



UNIVERSITÀ DI PARMA

ARCHIVIO DELLA RICERCA

University of Parma Research Repository

NODULAR GOITER AND LARYNGEAL ANATOMIC VARIANT IN TWO PORTRAITS OF THE HELLENISTIC DRAMATIST MENANDER

This is the peer reviewed version of the following article:

Original

NODULAR GOITER AND LARYNGEAL ANATOMIC VARIANT IN TWO PORTRAITS OF THE HELLENISTIC DRAMATIST MENANDER / Toni, Roberto; Barbaro, Fulvio; DI CONZA, Giusy; Trimarchi, Francesco. - In: JOURNAL OF ENDOCRINOLOGICAL INVESTIGATION. - ISSN 1720-8386. - (2022). [10.1007/s40618-022-01772-z]

Availability:

This version is available at: 11381/2911176 since: 2024-02-28T11:29:39Z

Publisher:

Published

DOI:10.1007/s40618-022-01772-z

Terms of use:

Anyone can freely access the full text of works made available as "Open Access". Works made available

Publisher copyright

note finali coverpage

(Article begins on next page)

23 April 2024

Journal of Endocrinological Investigation

NODULAR GOITER AND LARYNGEAL ANATOMIC VARIANT IN TWO PORTRAITS OF THE HELLENISTIC DRAMATIST MENANDER

--Manuscript Draft--

Manuscript Number:	
Full Title:	NODULAR GOITER AND LARYNGEAL ANATOMIC VARIANT IN TWO PORTRAITS OF THE HELLENISTIC DRAMATIST MENANDER
Article Type:	Endo&Art
Funding Information:	Università degli Studi di Parma (FIL 2020) PROF ROBERTO TONI
Abstract:	NO ABSTRACT REQUIRED
Corresponding Author:	ROBERTO TONI, MD, PhD University of Parma Department of Medicine and Surgery: Università degli Studi di Parma Dipartimento di Medicina e Chirurgia PARMA, ITALY
Corresponding Author Secondary Information:	
Corresponding Author's Institution:	University of Parma Department of Medicine and Surgery: Università degli Studi di Parma Dipartimento di Medicina e Chirurgia
Corresponding Author's Secondary Institution:	
First Author:	ROBERTO TONI, MD, PhD
First Author Secondary Information:	
Order of Authors:	ROBERTO TONI, MD, PhD FULVIO BARBARO, PhD GIUSY DI CONZA, PhD FRANCESCO TRIMARCHI, MD
Order of Authors Secondary Information:	
Author Comments:	SUBMISSION OF THE MANUSCRIPT GRANTED AND SOLICITED BY THE EDITOR IN CHIEF PROF. LUIGI BARTALENA
Suggested Reviewers:	MARTINO ENIO PROFESSOR OF ENDOCRINOLOGY, University of Pisa School of Medicine and Surgery: Università degli Studi di Pisa enio.martino@gmail.com INTERNATIONALLY RENOWNED EXPERT OF ENDOCRINOLOGY AND ART

[Click here to view linked References](#)

NODULAR GOITER AND LARYNGEAL ANATOMIC VARIANT IN TWO PORTRAITS OF THE HELLENISTIC DRAMATIST MENANDER

Roberto Toni^{1,2}, Fulvio Barbaro¹, Giusy Di Conza¹, Francesco Trimarchi³

¹ Dept. of Medicine and Surgery, Unit of Biomedical, Biotechnological and Translational Sciences, and Museum and Historical Library of Biomedicine - BIOMED, University of Parma, Parma, Italy, ² Division of Endocrinology, Diabetes, and Metabolism, Tufts Medical Center, Tufts University School of Medicine, Boston, MA, USA, ³ Dept of Clinical and Experimental Medicine, University of Messina, Messina, Italy

These two marble sculptures (Figs.1a and 1b) dated to the Imperial Roman period portray the 2nd B.C. Greek Dramatist Menander, and are kept at the Chiaramonti Collection of the Vatican Museums in Rome and Uffizi Museum in Florence, respectively. Both display an anatomical variant of the thyroid cartilage, i.e. its protrusion on the midsagittal plane to give rise to the so called Adam's Apple. In particular, the lateral view of the Menander's head (Fig.1b) shows an acute angle of protrusion of 13° between the line tangential to the thyroid cartilage and that intersecting the most anterior projection of the cartilage, as in an adult population (1). This gender feature is due to raised pubertal androgens, growth hormone, and related cartilage growth factors in males. Since this anatomical evidence suggests that Menander really had a "jug's spout", we may assume that he also truly harbored the small goiter visible in both images and showing a likely isthmic nodule in the Uffizi's sculpture (Fig. 1b). Indeed, this latter piece of art is one of the eighty replicas of an original by Cephisodotos the Younger who was contemporary of Menander, and reproduced his real life appearance. Finally, goiter portraits (figures, coins) are found in ancient Greek art (2), supporting our belief the Menander might actually have had a nodular goiter.

Key words: nodular goiter, laryngeal prominence, anatomic variant

References

1. Glikson E, Sagiv D, Eyal A, Wolf M, Primov-Fever A. (2017) The anatomical evolution of the thyroid cartilage from childhood to adulthood: a computed tomography evaluation. *Laryngoscope* 127:E354-E358.
2. Laios K, Gregory Tsoucalas G, Karamanou M, Androutsos G. (2015) Goiter in ancient Greek art. *Indian J Endocrinol Metab* 19: 190.

Figure 1. a) Head of Menander. Marble, Roman copy of the Imperial era, Chiaramonti Collection, Vatican Museums, Rome, Italy, b) Marble Head of Menander, Roman copy of the Imperial era on modern bust (lateral view) Le Gallerie degli Uffizi, Florence, Italy. Both sculptures are replicas after a Greek original (ca. 343 - 291 BC).

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval This article does not contain any study involving human subjects or animal models.

Informed consent No informed consent is necessary.

