Short report

Colonoscopy and bacteraemia

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SUMMARY A prospective study was performed on 35 patients undergoing colonoscopy. Aerobic and anaerobic blood cultures before, during and after the investigation failed to demonstrate bacteraemia in any instance.

Transient bacteraemia has been reported after a variety of procedures which produce minor trauma to mucosal surfaces that harbour large numbers of bacteria (Sullivan *et al.*, 1972; Berry *et al.*, 1973; McCloskey *et al.*, 1973; Berger *et al.*, 1974; Shull *et al.*, 1975). Le Frock *et al.* (1975) have described its occurrence after sigmoidoscopy (1973) and barium enema examination. A study was performed to determine the risk of bacteraemia with colonoscopy.

Methods

The survey was performed on 35 consecutive patients referred for colonoscopy. None had received antibiotics within seven days. Routine preparation for colonoscopy consisted of a fluid diet for two days, 20 ml castor oil the night before, and tap water enemas two and one hours before examination. A 19-gauge butterfly infusion set was inserted intravenously through skin sterilised with 70% alcohol and 2% iodine solution, and blood was withdrawn into Becton-Dickinson vacutainers containing supplemented peptone broth. Samples were obtained before colonoscopy, at 10 minute intervals during the examination, and 10, 20, 30, 60, and 120 minutes afterwards. One vacutainer was vented for aerobic culture and the other was closed for anaerobic culture. Subcultures were made into enriched thioglycolate at two, nine, and 16 days.

Results (Table)

Fifteen patients had colonic pathology and one, or

Table *Clinical diagnosis after completion of colonoscopy and review of biopsies taken*

Colonoscopic diagnosis	Number of patients	Patients biopsied
Ulcerative colitis	6	6
Diverticular disease	4	3
Polyps	3	3
Crohn's colitis	1	1
Carcinoma	1	1
Normal	20	8
Total	35	22

more, biopsies were taken from 22 patients. The average duration of colonoscopy was 34 minutes with a range of 10 to 90 minutes. Total colonoscopy was performed in 23 instances and examination as far as the splenic flexure in 12 patients. Of 550 blood cultures, only two grew microorganisms—propionibacterium acnes and a diphtheroid. These were assumed to be contaminants.

Discussion

This study supports the findings of Norfleet *et al.* (1976) that bacteraemia is not a complication of colonoscopy. Le Frock *et al.* (1975) found bacteraemia in 11% of persons having barium enemas. Pratt and Jackman (1945) described lesions varying from submucosal haemorrhages to tears up to 2 cm in extent in the anterior rectal mucosa after barium enema. A possible explanation of the lack of bacteraemia might be the thorough bowel cleansing before colonoscopy, although Nichols *et al.* (1972) found no change in colonic microflora after cleansing procedures of the colon before surgery.

Antibiotic prophylaxis, before colonoscopy, in patients on immunosuppressive drugs or with valvular heart disease would appear not to be warranted.

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