IgG and IgA antibody to *Saccharomyces cerevisiae* (measured as optical density at 410 nm) in patients with Crohn's disease (n=55) or ulcerative colitis (n=40) and in controls (n=30)

patients.⁵ More probably, Crohn's disease results from hypersensitivity to *S. cerevisiae* antigens, and this would be consistent with the responsiveness of Crohn's disease to steroid treatment and bowel rest. Another possibility is infection by an unknown agent that

cross reacts antigenically with *S. cerevisiae*. Further investigation of the yeast antigens and their potential cross reaction is required.

Strains of *S. cerevisiae* are used in baking and brewing and are found in a wide variety of foodstuffs. A controlled trial of a yeast free diet for patients with Crohn's disease may therefore be worth while. We intend to investigate patients with other diarrhoeal diseases, including coeliac disease, to establish the specificity of antibody to *S. cerevisiae* as a marker for Crohn's disease; our results indicate that it may be valuable in distinguishing Crohn's disease from ulcerative colitis.

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Rupture of tendon after cryotherapy for hand wart

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We describe a patient who developed necrosis of the central slip of the extensor tendon of her right little finger after cryotherapy for a viral wart overlying the proximal interphalangeal joint.

Case report

A 25 year old woman was referred for cryotherapy for a large wart over the proximal interphalangeal joint of her right little finger after treatment with topical salicylic acid had failed. Liquid nitrogen was applied to the wart on three occasions at intervals of six weeks with a liquid nitrogen spray with a C nozzle held 2 cm above the surface of the skin. The duration of freezing

on each occasion was 10 seconds from the formation of ice. Twenty four hours after the third application of liquid nitrogen she noticed blistering of the skin over the treated area, and subsequently swelling and flexion occurred at the proximal interphalangeal joint. An x ray film of the joint did not show infection, and the finger was treated with a dynamic splint. As the swelling subsided a boutonniere deformity of the finger was seen with hyperextension of the distal phalanx (figure), and it was obvious that the central slip of the extensor tendon had ruptured.

Surgical exploration showed a defect in the extensor expansion with sloughing of the central slip of the extensor tendon. The defect was corrected by a modified Littler procedure. The patient gradually regained partial function of the finger.

Comment

Blistering of the skin after cryotherapy is a common side effect,¹ but to our knowledge tendon necrosis has not been reported before. Shepherd has shown that connective tissue is not affected by standard freeze times.² Studies on the effects of cryosurgery on peripheral nerves have shown that even the delicate perineurium, which is largely made up of collagen, is unaffected by freezing.³ On the basis of this and other scientific evidence⁴ we did not expect tendon necrosis to occur. In view of this side effect and in the light of a recent report by Keefe and Dick,⁵ who suggested that cryotherapy should be delegated to nurses, we think that anyone treating lesions overlying tendons should exercise caution.

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Boutonniere deformity with hyperextension of distal phalanx resulting from cryotherapy for wart on proximal interphalangeal joint