



Black patients are less likely to receive stage appropriate treatment for lung cancer, and one third of this disparity is a result of cultural factors including fatalism, and medical mistrust.

Lin Jenny J, Wisnivesky Juan P, Leventhal Howard, et al; Cultural Factors Associated with Racial Disparities in Lung Cancer Care. Ann Am Thorac Soc. 2014; 11 (4): 489-495.

Objective

Disparities have long been observed in treatment of lung cancer among racial and ethnic minorities. This paper sought to determine which cultural factors among Black and Hispanic populations contribute to disparities in lung cancer (LC) treatment.

Methods

Design: Mediation analysis study using structural equation modeling. The model defined different cultural factors (fatalism, negative surgical beliefs, and medical mistrust) as the mediator variables.

Setting: Four New York City hospitals (Mount Sinai Hospital, Montefiore Hospital, New York-Presbyterian Hospital, and Harlem Hospital)

Period of the enrollment: 2008 -2011

Follow up: 1 year

Patients enrolled: 352 patients (74 Blacks, 70 Hispanics, and 208 Nonminority), age of 18 years or older, diagnosed with lung cancer within the previous 12 months and without another malignancy within the previous 5 years.

Main results

Blacks were less likely to receive stage appropriate lung cancer treatment (odds ratio 0.50; 95% CI: 0.27-0.93) compared to nonminorities. No difference was observed between Hispanics and nonminority patients (odds ratio 1.30; 95% confidence interval: 0.68-2.52). Fatalism, negative surgical beliefs, and mistrust explained 30% of the reduction in stage appropriate LC treatment observed in Blacks (total effect: -0.43; indirect effect: -0.13).

Conclusion

Cultural factors like fatalism, negative surgical beliefs, and mistrust explain one third of disparities in lung cancer treatment among Blacks suggesting that the development of

specific targeted interventions have the potential to reduce these disparities and improve the receipt of stage appropriate LC care.

Commentary

Several studies have demonstrated significant disparities in lung cancer care in minority populations. Black and Hispanic patients are more likely to be diagnosed with disease at a later stage, are less likely to undergo surgical resection when indicated, and have a worse lung cancer specific survival rate compared to their White counterparts [1-4]. The factors influencing these disparities are multifaceted and include the health care system (e.g. access, insurance coverage, hospital support), healthcare providers (e.g. stigma and stereotyping, cultural sensitivity, communication barriers) and patients (e.g. cultural factors, English proficiency) [5, 6].

Specific cultural factors like fatalism, medical mistrust and negative surgical beliefs have been found to be more prevalent in Blacks and Hispanics with lung cancer compared to Whites [7, 8]. The exact degree to which such cultural factors contribute to racial disparities in lung cancer care, however, was previously unknown. Through the application of mediation analysis statistics [9], Lin and colleagues were able to both identify and quantify the degree of influence these cultural factors on disparities in LC care among Black patients [10]. This study demonstrated that cultural mediators including medical mistrust and fatalism explain 30% of the reduced rate of lung cancer treatment in Blacks.

Using the SEER database, the authors previously described similar disparities in Hispanic patients with stage I lung cancer; they were less likely to undergo surgery and had worse LC specific survival rates compared to their White counterparts [4]. In the current study, however, a significant difference in LC treatment between Hispanics and nonminorities was not detected. The authors point out that there might have been an underrepresentation of the US Hispanic population in the study sample. The majority of Hispanics participating in the study were from Puerto Rico and the Dominican Republic which represent only 13% of the entire US Hispanic population [11]. There were very few Mexican, Central and South American Hispanics included. These groups have been shown to have a lower rate of English proficiency [11] which has been described to affect negatively use of health care services [12].

While further investigation into a more representative population of Hispanics may be warranted, this study sets the stage for the development of interventions targeting these cultural factors in Blacks diagnosed with LC. In this population with higher LC mortality, effective interventions at the patient level resulting in receipt of guideline appropriate treatment have the potential to make an impact on survival.

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