mising results [2]. Could the effectiveness of SDD be enhanced by this principle?

The purgation method, one of the classic eight therapeutic methods in traditional Chinese medicine, first stated in the third or second century BC, is to relieve constipation, clear stagnation of food or blood and expel internal heat and excessive fluid through purgations by using the laxative herb medicine, such as Rhubarb (*Rheum tanguticum*).

The herbs used for purgation, such as Rhubarb, administered by NG tube in decoction, can reduce body temperature by suppressing the production of PGE and cAMP [3, 4], relieve toxic symptoms, improve GI peristalsis, and relieve abdominal distension in critically ill patients with severe infection [2]. It has also been found that purgatives reduced the incidence of endotoxemia in acute infection patients [5]. Purgation can stimulate the digestive tract locally and promote intestinal movement. It has been found that electrical activity of colon is excited by rhubarb (*Rheum tanguticum*) in isolated intestine in rats [6]. The frequency and amplitude of spike potential increases, as does the contraction. This exciting effect of rhubarb on the colon can be blocked by atropine. Some purgatives stimulate the secretion of bile and contraction of the gallbladder. The rhein, the active substance of rhubarb, has also been found to have an activity against *Bacteroides fragilis*, a major anaerobic micro-organism in the intestinal flora of humans [7].

Based on the findings and observation that abdominal distension, GI bleeding, ileus and enterobacteriaceae septicemia are frequent in critically ill patients in China, a series of controlled clinical trials using systemic antibiotics and a purgation method have been carried out in infected critically ill patients. Results revealed that this combined therapy significantly decreased the in-hospital mortality rate [4, 5].

Could the purgation principle be useful prophylactically in critically ill patients?

Yours faithfully,

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Bradycardias after tracheal disconnection

Sir,

We were interested in the report by R. Robert and his colleagues [1] showing bradycardias after tracheal disconnection that were unrelated to hypoxia. We have seen three similar arrhythmias with different causes.

The first patient was a 28-year-old man admitted after blunt liver trauma. He developed acute renal failure, intra-abdominal sepsis and ARDS. During his recovery (40 days after admission) he had several episodes of sinus bradycardia and asystole after suctioning and even swallowing. This required transvenous ventricular pacing before discharge.

Patient two was a 32-year-old man who had suffered severe multiple trauma to his pelvis and long bones of his legs, that was complicated by deep pelvic sepsis. This needed surgical debridement of his wounds under general anaesthetic. After 6–10 hr he developed episodes of sinus bradycardia. This resolved spontaneously with no active treatment and was attributed to the release of myocardial toxins from the abscess cavities.

The last patient was a 56-year-old man who developed a sinus bradycardia and asystole after being sat out in a chair 3 weeks after liver transplantation. The operation had been needed for alcoholic hepatitis and the course after operation was complicated by encephalopathy and hepatorenal syndrome. The bradycardia responded to atropine. One day later he developed respiratory failure and sepsis for which he was resuscitated and his trachea was reintubated and ventilatory support restarted.

In all these patients the arrhythmia preceded or coincided with the development of sepsis. At the time all 3 were breathing spontaneously, either by mouth or through a tracheostomy, needing moderate oxygen supplementation ($\text{FiO}_2 < 0.35$). Two of the three were markedly jaundiced with abnormal liver enzymes. All had some degree of renal dysfunction, two patients were receiving continuous haemofiltration at the time. No patient was hyperkalemic. All of the patients are still alive.

Although Dr. Robert and his colleagues have shown one cause for bradycardias, others including sepsis and liver dysfunction [2] must also be considered.

Yours faithfully,

S. Greer, P. Haji-Michael and G.R. Park

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