

Non-Hodgkin's Lymphoma and Occupational Exposure to Hair Dyes among People with AIDS

We were intrigued by the finding by Zahm et al.¹ that women who used hair coloring products are at increased risk for non-Hodgkin's lymphoma. Because the risk for non-Hodgkin's lymphoma among people with acquired immunodeficiency syndrome (AIDS) is 50 to 100 times higher than the general population,² because previous studies have shown increased risks of non-Hodgkin's lymphoma for persons occupationally exposed to hair dyes,^{3,4} and because beauticians and cosmetologists are greatly overrepresented among people with AIDS,⁵ we wondered if beauticians and cosmetologists with AIDS have increased risk for non-Hodgkin's lymphoma compared with other persons with AIDS. If documented, such a risk might be reduced by changes in safety practices. We conducted a case-control study to test this hypothesis.

April 1993, Vol. 83, No. 4

Our case subjects and control subjects were persons who had died between 1987 and 1989 with AIDS listed as a cause of death. Additionally, the subjects died in one of the 23 states⁵ where death-certificate documentation of lifetime occupation was available. Case subjects were all persons who had both AIDS and non-Hodgkin's lymphoma listed as causes of death; all persons with AIDS without non-Hodgkin's lymphoma as a cause of death were eligible to be chosen as control subjects. Four times as many control as case subjects were randomly chosen, with frequency matching for 5-year age group, race, and sex. We computed the odds ratio of non-Hodgkin's lymphoma for beauticians and cosmetologists compared with all other occupations.

Among the 2153 case subjects, 9 (.42%) were beauticians or cosmetologists, while among the 8612 control subjects with AIDS only, 56 (.65%) were beauticians or cosmetologists (odds ratio = .65; 95% confidence interval = .3, 1.3). These data provide no evidence that beauticians or cosmetologists with AIDS are at an increased risk for non-Hodgkin's lymphoma. Similar analyses for other occupations did not detect increased risk among persons with AIDS employed in occupations previously associated with non-Hodgkin's lymphoma.^{1,2}

As Zahm and her colleagues noted in their paper, beauticians and cosmetologists may be less exposed to the mutagenic and carcinogenic chemicals in hair coloring products than their clients, because professionals use gloves to avoid cutaneous exposures. Alternatively, if the effect were additive rather than multiplicative, the strongly lymphomatogenic factors operant among persons with AIDS may have obscured the relatively lesser effects of hair dyes. This analysis provides no evidence that non-Hodgkin's lymphoma risk would decrease if persons with AIDS who are beauticians or cosmetologists changed occupations. □

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