



## HIPPOCRATIC CONCEPT OF TUMORS "A SOURCE STUDY"

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## ABSTRACT

The aim of this study is to evaluate Theories related to etiology of different Tumors and their natures in Hippocratic Corpus as their relation to what modern and advanced medicine found.

**KEYWORDS:** Theories, Hippocratic Corpus.

## INTRODUCTION

Tumor is a swelling of a part of the body, generally without inflammation, caused by an abnormal growth of tissue, whether benign or malignant.

The word "Tumor" originated from Latin verb "tumere" which means to swell, and Latin noun "tumor".

In Hippocratic corpus, etiology of tumors were mainly related to inflammation which was explained by humoral theory, it was based upon body fluids (which were)

- Blood
- Phlegm
- Yellow bile
- Black bile.

These fluids according to Hippocratic doctors must be present in a balanced values, but any Imbalance between these fluids may result in different pathological problems, for example, excess of black bile in a particular organ site was thought to be related to cancer, thus theory was standard through the middle ages for over 1300 years.<sup>[1]</sup>

In Hippocratic corpus these were several signs for Tumors classification, in our study we found that these classification mainly concentrated into three main groups:

**1. First Group:** Known as phyma (φυμα-ατα) it is originated from Greek word "φουμα" which means swelling or tumor.<sup>[2]</sup>

The term "φουμα" found to be used in different body sites as for examples in urinary tract as urethra, here the lesion will predispose to internal suppuration which when rupture relief will occur.<sup>[3]</sup>

Also "φουμα" considered as renal tumors which is closely related to renal stones that can predispose to infection which will lead to pyuria, hematuria.<sup>[4]</sup>

"φουμα" also could affect throat, this will be known as scrofula. Throat has bilateral glands on both sides which known as paristhmia (παρίσθημα). Scrofula will occur when the throat will be filled with phlegm then it will swall this is how scrofula formed.<sup>[5]</sup>

Phyma could also affect breast when milk engorgement will occur this will predispose to inflammation.<sup>[6]</sup>

**2. Second Group:** Known as edema (οίδημα) it is originated from Greek word "οίδημα" which means "swelling"<sup>[7]</sup>, it is defined as abnormal accumulation of fluids in the subcutaneous tissues.<sup>[8]</sup>

In Hippocratic Corpus edema mainly focused in the following conditions:

- First condition:** skull injury whether trephination occurs or not here edema will affect face and eyes.<sup>[9]</sup>
- Second condition:** swelling in the Hypochondrium which is more dangerous and may lead to death, also it is suitable medium for suppuration and the main complain of patients will be fever, Headache and vomiting.<sup>[10]</sup>
- Third condition:** swelling of belly which is less serious when superficial and more sever when deep.<sup>[11]</sup>

**3. Third Group:** known as cancer "καρκίνος" it is originated from Greek word "καρκίνος" which said by Hippocratic doctors to have been applied to such tumours because the swollen veins around them resembled the limbs of a crab. Canker was the usual form until the 17<sup>th</sup> century compare with cancer.

Hippocratic doctors said that cancers are dangerous, Hidden and they advised to leave patient in peace without medical treatment as medical treatment will

shorten his life span.<sup>[12]</sup> but surgical and cautery treatment is advised, whenever possible.<sup>[13]</sup>

**Finally:** the scientific terms which is related to the tumors between the Hippocratic dictionary and the modern dictionary:

The term as it is in the Hippocratic Corpus	Its Hippocratic meaning	What is affect it lexically & meaning
(1) φύμα	growth, tumour	Phyma
(2) οίδημα	Swelling	oedema, edema
(3) φλεγμα	Inflammation	Phlegmon
(4) φαρυγγίς	Pharynx	Pharynx
(5) δπο-χονδριος	under lumps	hypochondrium
(6) καρκίνος	Cancer	Cancer

## DISCUSSION

The Hippocratic concept of Tumors embraced all abnormal swellings of the human body which is totally in line with what modern medicine claim. This Hippocratic concept based upon inflammation as understood by humoral theory, in modern medicine the exact etiology is not known but there are many theories trying to explain the cause, one of the most accepted theory is molecular biology theory in which there is mutational activation of the proto-oncogene to oncogene with mutational inactivation of the tumor suppressor gene.

In Hippocratic Corpus edema and phyma were considered as tumors which is not in line with modern medicine as edema may result from the tumor itself but never to be considered as tumor.

"καρκίνος" in Hippocratic Corpus is equivalent to cancer in modern medicine which has very bad prognosis and usually ends by death, in modern cancer is provisionally diagnosed after clinical evaluation but confirmation of diagnosis only after histopathological examination where cellular atypia and stromal invasion are present.

## CONCLUSION

With all the respect of Hippocratic doctors but they failed to recognize the difference between benign and malignant tumors this may be due to absence of important diagnostic aids during that Era such as computed tomography scan , magnetic resonance imaging and Histopathological examination.

But we should never forget to say that Hippocratic doctors settled the principles from which modern medicine continued.

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3. Hippocrates, Aphorisms, IV. LXXXII, "Οκόσοισιν εν Τη συρηθηρη φύματα φύεται, Τούτοισι, διαπυήσαντος και εκραγέντος, λύσις." cf: Ibid., VII. VIII. "Επί φύματος εσω ρηξει εκλυσις, εμετος, και λειποψυχη γινεται".
4. Idem, Nature of man, XIV.
5. Idem, Glands, 7.
6. Ibid., 17. "ποιέσουσι και μαζοι φυματα, φλεγμονάς, Τò γαλα άποσή ποντες."
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9. Hippocrates, on Wounds in the head, xx.
10. Idem, Prognostic, VII.
11. Idem, Aphorisms VI. VII., "Αλγήματα και οίδημα κατά την κοιλίην γινόμενα, τὰ μὲν μετεωρα κουφοτερα, τὰ δε μη μετέωρα, ισχυρότερα."
12. Ibid., XXXVIII, "Οκόσοισι κρυπτοι καρκίνοι γίνονται, μη θεραπεύειν βέλτιον θεραπευόμενοι γάρ απόλλονται ταχεως, μη θεραπευόμενοι δὲ πολὺν χρόνον διατελέουσιν."
13. Ibid., 165- 6.