic ileus [1, 4]. However, in the majority of cases, the diagnosis is not suspected until diagnostic paracentesis is performed [5], yielding milky-white peritoneal fluid rich in triglycerides (>200 mg/dL) [6].

There is no agreed protocol for the treatment of chylous ascites following AAA surgery. Conservative management, combining a low-fat diet, medium-chain triglycerides (MCTs) regime and parenteral nutrition (TPN), is frequently advocated following initial diagnosis [1, 3, 5, 7], and is believed to promote healing by minimizing the lymphatic flow from the leaking duct [8]. Up to 80% of chylous ascites, reportedly, dry out with such approach

Figure 1: Enhanced computed tomography scan of the abdomen three weeks postoperatively showing subcutaneous abdominal wall collection and ascites.

Figure 2: Enhanced computed tomography scan of the abdomen six weeks postoperatively showing reaccumulation of ascites in spite of the per-cutaneous drainage.

[1, 4], and some feel that surgical intervention is only warranted after 4–6 weeks of persistent ascites [1, 9].

Insertion of a peritoneovenous shunt and suture ligation of the fistulae are two available surgical options [10]. Both carry a significant complications rate, however peritoneovenous shunt insertion is the less invasive procedure and more appropriate in patients who are unfit to undergo re-laparotomy with ligation of the leaking lymphatic vessel [4].

Favorable outcome depends on timely diagnosis and identification of the underlying pathology. The treatment of chylous ascites should therefore be selective and

tailored to the severity of patient's condition [11]. While an adequate trial of conservative measures should precede any surgical intervention, our case report shows that early consideration of peritoneovenous shunt insertion for refractory chyloperitoneum provides excellent and sustained results.

CONCLUSION

Chylous ascites is rare after aortic surgery and manifests itself about two weeks after operation, at times after discharge from hospital. It has an indolent course, but may resolve spontaneously up to two months after operation. Its course appears not to be foreshortened by diet, including omission of fat, but can be successfully treated surgically with a peritoneovenous shunt. If done early, a protracted hospital course may be avoided.

Author Contributions

Moutaz Alkhusheh – Substantial contribution to conception and design, Revising the article critically for important intellectual content, Final approval to the version be published

Olga Blach – Substantial contribution to conception and design, Acquisition of data, Drafting the article, Final approval to the version be published

Matthew Button – Substantial contribution to conception and design, Revising the article critically for important intellectual content, Final approval to the version be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

Copyright

© 2016 Moutaz Alkhusheh et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

REFERENCES

1. Combe J, Buniet JM, Douge C, Bernard Y, Camelot G. Chylothorax and chylous ascites following surgery of an inflammatory aortic aneurysm. Case report with review of the literature. [Article in French]. *J Mal Vasc* 1992;17(2):151–6.

2. Müns G, Rennard SI, Floreani AA. Combined occurrence of chyloperitoneum and chylothorax after retroperitoneal surgery. *Eur Respir J* 1995 Jan;8(1):185–7.
3. Fariña LA, Martínez MC. Chylous ascites following radical nephrectomy. Conservative management without paracentesis. [Article in Spanish]. *Actas Urol Esp* 2009 Jun;33(6):703–5.
4. Barakat HM, Shahin Y, McCollum P. Chylous ascites complicating elective abdominal aortic aneurysm repair: case report and review of treatment options. *Vasc Endovascular Surg* 2012 Nov;46(8):682–5.
5. Browse NL, Wilson NM, Russo F, al-Hassan H, Allen DR. Aetiology and treatment of chylous ascites. *Br J Surg* 1992 Nov;79(11):1145–50.
6. Jüngst D, Gerbes AL, Martin R, Paumgartner G. Value of ascitic lipids in the differentiation between cirrhotic and malignant ascites. *Hepatology* 1986 Mar-Apr;6(2):239–43.
7. Parthenis DG, Paraskevas KI, Stamos D, Spathi E, Georgopoulos DS. Spontaneous healing of chylous ascites after abdominal aortic aneurysm repair. *Vasa* 2003 Nov;32(4):215–7.
8. Busch T, Lotfi S, Sirbu H, Dalichau H. Chyloperitoneum: a rare complication after abdominal aortic aneurysm repair. *Ann Vasc Surg* 2000 Mar;14(2):174–5.
9. Pabst TS 3rd, McIntyre KE Jr, Schilling JD, Hunter GC, Bernhard VM. Management of chyloperitoneum after abdominal aortic surgery. *Am J Surg* 1993 Aug;166(2):194–8; discussion 198–9.
10. Onnitsev IE, Khokhlov AV. Surgical treatment of chyloperitoneum. [Article in Russian]. *Vestn Khir Im I I Grek* 2009;168(3):44–7.
11. Leibovitch I, Mor Y, Golomb J, Ramon J. The diagnosis and management of postoperative chylous ascites. *J Urol* 2002 Feb;167(2 Pt 1):449–57.

Access full text article on
other devices

Access PDF of article on
other devices

Edorium Journals: An introduction

Edorium Journals Team

About Edorium Journals

Edorium Journals is a publisher of high-quality, open access, international scholarly journals covering subjects in basic sciences and clinical specialties and subspecialties.

Invitation for article submission

We sincerely invite you to submit your valuable research for publication to Edorium Journals.

But why should you publish with Edorium Journals?

In less than 10 words - we give you what no one does.

Vision of being the best

We have the vision of making our journals the best and the most authoritative journals in their respective specialties. We are working towards this goal every day of every week of every month of every year.

Exceptional services

We care for you, your work and your time. Our efficient, personalized and courteous services are a testimony to this.

Editorial Review

All manuscripts submitted to Edorium Journals undergo pre-processing review, first editorial review, peer review, second editorial review and finally third editorial review.

Peer Review

All manuscripts submitted to Edorium Journals undergo anonymous, double-blind, external peer review.

Early View version

Early View version of your manuscript will be published in the journal within 72 hours of final acceptance.

Manuscript status

From submission to publication of your article you will get regular updates (minimum six times) about status of your manuscripts directly in your email.

Our Commitment

Six weeks

You will get first decision on your manuscript within six weeks (42 days) of submission. If we fail to honor this by even one day, we will publish your manuscript free of charge.

Four weeks

After we receive page proofs, your manuscript will be published in the journal within four weeks (31 days). If we fail to honor this by even one day, we will publish your manuscript free of charge and refund you the full article publication charges you paid for your manuscript.

Most Favored Author program

Join this program and publish any number of articles free of charge for one to five years.

Favored Author program

One email is all it takes to become our favored author. You will not only get fee waivers but also get information and insights about scholarly publishing.

Institutional Membership program

Join our Institutional Memberships program and help scholars from your institute make their research accessible to all and save thousands of dollars in fees make their research accessible to all.

Our presence

We have some of the best designed publication formats. Our websites are very user friendly and enable you to do your work very easily with no hassle.

Something more...

We request you to have a look at our website to know more about us and our services.

We welcome you to interact with us, share with us, join us and of course publish with us.

Edorium Journals: On Web

Browse Journals

CONNECT WITH US