Clinical Image:

An Enlarging Neck Mass with Dyspnea and Left Finger Pain in a 63-year-old Woman

Authors: Thanh D. Hoang, DO[1,2] ; Andrea N. Snitchler, MD[3] ; Mohamed K.M. Shakir, MD[1,2]

[1]Division of Endocrinology, Department of Medicine; Walter Reed National Military Medical Center, Bethesda, MD, USA

[2]Division of Endocrinology, Department of Medicine; Uniformed Services University of Health Sciences

[3]Department of Pathology; Walter Reed National Military Medical Center, Bethesda, MD, USA

Corresponding Author: Dr. Thanh D. Hoang

Division of Endocrinology, Walter Reed National Military Medical Center,

8901 Wisconsin Ave, Bethesda, MD 20889.

Email: tdhdthanh@gmail.com

Running title: papillary thyroid cancer; metastasis to finger;

Key Clinical Message:

We described a rare presentation of papillary thyroid cancer metastasized to left finger. This case highlights the importance of an early and effective engagement of multidisciplinary team approach with family in order to optimize patient care.

Key words:

Papillary thyroid cancer, metastasis to left finger

Clinical vignette:

A 63-year-old woman presented with an enlarging neck mass, dyspnea, neck pain and limited range of cervical motion for 18 months. Patient reported conversational and exertional dyspnea, pain in back of neck and scapular region, weight loss, fatigue and intense pain in her third left finger. Past medical history was significant for nontoxic multinodular goiter and osteoporosis for which patient refused previous treatment because she only wanted holistic medical treatment. Physical examination showed a large 6cm right neck mass, hard in consistency with skin changes concerning for impending ulceration (Fig 1). Pemberton sign and baseline spirometry were normal. Fine-needle aspiration of the right neck mass showed hyper-cellularity with nuclear molding, fine powdery chromatin, nuclear membrane irregularities and rare intranuclear inclusions (Fig 2). X-ray showed an erosive mass to the third distal phalanx (Fig 3).

Papillary thyroid cancer (PTC) metastasizes to distal phalanges is extremely rare. PTC mortality increases progressively with advancing age (1). The prognosis is poorer in patients with larger tumors, soft-tissue invasion, distant metastases, and high-risk features (tall cell, insular, hobnail variants, etc) (2,3). In our patient, the neck CT showed a large right thyroid nodule with calcifications, invading sternocleidomastoid muscle with tracheal mass effect and bilateral pulmonary nodules. Initially she was counseled extensively with endocrine surgeons, oncology, radiation-oncology, mental health with family engagement; however, she refused thyroid surgery and chose natural, holistic route. Several months later, the mass was not resectable due to its proximity to great vessels and potential tracheal collapse. Tyrosine kinase therapy was considered; however, it would take a prolonged period to be effective. She underwent EBRT using 35 Gy in 14 fractions to the thyroid mass and 30 Gy in 10

fractions to the left third finger, and zoledronic acid intravenous infusion for bone metastases. Unfortunately, these treatments offered little benefit. She was placed in a hospice program and passed away 1 month after radiation therapy. This case highlights the importance of an early and effective engagement of multidisciplinary team approach with family in order to optimize patient care.

Authorship List:

Thanh D. Hoang, DO – Author

Adrea Snitchler, MD - reviewer, providing pathology slides

Mohamed K.M. Shakir, MD – reviewer

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DISCLOSURE

The authors have no multiplicity of interest to disclose.

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Abbreviations:

CT - computed tomography

PTC - papillary thyroid cancer

EBRT - external beam radiation therapy

Figures Legend:

Figure 1: showing a large right neck mass with skin changes concerning for impending ulceration.

Figure 2: fine needle aspiration of the right neck mass showed showed hyper-cellularity with nuclear molding, fine powdery chromatin, nuclear membrane irregularities and rare intranuclear inclusions.

Figure 3: X-ray of the left finger showing an erosion.