

Table 2.14. Case-control studies of use of smokeless tobacco and cancer at other sites

Reference, study location and period	Organ site (ICD code)	Characteristics of cases	Characteristics of controls	Exposure categories	Relative risk(95% CI)	Adjustment for potential confounders	Comments
Phukan et al., (2005) Mizoram, India Aug.2001 to Aug. 2004	Stomach (151)	Hospital based case-control study with 329(253 men and 76 women) histologically confirmed cases. Cases with advanced disease and recurrent cancer were excluded. Interviewed using pretested questionnaire.	Controls were selected from hospital patients having non-malignant disease. Matched with cases for age(\pm 5years), sex and ethnicity. Two controls were selected for each case. Interviewed using pretested questionnaire.	<i>Chewers</i>		Adjusted for education, occupation, income group, smoking, using of tuibur (tobacco smoke-infused water)and alcohol drinking habits	Reference never chewers
				Never	1.0		
				Former	1.6(0.7–2.6)		
				Current	1.5(0.5–2.2)		
				<i>Chewing type</i>			
				Tobacco alone	2.6(1.1–4.2)		
				<i>Cumulative dose to amount of tobacco chewing (mg)</i>			
				< 20 000	1.5(0.04–4.8)		
				> 20 000	2.6(1.2–5.6)		
				<i>Tuibur use</i>			
				Never tobacco/betel users	1.0		
				Tuibur only	2.0 (1.5–3.2)		
				Non-user	1.0 (reference)		
				Former user	1.3 (0.4–2.1)		
				Current user	2.1 (1.3–3.1)		
<i>Frequency</i>							
Non-users	(reference)						
< 5	1.1 (0.2–7.2)						
05–10	1.3 (0.4–8.2)						
> 10	2.8 (1.1–11.7)						
<i>Start age</i>							
Non-users	1.0 (reference)						
\leq 19	2.7 (1.3–15.6)						
20–29	1.5 (0.6–6.4)						
\geq 30	1.2 (0.8–7.3)						
<i>Duration</i>							
Non-user							
\leq 15	1.4 (0.05–7.9)						
16–30	1.7 (0.3–8.4)						
\geq 30	2.4 (1.1–10.5)						

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Phukan et al., (2005) (contd)				<i>Cessation</i> Non-users < 10 10–20 > 20 Trend test	(reference) 1.9 (1.1–6.2) 0.5 (0.02–6.1) 0.2 (0.07–7.2) > 0.05		
				<i>Cumulative dose to amount of tuibur (mL)</i> Non-user < 1 000 1 000–2 000 > 2 000 p-trend	(reference) 0.7 (0.05–8.2) 1.3 (0.5–7.5) 2.1 (1.7–8.6) < 0.01		
Shukla et al., (2008) India 1999–2003	Gall bladder	A hospital based case control study was conducted at the University hospital, Benaras Hindu University, India with 78 patients with gall bladder cancer confirmed by biopsy or cytology or computed tomography. 68% of controls were females.	78 age and gender matched cholelithiasis cases were recruited as controls. 68% of controls were females.	Never user Chewing Tobacco alone Adding lime in chew	1.0 (reference) 2.71 (1.22–6.02) 1.65(0.78–3.49)	ORS were not adjusted for any confounders	

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Bracci & Holly (2005) San Francisco Bay Area, USA 1988 & 1995	NHL	Population Based case-control study With 1 304(M:725, F:579) NHL patients, HIV neagtive, aged 21-74 yrs. Interviewed.	2402 HIV negative population controls identified by random-digit dialing. Frequency matched by sex, county of residence and age within 5 yrs. Interviewed	Men: NHL No tobacco Snuff or chewing tobacco	1.00 4.0(1.3-12.0)	Adjusted for age, level of education and level of average weekly alcohol consumption	No NHL case in women who used snuff or chewing tobacco only
				Men: NHL-Follicular No tobacco Snuff or chewing tobacco	1.00 7.3(1.9-28.0)		
				Men: NHL-Diffuse large cell No tobacco Snuff or chewing tobacco	1.00 2.5(0.47-13.0)		

B.nut, betel nut; B.leaf, betel leaf