Critical thinking on cancer and mitotic rate

Health & Medicine, Cancer

Cancer and Mitotic Rate

There are basically four types of tissues in the body namely; connective tissues, epithelium, nervous tissue and muscle. Admittedly, these types of tissues have differing mitotic rates perhaps due to the type of the role they perform in the body. Even though the type of tissue that has the lowest rates cannot be accurately pinpointed, it is openly believed that epithelial tissues have the highest mitotic rates. Quite notably, neuron and muscle cells do not always undergo mitosis.

Epithelial tissues are the tissues made up of cells that form the external surfaces that cover the body. The tissues, besides covering and protecting the body from external pathogens, also form linings on the surfaces of inner and hollow organs like lungs, breasts, intestines and prostrate where they protect the organ cells from the action of various body fluids and enzymes (Acton, 2012; Alcamo, 2004). Since these tissues are protective tissues and form surfaces for most body organs, they are subject to constant damage hence must always be replaced through mitosis which gives insight to why these tissues are highly mitotic.

Conventionally, cancers that originate from the epithelial cells are most common types of cancer s in adults (Bernstein, & Gurney, n. d). Owing to the fact that epithelial tissues are the most highly mitotic and are the most common origin of cancers in adults, it can be easily generalized that highly mitotic cells are highly cancerous. On their part, Koss & Melamed (1992) contend that the mitotic rate is overly heightened in cancer; this validates, though not clearly, the perceptivity that there is a relationship between types of cancer and the mitotic rate. However, from a personal stand point, I

am opinionative that there is a paucity of literature talking about the possible relationship between types of cancer and mitotic rate hence the existence of any possible relationship cannot be easily underpinned.

References

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