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Antioxidant supplement and long-term reduction of recurrent adenomas of the large bowel. A double-blind randomized trial.

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Abstract

BACKGROUND:

Patients who undergo polypectomy are at increased risk of adenoma recurrence. The preventive potential of vitamins (A, C and E) and selenium supplementation represent an interesting opportunity for colorectal cancer prevention.

METHODS:

To assess the efficacy of a combination of these micronutrients in reducing the incidence of recurrent adenomas in subjects on post-polypectomy endoscopic follow-up, a double-blind placebo-controlled randomized trial was started in Italy in 1988. **A total of 411 patients were randomized to receive either an active compound (200 µg selenium, 30 mg zinc, 2 mg vitamin A, 180 mg vitamin C, 30 mg vitamin E) or a placebo daily for 5 years.** Of them, 330 had follow-up colonoscopy (164 in the intervention and 166 in the placebo group).

RESULTS:

After a median follow-up of 4 years (range 1-15 years), 100 patients had recurrence: 38 in the intervention and 62 in the placebo arm. The 15-year cumulative incidence of recurrence was 48.3 % in the intervention and 64.5 % in the placebo arm (HR = 0.59; log-rank P = 0.009). **A 39 %reduction of the risk of recurrence was observed in the intervention compared to the placebo group** (adjusted HR = 0.61; 95 % CI 0.41-0.92): the risk reduction was similar for small tubular (adjusted HR = 0.61; 95 % CI 0.37-0.99) and advanced adenomas (adjusted HR = 0.50; 95 % CI 0.24-1.01).

CONCLUSIONS:

Our study showed a statistically significant effect of antioxidant supplementation on adenoma recurrence. Further clinical trials are needed to address the role of antioxidants in subgroups of subjects at increased risk for colorectal cancer.