Dietary factors in pathogenesis of gallstone disease in southern India—a hospital-based case-control study.

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BACKGROUND: Pigment or mixed gallstones are common in southern India. The etiology is not established. Known risk factors include an obese, diabetic female and a nonsmoker male. AIM: To determine the association of dietary factors with mixed/pigment gallstones amongst southern Indian patients. METHODS: Diet details were obtained from 346 patients (178 women) with gallstones and an equal number of healthy controls who were age- and sex-matched attendants of the patients, sharing similar socioeconomic and demographic characteristics, with normal abdominal ultrasonogram. Data recorded included the number of daily meals, nature of cereal used, vegetarianism, oil consumed per month, sugar consumption per day, tamarind (Garcinia camborginia) usage per week, and per-day beverage consumption. RESULTS: There was no difference between cases and controls in consumption of non-vegetarian food, type of cereal, average oil and sugar consumption, and type of beverage consumed (tea/coffee/milk/combination). Individuals with BMI> 22 were at higher risk to develop gallstones (OR 1.49; 95% CI 1.09, 2.04; p=0.01). There was significant risk of gallstone formation with the use of tamarind when consumed > 3 times a week (OR 1.76; 95% CI 1.05, 2.96; p=0.03). Higher BMI and tamarind use were significant risk factors even on multivariate logistic regression analysis (p=0.02). CONCLUSION: Higher BMI and use of tamarind, a common ingredient of diet in southern India, are risk factors in the formation of gallstones in southern India.

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