ΔΙΑΛΕΞΗ ΠΡΟΣΚΕΚΛΗΜΕΝΟΥ ΟΜΙΛΗΤΗ

Are first degree relatives of gastric cancer patients at an increased risk for gastric cancer?

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Gastric cancer is the second most common cause of cancer deaths worldwide.[1,2] It is comprised of two major types,[3,4] i.e. firstly the intestinal, which is the more common variant and which has a strong association with environmental factors, including cigarette smoking, diet (particularly salted foods), and *Helicobacter pylori (H. pylori)* and secondly diffuse gastric cancer, which is less common than the intestinal type but is more likely to be attributed to host factor effects, such as mutations of the *E-cadherin* gene.[5,6] *H. pylori* is believed to predispose to gastric cancer by inducing precancerous changes, i.e. atrophy and intestinal metaplasia (IM).[7] First-degree relatives (siblings or offspring) of patients with gastric cancer might be at an increased risk of developing gastric cancer, as judged by studies which examined the prevalence of *H. pylori* infection and the development of gastric atrophy and IM in relatives and controls. This was examined in a very recent meta-analysis[8] which estimated the risk of first degree relatives developing gastric cancer by meta-analyzing all relevant studies. The results showed that the group of first degree relatives of gastric cancer patients, in comparison to controls, was at an increased risk of harbouring *H. pylori* infection [pooled OR with 95% CI=1.925 (1.419-2.611) and test for overall effect Z=4.211 (p=0.000)] (Figure 1). Similarly the group of first degree relatives of gastric cancer patients, in comparison to controls, was at an increased risk of devel-

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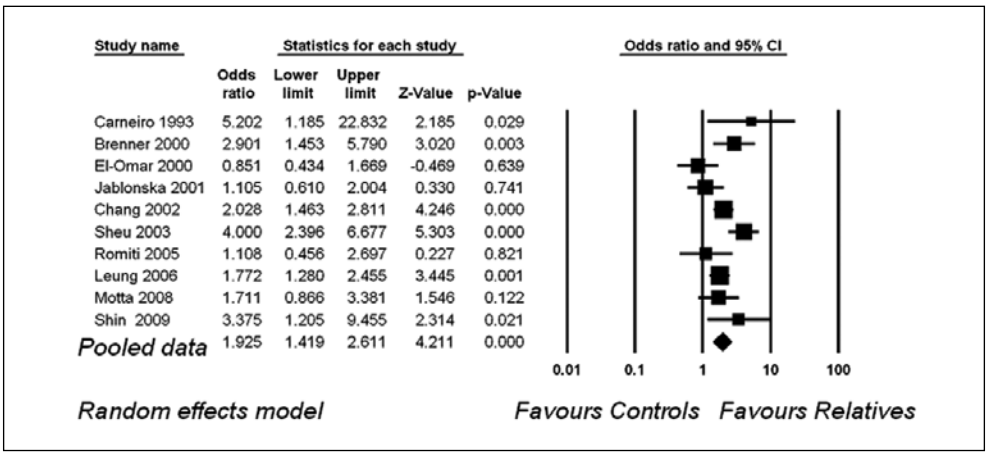

Figure 1. Forest plot (random effects model), concerning *H. pylori* prevalence in first degree relatives of gastric cancer patients and controls.

oping atrophy [pooled OR with 95% CI=2.200 (1.266-3.824) and test for overall effect Z=2.797 (p=0.005)] (Figure 2). Finally, the group of first degree relatives of gastric cancer patients, in comparison to controls, was at an increased risk of developing IM [pooled OR with 95% CI=1.982 (1.763-2.881) and test for overall effect Z=3.582 (p=0.000)] (Figure 3). Overall, the results of this meta-analysis showed that the first degree relatives of gastric cancer patients had a significantly higher risk of harbouring *H. pylori* and this

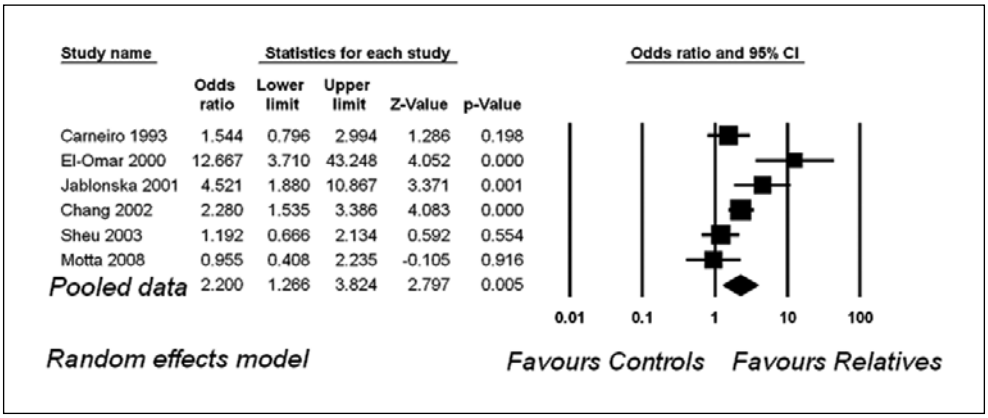

Figure 2. Forest plot (random effects model), concerning gastric atrophy prevalence in first degree relatives of gastric cancer patients and controls.

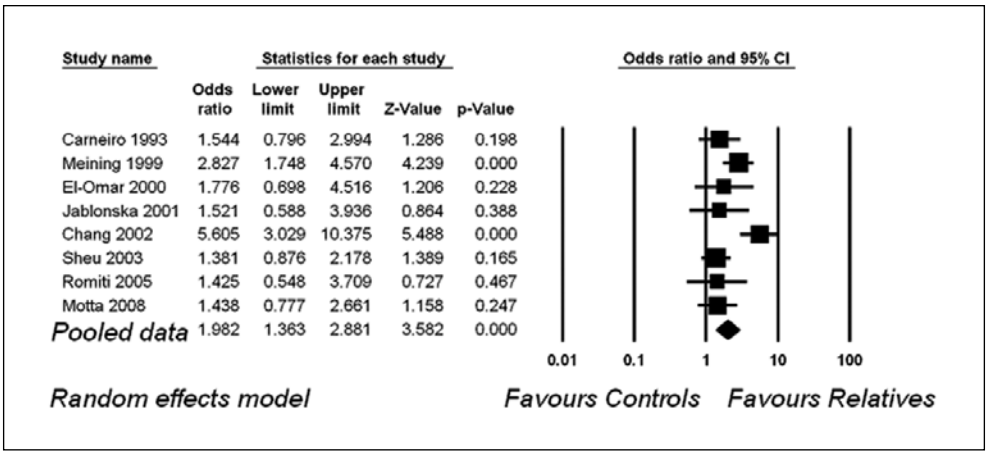

Figure 3. Forest plot (random effects model), concerning intestinal metaplasia (IM) prevalence in first degree relatives of gastric cancer patients and controls.

was paralleled by statistically significant higher risks for developing the pre-cancerous lesions of atrophy and IM, in comparison to controls. All of the above means that the first degree relatives of gastric cancer patients are at a high risk for developing gastric cancer. In conclusion, the results of this meta-analysis showed that first degree relatives of patients with gastric cancer are at an increased risk of developing gastric cancer. Consequently *H. pylori* detection and prophylactic eradication of the infection should be offered to such individuals.

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