BRIEF COMMUNICATIONS

A communication between the gastroepiploic artery and vein in the pedicle

Yasushi Terada, MD, and Toshio Mitsui, MD,
Tsukuba, Japan

The right gastroepiploic artery (GEA) has been increasingly recommended as a reliable graft in coronary artery bypass grafting (CABG).^{1,2} Suma and associates³ reported good mid-term angiographic results with 152 GEA grafts. Here we present angiographic evidence of arteriovenous communication between the GEA and the gastroepiploic vein in the pedicle.

On October 25, 1993, a 49-year-old man with two-vessel coronary artery disease underwent CABG. The vessels used were the left internal thoracic artery to the left anterior descending artery and the right GEA to the right coronary artery. Preoperative coronary angiography showed a total occlusion in segment 2 of the right coronary artery and a 99% stenosis in segment 6 of the left anterior descending artery. The GEA was harvested as a pedicle in the usual manner with free flows of 66 ml/min before papaverine was administered and 98 ml/min after intraluminal injection. At the anastomosis site, about 1 cm of the GEA was prepared, and surrounding tissues including the gastroepiploic veins were ligated.

GEA graft arteriography performed 11 days after the operation showed that the right GEA was patent and supplied sufficient blood to the right coronary artery (Fig. 1, A). In the late phase, however, a gastroepiploic vein was densely visualized and the contrast medium flowed in the opposite direction parallel to the GEA graft (Fig. 1, B and C).

No ischemic changes on the inferior wall of the left ventricle were noticed on the electrocardiogram obtained during exercise.

We speculate concerning the causes of an arteriovenous communication between the GEA and vein in the pedicle in this case. First, the GEA may have small direct connections with the accompanying gastroepiploic vein, especially in the middle of the greater curvature of the

Fig. 1. A, Postoperative angiogram of GEA-right coronary artery anastomosis. The GEA was patent and supplied blood to the right coronary artery. B, Late phase of postoperative angiograms of GEA-right coronary artery anastomosis. Note that the contrast medium flowed into the gastroepiploic vein and (C) in the opposite direction parallel to the GEA (arrow).

From the Department of Cardiovascular Surgery, Institute of Clinical Medicine, University of Tsukuba, Tsukuba, 305 Japan.

J THORAC CARDIOVASC SURG 1995;109:588-9

Copyright © 1995 by Mosby-Year Book, Inc.

0022-5223/95 \$3.00 + 0 12/8/56700

stomach where the right and left GEAs usually connect in a network. If a large arteriovenous fistula had been present, we would have recognized it during GEA take-down. Second, an arteriovenous fistula may have been created in the course of the surgical procedure. Although we skeltonized the GEA at the anastomotic site, the angiographic evidence that the gastroepiploic vein was densely filled to the end of the pedicle strongly suggests a surgically created arteriovenous fistula.

In our case, postoperative graft arteriography showed GEA-dependent flow as described by Nakao and Kawaue⁴—poor native coronary flow, a widely perfused area, and good runoff. Fortunately, because blood flow to the native right coronary artery was much more predominant than that into the gastroepiploic vein, no clinical problem resulted. We will observe the patient carefully to see whether a possible venous steal may cause future myocardial ischemia in the area of GEA grafting.

REFERENCES

1. Lytle BW, Cosgrove DM, Ratliff NB, Loop FD. Coronary artery bypass grafting with the right gastroepiploic artery. *J THORAC CARDIOVASC SURG* 1988;97:26-31.
2. Suma H, Takeuchi A, Hirota Y. Myocardial revascularization with combined arterial grafts utilizing the internal mammary and the gastroepiploic arteries. *Ann Thorac Surg* 1989;47:712-5.
3. Suma H, Wanibuchi Y, Terada Y, Fukuda S, Takayama T, Furuta S. The right gastroepiploic artery graft: clinical and angiographic midterm results in 200 patients. *J THORAC CARDIOVASC SURG* 1993;105:615-23.
4. Nakao T, Kawaue Y. Effect of coronary revascularization with the right gastroepiploic artery. *J THORAC CARDIOVASC SURG* 1993;106:149-53.

Cryopreserved aortic homograft for mycotic aneurysm

Paul Vogt, MD, Miralem Pasic, MD,
Ludwig von Segesser, MD, Thierry Carrel, MD,
and Marko Turina, MD, *Zurich, Switzerland*

Mycotic aneurysm is a life-threatening pathologic entity with high morbidity and mortality. The optimal surgical management is a subject of controversy.¹ We report in situ

Fig. 1. Computed tomographic scan showing a typical infrarenal mycotic aneurysm. Note moderate aortic dilation with partial disruption of the aortic intimal calcification (arrow).

Fig. 2. A cryopreserved homograft has been implanted in the infrarenal position after excision of the entire infrarenal part of the abdominal aorta. Note that the intercostal arteries arising from the grafts had been ligated by clips (arrows).

From the Clinic for Cardiovascular Surgery, Department of Surgery, University Hospital Zurich, Zurich, Switzerland.

J THORAC CARDIOVASC SURG 1995;109:589-91

Copyright © 1995 by Mosby-Year Book, Inc.

0022-5223/95 \$3.00 + 0 12/8/57775