INTRODUCTION

Chylopericardium is a rare entity that may be primary or congenital in origin or secondary to surgical trauma, mediastinal neoplasm or radiation. GROVES and EFFLER (1954) reported the first primary case of chylopericardium in 1954. In this report, a case of primary idiopathic chylopericardium in a 20-year-old man is presented.

Case Report

A 20-year-old man was referred to our hospital because of marked cardiac enlargement on a chest X-ray. An echocardiogram disclosed a massive pericardial effusion. Pericardiocentesis produced a chylous fluid and a diagnosis of primary chylopericardium was made. Primary chylopericardium is a rare disorder. There are several treatment including conservative therapies, pericardiocentesis and surgery, but an appropriate treatment has not been defined. Ligation of a lower thoracic duct together with partial pericardiectomy resulted in full recovery.

ABSTRACT

A 20-year-old man was referred to our hospital because of marked cardiac enlargement on a chest X-ray. An echocardiogram disclosed a massive pericardial effusion. Pericardiocentesis produced a chylous fluid and a diagnosis of primary chylopericardium was made. Primary chylopericardium is a rare disorder. There are several treatment including conservative therapies, pericardiocentesis and surgery, but an appropriate treatment has not been defined. Ligation of a lower thoracic duct together with partial pericardiectomy resulted in full recovery.

Key Words: Chylopericardium; Pericardiocentesis, Left thoracotomy
As to uncover the etiology of the process was then indicated.

Although the thoracic duct enters the posterior mediastinum by passing through the aortic hiatus of the diaphragm and ascends to the right of the midline between the ascending aorta and the azygos vein, a left thoracotomy was performed and the thoracic duct was identified and dissected (Fig 3). In this case, communications between the pericardium and the thoracic duct or abnormal lymphatic channels were not observed. The lower thoracic duct with 60 mm in length from the level of the diaphragm was resected and the ends of the duct were doubly ligated. Partial pericardiectomy was also performed to ensure adequate drainage.

The postoperative course was uneventful and the cardiomi mediastinal silhouette became normal. Histological study of the pericardium disclosed a slight, nonspecific inflammation. No malignant component were observed in the resected specimen.

**DISCUSSION**

There have been numerous reports describing chylopericardium secondary to thoracic operations (PIERSE et al., 1987; POLLARD et al., 1981), chest trauma, or tumors which cause obstruction of the lymphatic drainage. In this case, the patient had no history of surgery or trauma. Therefore,
chylopericardium (CHARNILAS et al., 1977; AKA-
MATSU et al., 1994; YOSHIDA et al., 1969) primary
in origin was strongly suspected. The exact cause
of this disorder is unknown, although most
authors believe that the cause is some abnormality
in the lymphatic connection between the thoracic
duct and the pericardium. Generally, conservative
therapies including a low-fat diet or total parenter-
al nutrition, and/or pericardial drainage are
attempted first. Somatostatin and more recently
Etilefrine, sympathomimetic drugs used in the
management of postural hypotension, also causing
smooth muscle contraction of the thoracic duct,
have been reported (GUILLEM et al., 1999) as sig-
nificant additives to this regimen. With these con-
servative treatments, however, it usually takes
several weeks for chylopericardium or chylothorax
to resolve and these are mostly unsuccessful in
patients with high flow leaks. Prolonged chylous
drainage should usually be managed by ligation or
resection of the thoracic duct at the level of the
diaphragm. Recently, video-assisted thoracic
surgery (VATS) is being introduced with minimal
thoracic pain.

Wurnig et al. (2000) reported 4 cases treated suc-
cessfully by VATS. They concluded clipping and
division of the thoracic duct by VATS is indicated
when the results of the conservative treatment are
disappointing. Naunheim (2000) however, com-
mented skeptically that using VATS to perform en
bloc ligation of the thoracic duct above the
diaphragm can be challenging technically. Very
often, isolation of the thoracic duct above the
diaphragm requires an extensive mobilization of
the esophagus, and circumnavigation of the tho-
racic duct with thoracoscopic instruments can be
difficult. Ligation of the thoracic duct deep into
the mediastinum may be difficult to perform,
especially given the thoracic duct is fragile. One
should not be hesitant to convert the procedure to
an open one if difficulty is encountered in achiev-
ing the goals of safe and reliable ligation of the
duct. We, therefore, performed open thoracotomy
in this case.

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