발작성 심방성 빈맥을 동반한 심장지방종

박찬범* · 조민섭* · 진 웅* · 조덕곤* · 조규도* · 김치경* · 왕영필*

Cardiac Lipoma Combined with Paroxysmal Atrial Tachycardia

Chan Beom Park, M.D.*, Min Seop Jo, M.D.*, Ung Jin, M.D.*, Deog-Gon Cho, M.D.*
Kyu-Do Cho, M.D.*, Chi Kyung Kim, M.D.*, Young Pil Wang, M.D.*

The incidence of primary cardiac tumor is rare, furthermore the cardiac tumor which cause arrhythmia is very rare. We presesent a case of cardiac lipoma combined with paroxysmal atrial tachycardia.

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Key words: 1. Heart neoplasms
2. Lipoma
3. Arrthythmia

CASE REPORT

A 44-year old male patient visited our hospital for dizziness. In physical examination, the blood pressure was 120/80 mmHg, the pulse rate was 120 times per minute, the rhythm was irregular and murmur was not detected. In chest X-ray, cardiomegaly was not detected, but a round belt-shaped calcification was detected in the anterior border of the heart. In EKG and 24 hour Holter monitoring, paroxysmal atrial tachycardia was detected, but myocardial ischemia was not detected. Transthoracic echocardiogram revealed a mass which compress the right atrium and the right ventricle, chest computed tomography showed a calcified mass with the inside showing low density, and early liver cirrhosis accompanying irregular surface was detected (Fig. 1). He was transferred to our department for operation.

The operation was performed after endotracheal intubation by the median sternotomy. After the median sternotomy, a mass approximately 8×10 cm in size in the right lower pericardial area was detected, and the border with the pericardium was not distinct. When the pericardium was opened carefully by avoiding the mass, approximately 150 cc serous pericardial fluid was drained, and severe pericardial adhesion was detected. The mass invaded partially the right ventricle and totally the right atrium. And the mass compressed the right atrium and the right ventricle, the upper part compressed the superior vena cava, and the lower part compressed the inferior vena cava. The aorta and the superior vena cava were dissected, a 24 Fr. cannula was inserted to the aorta and 28 Fr. to the superior vena cava, and partial cardiopulmonary bypass was initiated. Assisted by cardiopulmonary bypass, the inferior vena cava was dissected, 32 Fr. right angled cannula was inserted, and the mass was dissected. But the complete resection could not be performed as it adhered to the right atrium and partially to the right ventricle firmly. Therefore we opened the mass by partial incision, it was found that the inside was filled with dark brown color sludge and the surface of the mass was

* 가톨대학교 의과대학 흉부외과학교실
Departments of Thoracic and Cardiovascular Surgery, College of Medicine, The Catholic University of Korea
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책임저자 : 김치경 (130-709) 서울시 동대문구 전농동 620-56, 성바오로병원 흉부외과
(Tel) 02-958-2477, (Fax) 02-958-2477, E-mail: drcs5223@daum.net
본 논문의 저작권 및 전자매체의 지적소유권은 대한흉부외과학회에 있다.

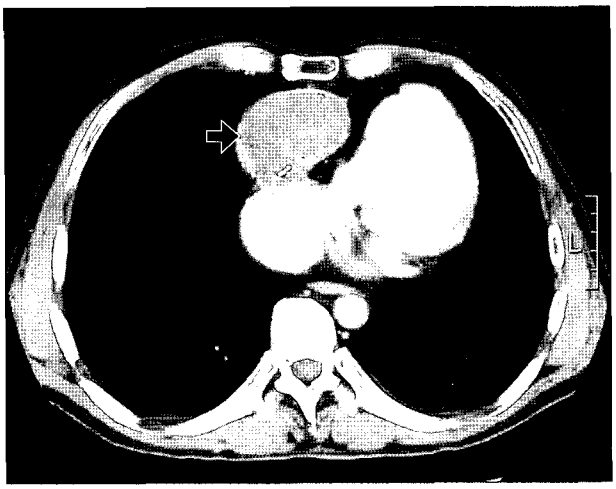

Fig. 1. Chest CT shows a low density mass compress the right ventricle.

calcified. To assess the endocardial invasion of the mass, total bypass was performed, opened the right atrium, examined the inside, but the invasion to the endocardium was not detected. The mass was partially resected to the limit that does not damage the right atrium and the right ventricle and the right coronary artery.

On the day of surgery, due to hemorrhage, bleeding control was performed. After surgery, temporarily, paroxysmal atrial tachycardia was detected, but after the application of Amiodarone, it disappeared. By pathohistologic examination, it was diagnosed as an old lipoma. The patient was discharged and there was no evidence of paroxysmal atrial tachycardia without antiarrhythmic agent for 6 months after surgery.

DISCUSSION

Primary cardiac tumors are rare. The incidence is 5~10% of all tumors in the heart or pericardium[1,2], and symptomatic cases are known to be very rare.

Approximately 75% of primary cardiac tumors are benign, of them, approximately 50% is myxoma, and the rest are lipoma, papillary fibroelastoma, hemangioma, atrioventricular node mesothelioma, fibroma, teratoma, neurofibroma, lymphangioma, and rhabdomyoma.

Primary cardiac tumors are histologically benign, however, they may show malignant clinical features due to valve obstruction, cardiac compression, peripheral embolism, severe arrythmia, etc[3].

The most frequent arrythmia caused by cardiac tumor is atrial fibrillation, and if they induced myocardial damage or the damage in the conduction system, ventricular tachycardia may develop. In most cases, they are known to be induced by rhabdomyoma, fibroma, teratoma, and papillary fibroelastoma located in the myocardium, and Schrepfer et al[4]. have reported the surgical removal of lipoma accompanying ventricular tachycardia developed during pregnancy.

Lipoma may developed in any ages, its frequency between genders is not different, it comprises mature adipocytes histologically, and it has the characteristic of the capsules being well developed. Lipoma has been known to occur in the epicardium, the endocardium, the pericardium, the atrial septum, and all other parts of the heart, it invades primarily the right atrium and the left ventricle, and lipoma occurred in the myocardium or the atrial septum hinders the normal conduction and thus causes the diverse patterns of arrythmia[5].

Lipoma grows slowly in most cases, induces symptoms or arrythmia after growing to a substantial size, and in many cases, it is detected accidentally without symptoms. The lipoma in the epicardium compresses the heart and may accompany serous pericardial effusion, and the lipoma in the endocardium may cause endocardial obstruction symptom, it infrequently induces peripheral obstruction[1], and it may be detected as pseudoaneurysmatic appearance[6].

As the treatment, a large symptomatic lipoma must be removed surgically, and small lipomas discovered accidentally during surgery must be removed if it did not increase the risk of the original operation. It is recommended to resect lipoma completely, and if lipoma were large and thus invaded the atrium, the injury should be repaired by using autologous pericardium or bovine pericardium treated with glutaraldehyde, and ventiriculoplasty may be required[6,7].

The prognosis of cardiac lipoma is related to resectability. After surgical excision, the prognosis is excellent and thus additional treatment is not required. Until now recurrence has not been reported[5].

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=국문 초록=

원발성 심장종양은 드문 것으로 알려져 있으며, 더구나 부정맥을 동반하는 경우는 매우 드문 것으로 알려져 있다. 저자들은 발작성 심방성 빈맥을 동반한 심장지방종 환자를 치험하여 보고하는 바이다.

중심 단어 : 1. 종양
2. 지방종
3. 부정맥