

대망편을 이용한 급성대동맥 박리증 수술 후 발생한 종격동염의 치료

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=Abstract=

Management of Acute Mediastinitis Following Repair of Acute Aortic Dissection with Omental Flap Transfer

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Acute mediastinitis and subsequent graft infection following aorta surgery poses a difficult problem, as infected synthetic material must be completely removed for resolution of infection. Here we report a case of successful management of acute mediastinitis following hemiarch replacement for acute aortic dissection with omental flap transfer leaving infected graft in situ.

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Key word : 1. Mediastinitis
2. Graft infection
3. Aortic dissection

Case

A 46 year old male was submitted to operation for acute type A aortic dissection. As the intimal tear of the ascending aorta extended to the aortic arch along lesser curvature of the arch, the replacement of the ascending aorta together with proximal arch was constituted with Hemashield 27 mm graft. The postoperative course was uneventful and the patient was discharged on 17th postoperative day. One week later, he came back to the hospital with pus collection on the operative wound. Initially, local debridement was done and wet dressing was applied. Mediastinal exploration was made only after 5 days as his condition deteriorated with time. On

exploration, there was wide dead space around graft and the space was filled with vivid yellow colored pus that actually the graft looked like submerged in pus. Thorough debridement including sternum was made and closed chest irrigation with 1% povidone iodine was continued. The bacteriologic culture revealed Staphylococcus aureus. The chest was reentered one week later. After further debridement, the sternotomy incision was extended to the upper abdomen. We decided not to replace the graft because graft suture lines looked rather intact and the more, the patient was supposed too ill to tolerate such an extensive surgery. The large omental pedicled flap was prepared by detaching the omentum from the transverse colon and dividing gastroepiploic arcade from the left side

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Fig. 1. Schematic drawing of omental flap transfer

of the greater curvature of the stomach with care not to injure the right gastroepiploic artery. The mobilized omentum was brought up to the chest through a separate hole made in the diaphragm initially to the left side of the heart and then passed behind the graft via transverse sinus. Again, the omental flap was brought from right to left anterior to the graft and transfixed thus rendering the omentum completely wrapped around the graft as shown in the figure. After placing draining tubes, the sternum was reapproximated with interrupted wires. As the sternum became so thin after the debridement, the wires were passed through intercostal space very close to lateral sternal margins except first two manubrial sutures where the wires were passed through the bone as usual. Then, wide pectoral advancement musculocutaneous flaps were made by freeing both pectoralis major muscles from the chest wall laterally to the axillary area with careful division of perforating vessels. Both flaps were reapproximated over the sternum after placing drains

beneath the pectoralis flap. Postoperative course was not complicated and the patient was discharged after 6 weeks' standard intravenous antibiotic therapy with vancomycin plus aminoglycoside. He was submitted to life long oral antibiotic therapy with penicillin derivative after discharge and now on 2 years follow up, he is doing well without evidence of infection.

Comment

For control and eradication of postoperative prosthetic graft infection, complete removal of prosthetic material and placement of new graft have been considered as essential and extraanatomic placement of new graft is usually preferred method among peripheral vascular surgeons¹⁾. In aorta surgery, however, postoperative graft infection poses a more complicated problem as extraanatomic bypass is rarely possible and removal of infected graft means submission of the patient who is usually in bad condition the the extensive reconstructive surgery with unpredictable results.

Omental flap has been used in a variety of postsurgical infectious condition including postoperative mediastinitis for its well known infection resistant nature²⁾. This case suggests that graft infection, once structural integrity of graft and suture line is ascertained, could be controlled with omental flap coverage leaving infected graft in situ as opposed to usual practice of removing infected graft^{3,4)} thus avoiding more extensive and potentially life threatening reconstructive surgery.

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=국문초록=

대동맥수술 후 발생하는 종격동염은 혈관이식편의 감염이 필연적으로 동반되므로 그 치료가 용이하지 않은 것으로 알려져 있다. 저자들은 최근 급성 대동맥 박리증으로 상행대동맥 및 대동맥궁 일부를 인공혈관으로 대체 후 발생한 급성 종격동염 환자 1례에서, 감염된 인공혈관을 제거하지 않고 대망편의 이동을 통하여 치료하여 만족스러운 결과를 얻었기에 문헌고찰과 함께 보고하고자 한다.