Cardiac Surgical Patient

board during surgery may be hazardous in that the drug may effectively prevent the patient from responding to vasopressors should vasoconstriction be necessary perioperatively.

Clearly a compromise course is indicated. It is advisable to withdraw the drug gradually a week (some say two weeks) prior to surgery. This may be impossible in certain patients, and it may be necessary to accept a degree of beta blockade during surgery, but the drug should be tapered to minimal levels preoperatively.

If emergency surgery must be performed on the cardiac patient who regularly takes propranolol, the hypotension he may experience must be managed in light of the fact that many of the therapeutic agents which would normally be effective simply will not work.

Electrolyte and Fluid Balance

The primary physician should be aware of electrolyte imbalances in the presurgical cardiac patient. A low serum potassium or high sodium, for example, should be corrected with appropriate fluid therapy and judicious diuresis prior to surgery.

Fluid balance is another key consideration. Hypovolemia may result in depletion of metabolic reserves and electrolyte imbalances. The "dried-out" patient may be in relative good health preoperatively, but the stress of surgery and fluid loss may make him hypovolemic very rapidly. This sets the stage for arrhythmias and an operative catastrophe. It is not good clinical practice to overly "dry out" your cardiac patients prior to elective surgery. In fact, many patients do better in the OR when they are a little on the "wet" side.

However, hypervolemia caused by excess fluid replacement with crystalloids or colloids is also to be avoided, especially in the postoperative stage. Similarly, anemia should be corrected.

Assessing Respiratory Function

Baseline pulmonary function values must be ascertained so that any obstructive or restrictive respiratory defect can be identified. Measurement of vital capacity and maximum voluntary ventilation will suffice for initial screening.

Any patient with demonstrated respiratory problems should be prepared for surgery with chest physical therapy and/or respiratory therapy, specifically intermittent positive pressure breathing. Chest physical therapy entails teaching diaphragmatic breathing technics and other ways to optimize pulmonary function, i.e., effective coughing. In addition to the pulmonary function tests previously mentioned, baseline arterial blood gas values should also be obtained in these individuals.

Smoking Absolutely Contraindicated

Many physicians pay lip service to the idea that any patient, particularly a cardiac undergoing elective surgery should abstain from smoking for at least three weeks preoperatively. I feel very strongly that this should be an absolute requirement. If a patient insists on smoking prior to elective surgery, the procedure should be postponed.

Nutritional Status

The importance of nutritional status has recently been stressed by countless clinicians. It is now being recognized that protein calorie malnutrition (PCM) may be responsible for more postop morbidity/mortality than has been previously identified. It may