

혈액투석을 위한 상완동맥-두정맥단락 수술 후 발생한 거대한 정맥의 동맥류

— 1예 보고 —

전 순 호* · 이 철 범*

Giant Venous Aneurysm after Brachiocephalic Arteriovenous Shunt for Hemodialysis Access

— A case report —

Soon-Ho Chon, M.D.*, Chul Burm Lee, M.D.*

We report a case of a 46-year-old man with end-stage renal failure who developed a giant aneurysm after a brachiocephalic arteriovenous shunt. The patient had complaints of pulsating pain and swelling of his left upper extremity. The patient had abandoned use of the arteriovenous shunt and had a second arteriovenous shunt procedure over his right extremity. The giant venous aneurysm was removed just distal to his anastomosis. The patient's postoperative course was uneventful.

(Korean J Thorac Cardiovasc Surg 2006;39:861-863)

Key words: 1. Aneurysm
2. Shunts
3. Arteriovenous shunt, surgica

CASE REPORT

A 46-year-old man had visited our outpatient clinic with complaints of pulsating pain and swelling of his left upper extremity of 1 year onset. The patient had a history of esophageal cancer and had undergone an Ivor Lewis procedure 7 years earlier. Thereafter, he was diagnosed with end-stage renal failure, had an upper arm brachiocephalic arteriovenous shunt operation, and has been on dialysis ever since. One month prior to his visit he had undergone another arteriovenous shunt operation (Brescia-Cimino) in his right arm and had abandoned the shunt in his left extremity. Although

inquiries were done, unfortunately, the details of the initial operation, done at another hospital, could not be obtained. The venous aneurysm was growing rapidly and required surgical intervention under general anesthesia, and thus, he was referred to our hospital. The arteriovenous aneurysm in his left arm was functional. The local hospital, where he was under dialysis, was unaware of the need for the operation and due to the patients neglect, there was a delay until the patient could no longer tolerate the pain and swelling.

The operation was done under general anesthesia. The operation commenced with an incision made just over the anastomosis site extending 1 cm over both ends. The aneurysm

*한양대학교 의과대학부속 구리병원 흉부외과

Department of Thoracic and Cardiovascular Surgery, Guri Hospital, Hanyang University College of Medicine

논문접수일 : 2006년 3월 11일, 심사통과일 : 2006년 8월 29일

책임저자 : 이철범 (471-701) 경기도 구리시 교문동 249-1, 한양대학교 의과대학부속 구리병원 흉부외과

(Tel) 031-560-2301, (Fax) 031-568-9948, E-mail: cblee@hanyang.ac.kr

본 논문의 저작권 및 전자매체의 지적소유권은 대한흉부외과학회에 있다.



Fig. 1. The surgical field of the giant venous aneurysm, showing the divided anastomotic end (grabbed by the Ellis Clamp).

measured at about 14 cm in length and 6 cm in width and was pulsatile (Fig. 1). The proximal brachial artery was clamped and the venous aneurysm was clamped just distal to the anastomosis site, divided, and sutured with 6-0 continuous and over and over Prolene sutures. The venous aneurysm, itself, was removed after a longitudinal incision, leaving a bridge, thereby avoiding a 'T' incision. There were two main branches and they were also divided in a similar method. Routine closure was done after placement of a Hemovac drain. His postoperative course was uneventful.

DISCUSSION

Although the most common complication of autogenous arteriovenous fistulas is thrombosis, which accounts for 90% of the complications[1], venous aneurysmal dilatation is not uncommon and occurs in 5~10% of all arteriovenous fistulas after access surgery for hemodialysis[2]. The indications for

operation of such venous aneurysms or pseudoaneurysms are progressively increasing size, thrombosis, or the presence of an overlying skin lesion[3]. This particular patient neglected treatment and the consequence was a rapidly enlarging venous aneurysm with impending rupture.

Treatment modalities of venous aneurysms include partial resection, interposition graft, bypass, or stent-grafts[3]. In our case the patient had already abandoned the use of the shunt and had a new arteriovenous shunt performed in his other arm; thus, decision for partial resection without a salvage technique was made. Although there are less invasive modalities, such as manual ligation and compression under ultrasonographic guidance, endovascular graft implantation, embolization, and thrombin injection under ultrasonographic guidance, surgical intervention is the therapy of choice due to the risks of rupture[4].

We believe that an operation, such as in this case, under general anesthesia could have been prevented and a salvage technique without abandonment is an appealing option.

REFERENCES

1. Burkhart HM, Cikrit DF. *Arteriovenous fistulae for hemodialysis*. *Semin Vasc Surg* 1997;10:162-5.
2. Grauhan O, Zurbrugg HR, Hetzer R. *Management of aneurysmal arteriovenous fistula by a perivascular metal mesh*. *Eur J Vasc Endovasc Surg* 2001;21:274-5.
3. Mackrell PJ, Cull DL, Carsten III CG. *Hemodialysis access: placement and management of complications*. In: Hallett Jr JW, Mills JL, Earnshaw JJ, Reekers JA. *Comprehensive vascular and endovascular surgery*. 1st ed. New York: Mosby Publishing Co. 2004;361-90.
4. Karabay O, Yetkin U, Silistreli E, Uskent H, Onol H, Acikel U. *Surgical management of giant aneurysms complicating arteriovenous fistulae*. *J Int Med Res* 2004;32:214-7.

=국문 초록=

우리는 만성 신부전 환자에서 혈액투석을 위한 상완동맥-두정맥단락술(brachiocephalic arteriovenous shunt)을 시행한 후 최근 빠르게 성장하는 아주 거대한 정맥의 동맥류 1예를 경험하였기에 보고하는 바이다. 환자는 48세 남자로 7년 전 본원에서 동정맥단락술을 시행한 후 혈액투석을 해왔으나 좌측 상완의 정맥을 따라 점점 성장하는 정맥의 동맥류와 박동성 통증으로 혈액투석을 지속할 수 없었다. 내원 1개월 전 혈액투석을 지속하기 위해 타 의료기관에서 우측 손목관절부에 새로운 동정맥루를 조성하여 혈액 투석을 하고 있었다. 동정맥류가 너무 거대하여 동정맥단락 재건술은 시도하지 않았으며 수술은 전신마취하에서 동정맥루를 결찰하고 확장된 정맥의 동맥류를 모두 제거하였다. 환자의 술 후 경과는 양호하였다.

- 중심 단어 : 1. 동맥류
2. 동정맥루
3. 동정맥루 수술