A case report on pericardial effusion secondary to medullary thyroid carcinoma: An uncommon occurrence

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ABSTRACT

Medullary thyroid carcinoma (MTC) is a rare and aggressive form of thyroid cancer originating from the parafollicular cells (C-cells) of the thyroid gland. Unlike other types of thyroid cancer, MTC can produce hormones such as calcitonin and carcinoembryonic antigen (CEA), which serve as valuable markers for diagnosis and monitoring. MTC commonly metastasizes to regional lymph nodes; however, distant metastases to organs such as the liver, lungs, and bones are also observed. Cardiac metastasis is exceedingly rare and poses significant diagnostic and therapeutic challenges. Herein, we present a case involving a male patient who exhibited cardiac-related symptoms, eventually leading to a diagnosis of global pericardial effusion with cardiac tamponade. During evaluation, the patient was incidentally found to have co-existing MTC as evidenced by various radiological, biochemical, histological, and cytological analyses. Pericardial tapping provided symptomatic relief, and cytological examination confirmed metastasis originating from MTC. This case highlights the rare occurrence of MTC metastasizing to the pericardium, emphasizing the necessity for comprehensive imaging and multidisciplinary management in such presentations.

Keywords: medullary thyroid carcinoma, MTC, thyroid, metastasis, cardiac metastasis