



Cancer Biopsy in Ancient Persian Medicine: Do or Not to Do!

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(Received 15 May 2015; accepted 28 May 2015)

Dear Editor-in-Chief

One of the controversial topics in cancer research and its clinical approach is the influence of biopsy on the possibility of tumor spread and metastasis that seems to be a new issue in medical knowledge (1-2), but Avicenna in more than a thousand years ago (980–1037 AD) in his book (Cannon of medicine) has been connoting on this subject (3). According to the Avicenna opinion, cancer is described as a "solid swelling" (tumor) which is firmly attached to the adjacent organ (4). In this point of view, being susceptible to cancer depends on quality of life such as nutrition, physical activity etc. (3, 4). The other risk factor on which Avicenna emphasized is past history of injury and trauma, damage and chronic or severe pain in different parts of the body. He believed that pain and trauma absorbs substances including natural and toxic materials from the other parts of body to the pain point that can start genesis of cancer. Traumas moreover can damage self-layer of swelling in cancerous tissue, and disperse disease locally or generally in body (3, 4). Nowadays multiple continuing traumas in the same region of the body (skin or oral mucosa) is a known cause of cancer (5). Chronic inflammation is a precursor factor of tumor progression and many cancers have been found to occur from location of infection, chronic irritation, and

inflammation (6, 7). Trauma induces tumor immunosuppressive factors that increase vascular permeability and facilitating passage of the tumor cells into the other tissues (8).

Moreover, some studies even showed the relationship between single trauma and cancer development. It can also lead to a significant increase in tumor size over a short duration times (8). Indeed traumatizing the cancer tissue leads to trigger inflammation process that allows cells to progress by proliferation, survival, and migration (9).

Based on this theory, Avicenna and his followers forbade physicians from manipulation without complete removal of tumors. They stated: "tranquilize the tumor, do not stimulate it", so they used medicinal herbs like *Viola Odorata L.* (*banafshe*), *Nymphaea Alba L.* (*niloofar*) and *Cucurbita pepo* to calm tumors cells. Some new studies have been shown effects of such herbs on inhibition of cancer cell growth (3, 4). Therefore, it seems that the use of the herbs before biopsy will reduce the chances of potential tumor spreading (10).

According to Avicenna's recommendation in more than thousand years ago, we propose the use of non-invasive methods such as laboratory parameters and biomarkers, for tumor detection; although the effect of biopsy in cancer metastases is not conclusive. We also suggest further

investigation on also the influence of herbal drugs such as syrup of violets for tumor cells tranquilizing before the biopsy

Acknowledgment

This comment is based on PhD thesis number 58, school of Traditional Persian Medicine, Tehran University of Medical Sciences, Tehran, Iran. The authors declare that there is no conflict of interests.

References

1. Peters-Engl C, Konstantiniu P, et al. (2004). The impact of preoperative breast biopsy on the risk of sentinel lymph node metastases. *British Journal of Cancer*, 91:1782–86.
2. Fujii H, Ishii E, Tochitani S, Nakaji S, Hirata N, Kusanagi H, Narita M, (2015). Lymph node metastasis after endoscopic submucosal dissection of a differentiated gastric cancer confined to the mucosa with an ulcer smaller than 30 mm. *Digestive Endoscopy*, 27(1):159-61.
3. Avicenna H (1876). *Cannon of Medicine*. Tehran, Iran: Traditional Publishing, vol. 4: 70-71. [In Arabic]
4. Rhazes M (1962). [*Alhavi Alkabir fi al Teb*], 1st ed. Heydarabad, India: Daerat al Maaref al Osmanyah, vol.13: 3-35. [In Arabic]
5. Piemonte E, Lazos J, Brunotto M (2010). Relationship between chronic trauma of the oral mucosa, oral potentially malignant disorders and oral cancer. *J Oral Pathol Med*, 39 (7): 513–17.
6. Meng X, Zhong J, Liu S (2010). A new hypothesis for the cancer mechanism. *Cancer Metastasis Rev*, 31:247–68.
7. Elinav E, Nowarski R, Thaiss A, Hu B, Jin C, Flavell A (2013). Inflammation-induced cancer: crosstalk between tumours, immune cells and microorganism. *Nature Reviews Cancer*, 13:759–71.
8. Shiffman, Melvin A (2004). Can trauma cause or accelerate the growth of cancer. *The Forensic Examiner*, 13(3):5-11.
9. Yadav V, Prasad S, Sung B, Kannappan R, Aggarwal B, (2010). Targeting Inflammatory Pathways by Triterpenoids for Prevention and Treatment of Cancer. *Toxins (Basel)*, 2(10): 2428–66.
10. Gerlach SL, Rathinakumar R, Chakravarty G, Göransson U, Wimley WC, Darwin SP, Mondal D. (2010). Anticancer and chemosensitizing abilities of cycloviolacin 02 from *Viola odorata* and psyle cyclotides from *Psychotria leptothyrsa*. *Biopolymers*, 94(5):617-25.