report on the pellets' anecdotal success in treating diabetic infected wounds (3).

A 41-year-old male with type 1 diabetes referred to the diabetic foot clinic had radiological findings of septic arthritis and diffuse osteomyelitis (anatomic stage IV) of the right fourth metatarsal head and adjacent phalanx overlying a chronic neuropathic ulcer. He refused to undergo a ray excision of the infected bones despite the suggestion of our surgical colleagues. Local therapy with prefabricated tobramycin-impregnated CS pellets, which were inserted twice into a deep cavity beneath the small foot ulcer, was then added to supplement oral Ciprofloxacin and Clindamycin and later to Amoxicillin/clavulanic acid treatment due to drug-related diarrhea. Further radiographs of the right forefoot after 4 and 6 weeks of the above treatment revealed radiological improvement of osteomyelitis and signs of bone reconstruction in the affected bones (online appendix Fig. 1 [available at http://care.diabetesjournals.org]).

In a randomized study (4), high local antibiotic bioavailability from implantable beads in infected joint arthroplasties was found to be as effective as conventional parenteral antibiotic treatment. The nonadherent state of CS pellets versus bone substitutes, like polymethylmethacrylate, could be advantageous for antibiotic delivery in chronic osteomyelitis with antibiotic resistance (5). The potential role of local administration of antibiotics from CS pellets in healing and bone repair is reported in a case series of patients with osteomyelitis (6).

In the infected nonischemic diabetic foot, the possible synergistic effect of tobramycin-impregnated CS pellets as an additional treatment to systemic antibiotics should be further investigated in clinical trials.

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Additional information for this article can be found in an online appendix at http://care.diabetesjournals.org.

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Acute Renal Failure Following Oral Sodium Phosphate Bowel Preparation in Diabetes

Recently there is renewed interest in the association between type 2 diabetes and colorectal carcinoma (1). Some authorities have advocated more in-

Table 1—*Clinical presentation and biochemical findings of two patients with diabetes presenting with acute renal failure after sodium phosphate bowel preparation*

	Patient 1 (T.T.H.)	Patient 2 (U.T.)	Normal range
Age/sex	75/male	80/female	
Other medical history	Hypertension, microalbuminuria, paroxysmal atrial fibrillation	Hypertension, hyperlipidemia, diabetic retinopathy	
Baseline creatinine	80 (62–106 μmol/l)	79 (44–80 μmol/l)	
Diabetes medications	Gliclazide, metformin	Gliclazide, metformin	
Other medications	Perindopril, warfarin, sotalol, nifedipine	Aspirin, amitriptyline, famotidine	
Presenting complaint	Diarrhea, decreased consciousness	Hypoglycemia, diarrhea and vomiting	
Days after colonoscopy	4	3	
Sodium (mmol/l)	133	132	134–145
Potassium (mmol/l)	6.8	4.7	3.5–5.1
Urea (mmol/l)	21.4	16.8	3.4–8.9
Creatinine (μmol/l)	924 (62–106)	629 (44–80)	
Calcium (mmol/l)	2.51	2.16	2.15–2.55
Phosphate (mmol/l)	4.19	2.04	0.82–1.40
Lactate (mmol/l)	17.3	7.2	0.7–2.1
Dialysis required	CRRT for 5 days	No	
Last creatinine (μmol/l)	115	101	

CRRT, continuous renal replacement therapy.

tensive colonoscopy screening in patients with diabetes (2). We recently managed two diabetic patients who developed acute renal failure following elective colonoscopy. The clinical presentation and biochemical parameters of these two patients are summarized in Table 1.

Both of the patients described had normal renal function at baseline, yet presented with acute renal failure within a few days following bowel preparation and colonoscopy, thus strongly implicating the bowel preparation in the development of the acute renal failure. Both patients received oral sodium phosphate (OSP) solution for bowel cleansing. OSP promotes colon evacuation by drawing large amounts of water into the colon and has been shown to be more effective and better tolerated than polyethylene glycol (PEG) solution. However, recent studies suggest that some patients given OSP are at risk of renal failure due to acute phosphate nephropathy. In a series of 31 cases of renal impairment with renal biopsies showing deposits of tubular calcium phosphate, the risk was highest among patients with preexisting renal impairment, elderly patients, and patients with hypertension or concurrent use of ACE inhibitor or angiotensin receptor blocker (ARB). In that series, 21 patients presented with acute renal failure, of which 4 had diabetes, with age ranging between 44 and 66 years. In a few patients, acute renal failure was discovered within 3 days of colonoscopy, at which time hyperphosphatemia was documented (3).

The U.S. Food and Drug Administration has recently issued an alert advising against the use of OSP products in patients with kidney disease, impaired renal function or perfusion, dehydration, or uncorrected electrolyte abnormalities. OSP should be used with caution in patients taking diuretics, ACE inhibitors, ARBs, and nonsteroidal anti-inflammatory drugs (NSAIDs) (4). In the recently published consensus document on bowel preparation before colonoscopy (5), there was no specific advice given for patients with diabetes aside from the statement that patients with diabetes have significantly poorer preparations with PEG solution than those without diabetes. Patients with diabetes often have reduced renal perfusion despite normal serum creatinine. Incipient diabetic nephropathy is marked by the presence of microalbuminuria, a powerful predictor of subsequent diabetic nephropathy. Our experience suggests that patients with diabetes and normal renal function tests may be at increased risk of acute phosphate nephropathy after taking OSP. Clinicians should consider avoiding the use of OSP in patients with diabetes undergoing colonoscopy. Use of an osmotically balanced cleansing agent that does not cause significant shift of fluid and electrolytes, such as PEG, is likely to be a safer alternative (6). For patients receiving drugs that alter electrolyte balance, such as diuretics, ACE inhibitors, or ARBs, it may be prudent to withhold these drugs temporarily before OSP. Close monitoring of hydration status, glycemic control, and renal function is mandatory during the preparation and after colonoscopy in patients with diabetes.

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COMMENTS AND RESPONSES

Is Self-Monitoring of Blood Glucose Appropriate for All Type 2 Diabetic Patients? The Fremantle Diabetes Study

Response to Davis et al.

The analysis of self-monitoring of blood glucose (SMBG) in the community-based observational Fremantle Diabetes Study (1) becomes even more interesting when combined with three other studies of SMBG in type 2 diabetes: the Italian Qualità ed Esito in Diabetologia (QuED) Project (2), analyses of the Kaiser Permanente Northern California Medical Care Program (3), and the German ROSSO Study (4).

All four studies concur that patients using SMBG are younger at diagnosis by 3–4 years (1,2,4). Patients present with higher A1C (mean +0.9%) (4). Even during continuous use of SMBG, mean A1C levels are slightly higher (difference 0.2–0.3%) (2–4) or slightly lower (−0.3%) (1) than in patients not using SMBG (mean of all four studies +0.2–0.3%).

Where, then, is the assumed beneficial impact of SMBG on blood glucose control? Though one cannot see it in cross-sectional analyses, it is evident in longitudinal studies. In the ROSSO Study, mean A1C is different at diagnosis between later SMBG users and permanent nonusers by 0.9%. In