

Coffee and cigarettes may protect against liver disease, study says

December 16 2013



Liver transplantation. PSC is the main cause for liver transplantations in Scandinavia. Credit: Ram Gupta, Oslo University Hospital.

Coffee and cigarette smoking may protect against the rare liver disease Primary Sclerosing Cholangitis (PSC), study shows.

In a new study from Norway published in *Clinical Gastroenterology and Hepatology*, both coffee consumption and cigarette smoking are shown

to potentially protect against primary sclerosing cholangitis (PSC). This is a [chronic liver disease](#) caused by [chronic inflammation](#) of the [bile ducts](#).

Great interest

The findings are of great interest against a backdrop of increasing knowledge on coffee as a possible protective agent in other liver diseases.

The cross-sectional study was conducted by researchers at the Norwegian PSC Research Center based at Oslo University Hospital and the University of Oslo.

The study was conducted using a questionnaire about environmental exposures, and included 240 PSC [patients](#) and 245 controls.

Coffee

The study shows showed that the PSC patients had lower coffee consumption both currently and in the early adulthood, suggesting that coffee consumption could protect against the development of the disease. PSC patients who drank coffee, however, had lower levels of [liver enzymes](#) in the blood, thus suggesting a beneficial effect in the liver.

Cigarettes

Regarding cigarette smoking, only 20% of the patients reported ever daily cigarette smoking, compared with 43% of the healthy controls. In addition, cigarette smokers acquired the disease on average 10 years later than non-smokers. Taken together, these observations confirm and

strengthen previous observations of smoking as a possible protective factor in PSC.

About PSC

While PSC is not a common disease, it is a severe condition affecting mostly young adults (30-40 years), and with a high risk of associated cancer of the bile ducts.

Few treatment options are available and PSC is one of the most important reasons for liver transplantation. While the possible protective effect of smoking against PSC seems rather unique to this particular [liver disease](#), [coffee consumption](#) has been shown to protect against multiple other liver conditions including liver cirrhosis and liver cancer – and now for the first time also against PSC.

Scientific abstract:

Background & Aims

Little is known about nongenetic risk factors for [primary sclerosing cholangitis](#) (PSC), except a possible protective effect of smoking. We investigated the relationship between environmental risk factors and susceptibility to PSC.

Methods

A questionnaire was distributed to patients with PSC, recruited from Oslo University Hospital Rikshospitalet in Norway through 2011, and randomly chosen individuals from the Norwegian Bone Marrow Donor Registry ([control subjects](#)). Data were analyzed from 240 patients with PSC and 245 control subjects, matched for gender and age.

Results

A lower proportion of patients with PSC were daily coffee drinkers than control subjects, both currently (76% vs 86%; odds ratio [OR], 0.52; 95% confidence interval [CI], 0.32–0.82; $P = .006$) and at the age of 18 years (35% vs 49%; OR, 0.58; 95% CI, 0.40–0.83; $P = .003$). The associations were mainly attributed to differences observed in men. Twenty percent of the patients were ever (current or former) daily smokers compared with 43% of control subjects (OR, 0.33; 95% CI, 0.22–0.50; P

Conclusions

Coffee consumption and smoking might protect against development of PSC. In women, the disease might be influenced by hormonal factors.

More information: Ina Marie Andersen, Guro Tengesdal, Benedicte Alexandra Lie, Kirsten Muri Boberg, Tom Hemming Karlsen "Effects of Coffee Consumption, Smoking, and Hormones on Risk for Primary Sclerosing Cholangitis. *Clinical Gastroenterology and Hepatology* (Elsevier, USA). Available online: [www.sciencedirect.com/science/ ... ii/S1542356513014298](http://www.sciencedirect.com/science/article/pii/S1542356513014298)

Provided by Oslo University Hospital

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