

placed, ketamine was administered intravenously in approximately 0.5-mg/kg doses just before each of the three to four 5-min radiation treatments. At the end of the procedure, the patient was transported to the postanesthesia recovery room and then usually was discharged to the ward in excellent condition in less than 30 to 40 min.

Low-dose ketamine for pediatric radiotherapy provides excellent sedation and brief induction and recovery times, facilitates repeated catheterization and dosing, and probably preserves protective airway reflexes.<sup>3</sup> Also, pulse oximetry, in addition to blood pressure and ECG monitoring, is extremely valuable as a global monitor of cardiopulmonary function, particularly for patients isolated from anesthesia personnel.

Anesthesiology  
64:407, 1986

### Isorhythmic Dissociation

*To the Editor:*—Sosis *et al.* refer again to the type of "junctional" rhythm in which upright P waves traverse the QRS complex.<sup>1,2</sup> To classify this as isorhythmic dissociation<sup>3</sup> is to give formal identity and recognition to one of the more common physiopharmacologic aberrations during inhalation anesthesia. Perhaps the associated reductions in arterial pressure in an aging population of surgical patients account for the greater consideration now being given to a phenomenon so long observed and little regarded. Meanwhile, an interest in the mechanism of this and other so-called "junctional" rhythms may be stimulated by clinical observations. We wish, therefore, to add calcium chloride (up to 1 g intravenously) to the growing list<sup>4</sup> of sometimes-successful "treatments." In one patient, the reversion was demonstrated three times at successive intervals (without increases in heart rate)—which, obviously, implies a brief duration for whatever effect calcium induces. Such changes in cardiac conduction during anesthesia do not seem comparable in significance, reversibility, and probable mechanism to the grosser abnormalities of organic disease.

We have also recently observed an instance in which the P wave was upright on moving into the QRS complex but was inverted as it emerged to the right. Was this a case of "isorhythmic-nodal" conversion, or is a less-neat classification required, based on sophisticated electrophysiologic studies?

DOUGLAS J. DAVIES, M.D.  
*Resident in Anesthesiology and Special Fellow*  
*University of Florida College of Medicine*  
*Gainesville, Florida 32610-0254*

#### REFERENCES

1. Lo JN, Buckley JJ, Kim TH, Lopez R: Anesthesia for high-dose total body irradiation in children. *ANESTHESIOLOGY* 61:101-103, 1984
2. Amberg HL, Gordon G: Low-dose intramuscular ketamine for pediatric radiotherapy: A case report. *Anesth Analg* 55:92-94, 1976
3. Glaser R, Fisher DM: Respiratory monitoring for children undergoing radiation therapy (letter). *ANESTHESIOLOGY* 63:123-124, 1985

(Accepted for publication September 26, 1985.)

ALEXANDRU GOTTLIEB, M.D.  
*Staff, Anesthesiology*

PATRICIA SATARIANO, C.R.N.A.  
*Certified Registered Nurse Anesthetist*

DHUN SETHNA, M.D.  
*Staff, Cardio-Thoracic Anesthesiology*

RONALD A. MILLAR, M.D.  
*Staff, Anesthesiology*  
*Cleveland Clinic Foundation*  
*9500 Euclid Avenue*  
*Cleveland, Ohio 44106*

#### REFERENCES

1. Sosis M, Cooper PS, Herr G: The diagnosis of "junctional rhythms" with halogenated anesthetics. *ANESTHESIOLOGY* 63:233-234, 1985
2. Sethna DH, DeBoer GE, Millar RA: Observations on "junctional rhythms" during anaesthesia. *Br J Anaesth* 56:924-925, 1984
3. Schubart AF, Marriott HJL, Gorten RJ: Isorhythmic dissociation: Atrio-ventricular dissociation with synchronization. *Am J Med* 24:209, 1958
4. Breslow MJ, Evers AS, Lebowitz P: Successful treatment of accelerated junctional rhythm with propranolol: Possible role of sympathetic stimulation in the genesis of this rhythm disturbance. *ANESTHESIOLOGY* 62:180-182, 1985

(Accepted for publication October 10, 1985.)