30 درصد تخفیف نوروزی ویژه کارگاه‌ها و فیلم‌های آموزشی

اصول تنظیم قراردادها

پروپوزال نویسی

آموزش مهارت های کاربردی در تدوین و چاپ مقاله
Transcatheter Coil Embolization of Coronary Artery Fistula

J Zamani, M Tavassoli, Y Mahmmody

Cardiovascular Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

Introduction

Coronary artery fistula is characterized by a fistulous communication between coronary artery with the atria, ventricle, or pulmonary artery. The incidence of coronary artery fistula was found to be 0.18% of adult patients undergoing coronary angiography in one large series. The majority of fistulas drain into the right heart, with 15% into the pulmonary artery, 7% into the coronary sinus and rarely into the left heart. The cause of coronary artery fistulas may be either congenital or acquired.

Most coronary artery fistulas are congenital in origin, but they have been reported to be acquired as complications of chest trauma, coronary angioplasty, and bypass surgery. Because most patients are initially asymptomatic, these fistulas are usually discovered incidentally on coronary angiography or are found at autopsy. Presence of congenital coronary artery fistulas can be suspected on the basis of transthoracic and transesophageal Doppler echocardiographic findings. Treatment of coronary artery fistulas has included surgical ligation, balloon-expandable polytetrafluoroethylene-covered coronary graft stents and expandable electrolytically detachable platinum coil has been described.

Case report

A 46-year-old man was referred to our center with chief complaint of chest pain and fatigue on exertion since 2 years ago. Physical examination was normal. Transthoracic echocardiography showed normal sinus rhythm and no significant ST-T changes. Transthoracic echocardiography revealed mild right ventricular dilatation and ejection fraction of 50%. Coronary angiogram (CAG) revealed significant lesion in mid part of left anterior descending artery (LAD) and a fistula arising from the mid part of LAD artery communicating with main pulmonary artery. Transcatheter coil embolism was successfully performed. The patient was free of symptoms during 12 months follow up.

Discussion

Coronary artery fistulas, defined as abnormal vascular communication between any coronary
artery and any of the cardiac chambers or great vessels, are uncommon. Most patients are initially asymptomatic but even if a patient is initially asymptomatic, dyspnea and fatigue may develop in future. Cardiomyopathy, heart failure and atrial fibrillation can occur as late findings. Other complications related to coronary fistulas include myocardial ischemia (from steal phenomena or from embolization due to thrombus formation within aneurysmal segments), endocarditis and cardiomegaly with enlargement of the right chambers. Indications for fistula closure include myocardial ischemia, large left-to-right shunts, and congestive heart failure. Surgical ligation had been the treat-
ment of coronary artery fistulas, but more recently, coil embolization has been described.5

In conclusion, we successfully treated a complicated, high-flow coronary artery fistula by transcatheter coil embolization. Therefore, catheter coil embolization is an effective and safe treatment for coronary artery fistula in strictly selected cases.

Acknowledgements

This work was financially supported by Vice Chancellor for Research of Shiraz University of Medical Sciences. The authors declare that they have no Conflicts of Interest.

References

۳۰ درصد تخفیف نوروزی ویژه کارگاه‌ها و فیلم‌های آموزشی

اصول تنظیم قراردادها
بروپوزال نویسی
آموزش مهارت های کاربردی در تدوین و چاپ مقاله