Giant Cardiac Lesion in Anaplastic Thyroid Cancer

Giulia Guerra, MD, Assunta Fabozzo, MD, PhD, Rosario Marchese Ragona, MD, PhD, Gino Gerosa, MD

PII: S2666-2507(22)00513-2
DOI: https://doi.org/10.1016/j.xjtc.2022.08.030
Reference: XJTC 1247

To appear in: JTCVS Techniques

Received Date: 17 June 2022
Accepted Date: 30 August 2022

Please cite this article as: Guerra G, Fabozzo A, Ragona RM, Gerosa G, Giant Cardiac Lesion in Anaplastic Thyroid Cancer, JTCVS Techniques (2022), doi: https://doi.org/10.1016/j.xjtc.2022.08.030.

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Copyright © 2022 The Authors. Published by Elsevier Inc. on behalf of The American Association for Thoracic Surgery
Giant Cardiac Lesion in Anaplastic Thyroid Cancer

Giulia Guerra MD\textsuperscript{1}, Assunta Fabozzo MD, PhD\textsuperscript{1}, Rosario Marchese Ragona MD, PhD\textsuperscript{2}, Gino Gerosa MD\textsuperscript{1}

1. Cardiac Surgery Unit, Department of Cardio-Thoracic, Vascular Science and Public Health, University of Padova, Italy

2. Otolaryngology Unit, Department of Neuroscience, University of Padova, Italy

Corresponding Author:

Assunta Fabozzo, M.D, PhD,

Cardiac Surgery Unit, Department of Cardio-Thoracic, Vascular Science and Public Health, University of Padova, Italy

Email: assunta.fabozzo@gmail.com. Phone: +390498212410

Authors have no disclosures and no funding to declare.

The subject provided written informed consent for the publication of the study data.

Word Count after Review: 308 (including title page, main text and central message, excluding headings, word count statements, references and legends)
Main Text

Cardiac metastases in anaplastic thyroid carcinoma (ATC) are extremely rare and mostly documented at the time of autopsy. Intracavitary lesions should be removed to avoid sudden death and/or pulmonary embolism, but the poor outcomes associated to ATC yield surgical indications controversial. Upon his informed consent, we describe the case of a 53y/o man who underwent thyroideectomy (through left-lateral cervicotomy) and, two months later, cardiac surgery to remove an intracardiac metastasis, occupying almost entirely the right heart. Thrombosis of the left jugular, subclavian and innominate veins was also demonstrated (Figure 1A-B). At surgery, left femoral vein and ascending aorta were cannulated to establish extracorporeal circulation. Under cardioplegic arrest, right atriotomy allowed total exeresis of the mass, which appeared completely capsulated (Figure 1C-D). Histology revealed undifferentiated neoplastic cells within thrombotic organized tissue. Although an early postoperative echocardiogram confirmed cardiac chambers’ clearness, the patient underwent re-sternotomy after five days for pericardial (non-thrombotic) effusion and, fifteen days later, computed tomography showed the reorganization of the intravascular thrombosis. Despite surgery, his prognosis was deemed ominous, and no other procedures were performed. Non-cardiac-related death occurred two months later, underlying the very limited value of this intervention, although suggested in other reports, on early survival.

Central Message

Cardiac metastases of ATC are rare. Benefits of cardiac surgery on early postoperative survival are very limited.
References


Central Picture Legend

Intraoperative view of the cardiac metastasis of anaplastic thyroid carcinoma.

Figure Legend

Figure 1. Intracardiac metastasis of anaplastic thyroid carcinoma. A: Echocardiographic image of the mass (L.14cm,W.4cm,D.3cm); RV, right ventricle; RA, right atrium. B: Chest CT image of the mass. C and D: Intraoperative view of the specimen; a, atrial part; v, ventricular part; i, infundibular part.

Video 1. Pre-operative echocardiographic evaluation of the mass occupying almost entirely the right heart.