

**The prevalence of Type 2 Diabetes in Vietnam compared to, and in association with, the
United States: A Comparative Case Study**
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Background

Chronic and non-communicable diseases are the leading causes of death around the world. One of the most prevalent is Type 2 Diabetes (T2D).

The most commonly researched factors in contracting the disease are poor diet and a lack of physical activity. Thus, T2D has been recognized as highly preventable.

In the United States, this has been supported and there are multiple efforts to influence actions and decrease the prevalence of T2D. As a result, the percentage of individuals that have the disease has decreased by 2.5 percent between 2007 and 2017.

In Vietnam, however, there has been an exponential rise in the prevalence of T2D between 2007 and 2017 with almost a 52 percent increase, and that number is still growing at alarming rates.

Many studies have linked this epidemic to the abrupt shift of the Vietnamese economy from agriculturally based to industrial beginning in the 1990s.

This economy shift means a substantial number of Vietnamese people living in urban areas are eating unhealthy diets and are rapidly decreasing their physical activity. While this is true, this is not the only reason for the significant increase of T2D.

To argue against the growth of T2D in Vietnam as being highly preventable like in the United States, newer research studies have found a connection between chemical compounds initiating epigenetic modifications and the contraction of T2D.

In other words, Vietnam could be experiencing unavoidable environmental factors outside of poor diet and a lack of exercise that have significantly contributed to the exponential contraction and prevalence of T2D.

Objective

This comparative case study analyzes the prevalence of Type 2 Diabetes in Vietnam compared to, and in association with, the United States. In breaking down both preventable and unavoidable environmental factors that contribute to the onset of T2D, military tactics used by Americans during the Vietnam War are strongly considered.

More specifically, understanding the effects of the war on the Vietnamese can help determine appropriate methods of intervention in addressing and preventing the further growth of T2D in Vietnam.

Methods

This case study uses data from a 2006 peer-reviewed, research article on Molecular Epidemiological Evidence for Diabetogenic Effects of Dioxin Exposure in U.S. Air Force Veterans of the Vietnam War. Even though this information focuses on the effects regarding American war veterans, the data is used to examine how Vietnamese war veterans and citizens were affected by the American war tactic of Agent Orange.

To supplement that data, this study also includes personal stories from local Vietnamese healthcare professionals and healthcare consumers through groundwork while in Vietnam.

Findings

The experiment-based study found definitive evidence indicating a diabetogenic shift had occurred in the biochemistry of adipose tissues from Vietnam War veterans who were exposed to the dioxin-containing herbicide, Agent Orange.

In other words, there is a direct connection between Agent Orange and Type 2 Diabetes. An individual can contract T2D from epigenetic modifications caused by the Agent Orange war tactic used during the Vietnam War.

Conclusion

These findings suggest that Vietnamese citizens and war veterans who were coated with the Agent Orange herbicide must also be experiencing epigenetic modifications, thus leading to the contraction of Type 2 Diabetes. Therefore, this study highlights an unavoidable environmental factor explaining the exponential growth in the prevalence of T2D in Vietnam.

Key Words

Type 2 Diabetes (T2D), chronic disease, non-communicable disease, epigenetics, Vietnam War, Agent Orange