SMOKING AND ULCERATIVE COLITIS - DOES NICOTINE HELP?

(Pullan RD, Rhodes J, Subramanian G, *et al*. Transdermal nicotine for active ulcerative colitis. *N Engl J Med* 1994; 330: 811-5.)

SUMMARY

Objective : To find out if nicotine helps as supplemental treatment for active ulcerative colitis.

Design : Double blind, randomized, controlled trial for 6 weeks.

Patients : Seventy seven patients with endoscopically confirmed left sided ulcerative colitis were selected. They all had relapses despite treatment with usual medication. During the trial, all patients continued to take the same doses of anticolitis drugs (oral formulation of mesalamine and glucocorticoids).

Intervention : Thirty five patients (Nicotine group) were treated with transdermal patches of nicotine while the rest (placebo group) received similar looking placebos.

Main outcome measure : Clinical improvement in the patients condition with results of histology of biopsy done alongwith sigmoidoscopy at the end of six weeks.

Main results : Seventeen of the 35 patients in the nicotine group had complete remission as compared with 9 of the 37 patients in the placebo group ($p = 0.03$). The patients in the nicotine group had greater improvement in global clinical grade of colitis ($p < 0.001$) and the histological grade ($p = 0.03$).

Conclusions : The addition of transdermal nicotine to conventional therapy improves symptoms in patients with ulcerative colitis.

Comments

It has been known for quite some time that ulcerative colitis is commoner amongst non smokers and smoking somehow offers protection against development of ulcerative colitis. The potential effects of smoking on the gastrointestinal tract include alterations in colonic mucus and in cellular and humoral immunity and there is increased intestinal permeability. Nicotine may be a mediator of effects of smoking [1]. This report shows that nicotine patches as supplementary therapy to the patients with ulcerative colitis not only showed good clinical response but also led to histological improvement.

However, the study does not clearly define exact number of the patients who had achieved sigmoidoscopic and/or histological remission and endpoints could have been clearer. The result need to be confirmed with longer follow-up with special emphasis on nicotine withdrawal. It is possible that a few patients could have felt better due to physiological effects of nicotine [2]. Moreover, we still are not clear of mechanism of action of nicotine in this condition. Hence it may be too premature to advocate a habit forming drug for a chronic disease.

REFERENCES

1. Hanauer SB. Nicotine for colitis - The smoke has not cleared. *N Engl J Med* 1994; 330 : 856-7.
2. Shanahan F. Pathogenesis of ulcerative colitis. *Lancet* 1993; 342 : 407-11.

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