Acute Renal Failure following Colorectal Surgery

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Dear Sir,

We would like to bring to the attention of the nephro-logist our recent observations [1] on the unexpectedly high incidence of acute renal failure in otherwise uncomplicated patients undergoing planned colorectal surgery for cancer.

Patients were selected provided pre-existing nephropathies were excluded. No potentially nephrotoxic drugs were administered preoperatively, and any patient requiring such treatment was excluded from the study. Twenty-four eligible patients (13 males, 11 females; age range 41–83 years, mean 62.6) were investigated. Operations included: left colectomies, 10 cases; anterior resections, 7; abdominoperineal excisions, 7.

As a whole group, we noted a significant increase in the mean serum creatinine concentration at 24 h after surgery compared to the preoperative value (0.89 ± 0.22 vs. 1.13 ± 0.9 mg/dl, $p < 0.01$). Four out of the 24 patients studied (16.6%) developed acute renal failure, defined as an increase in serum creatinine of at least 50% above the baseline value and exceeding 1.4 mg/dl [2], within 48 h after surgery. Renal insufficiency occurred in nonoliguric form in all, with peak serum creatinine ranging from 1.5 to 2.7 mg/dl. Urinary indices [3] were compatible with prerenal azotemia in 1 case and with acute tubular necrosis in the remaining 3. Renal function tests normalized spontaneously within 1–10 days after diagnosis was made. These patients did not differ from those with stable renal function with regard to age, general conditions, initial serum levels of creatinine and surgical procedure (anesthesia included). In none of them hemodynamic problems or hemorrhages occurred at any time either intraoperatively or postoperatively; as said above, nephrotoxic drugs were avoided.

In brief, we were unable to disclose the mechanism(s) leading to renal impairment in such patients. Yet, from a practical standpoint, we could conclude that patients undergoing colorectal surgery are at significant risk of developing acute renal failure in the postoperative period, even in the absence of major complications. Therefore, they should be monitored carefully throughout to detect early signs or renal insufficiency.

References

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