

Hypothesis Nature has provided the two Subsets required for Translational Lung Cancer Research

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Abstract

Regarding translational research on lung cancer, a recent report came from China. In the present paper from Nigeria, necrosis was noted to occur when cancer cells being transported within the thoracic duct were comingled with red cells. It was hypothesized that the retrieval of such rich natural pabulum in addition to the replication of it in translational laboratories will conduce to cancer cure.

Hypothesis

I was much interested to come across the account of Zhan and Song [1] as regards translational research on lung cancer in China. This has prompted me to remark from Nigeria on a 1967 contribution of mine [2]. This is because the utilization of its conception ought to promote translational research in this excitingly emerging field.

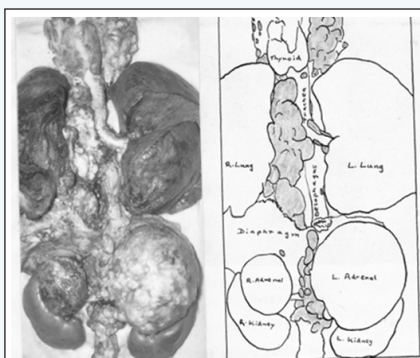


Figure 1: Specimen of right lung cancer obtained with the mono-block formalin-fixation method showing the patterns of metastases, e.g: right mediastinal masses connected with left cervical group and left adrenal gland as a C-shaped process.

Field of performance of the postmortem examination was improved upon personally when, in 1963, I instituted in Glasgow, Scotland the mono-block formalin-fixation method for investigating lung cancer [3]. (Figure 1) It was this particular method that enabled me to obtain the long 45 cm thoracic duct in its entirety. Furthermore, on account of serendipity, I made use of the Swiss-roll method of coiling the duct in order to study

it on one microscope slide [2]. Hitherto, as Uдах found out [4], it was tedious to employ cross sections.

Sections of the longitudinal type proved to be panoramic in that they revealed the whole stretch of lung cancer cells as they were being carried from the upper abdomen, through the chest, and to the neck at the moment of death. The scenery was that of not only individual cancer cells but also of clumped and dying cancer cells. Indeed, I concluded as follows [2]: "Necrosis of the cancer cells was apparent in 3 cases, but it was clear that this had occurred in association with large aggregates of the malignant cells and that among such aggregated cells red blood corpuscles abounded."



Figure 2: Longitudinal section showing thoracic duct containing transported cancer cells including two massed groups that on higher magnification revealed necrotic cancer cells comingled with erythrocytes.

Abounded as they were, these comingled elements should be recognized as a Natural eye opener. In this context, tumour

cells have been seen in the thoracic duct in quantum. (Figure 2) Moreover, they have provided the necessary two subsets essential for research, namely, lively cancer cells and necrotic cancer cells. Therefore, the question arises as to how to utilize them.

Hitherto, cannulation of the thoracic duct had been used for research and treatment ordinarily [5]. More importantly, there is now the technique of intravital videomicroscopy [6]. Accordingly, what remains is to use it to retrieve the two subsets of transported cancer cells. This is to be noted, from consenting lung cancer patients [7]. Indeed, in order to replicate the pabulum in translational laboratories, what Nature does visibly in the microenvironment of the human thoracic duct will become manifest.

Manifest evidence derived from the duct of this special type has provided data on a very important phenomenon viz the occurrence of necrosis during life [2]. Indeed, I am persuaded that this is the reason why, despite the millions of lung cancer cells being carried in the blood stream [8], their lack of effectiveness in metastasis formation in the system is very surprising. Consequently, there must be a natural protective phenomenon at work. I have named it the "Erythrocyte Associated Necrosis Factor" [EANF] [9]. In other words, it will be like another well known factor such as the Coagulation Factor, which enabled mankind to overcome long ago the severe bleeding diseases [10].

Conclusion

Diseases are overcome by recognizing their identity and using desirable drugs in everyday practice. Therefore, it is hypothesized that, as regards EANF, it should be identified in the translational laboratory system [11]. Thereafter, on pressing

it into service, mankind will benefit to such an extent that the "War on Cancer" [12], which was long ago declared in USA by her President, will be won sooner than later!

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