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In Reply:—The case we reported described the use of transesophageal atrial pacing (TAP) to drive an internal dual chamber pacemaker. This allowed normalization of a chaotic heart rate and efficient synchronization of intraaortic balloon pumping (IABP). The electrical signal generated by the TAP was sensed by the atrial wire of the internal pacemaker, which subsequently activated ventricular pacing. The electrocardiographic signal obtained consisted, then, in an atrial spike, generated by the TAP, followed by a ventricular spike, generated by the internal pacemaker. Finally, the IABP (Datascope System 90, Datascope, Paramus, NJ) was triggered in a dual-chamber pacing mode. The situation described by Roth is quite different, because the TAP has been used solely to directly trigger the IABP. Although an interesting topic, atrial pacing triggering of IABP was not the purpose of our communication. In addition, it has to be noted that, contrary to models 95 and 97, the IABP Datascope System 90 is not designed to permit isolated atrial pacing triggering. It is not surprising, therefore, that the TAP activity was not recognized by the IABP or was recognized as ventricular activity with subsequent inadequate timing. Why the Datascope System 95 did not recognize the TAP spike while in atrial pacing triggering mode in the second case reported by Roth is unclear, and does not meet our personal experience with this material.

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In Reply:—Thank you for giving Datascope the opportunity to respond to this exchange of correspondence regarding transesophageal atrial pacing as a trigger for intraaortic balloon pumps (IABP).

The result of proper triggering and timing is the synchronization of intraaortic balloon (IAB) inflation and deflation action with left ventricular contraction. When available, the R-wave is the preferred method of IABP triggering. However, Datascope pumps provide the ability to alternatively trigger from ventricular pacing pulses as precursors to ventricular stimulation and contraction.

No Datascope IABP has ever been designed to trigger off the atrial pacing pulse, due to vagaries of A-V pacing intervals and the potential dissociation of atrioventricular activity. Our newest pump consoles (System 95 and 97) provide a "Pacer A" mode. This mode is only invoked to *reject* large atrial pacing artifact that may compete with depressed QRS complexes during R-wave triggering (*i.e.*, after cardioplegia). Triggering on an atrial pacing stimulus will result in both early inflation and early deflation of the IAB. The longer the atrioventricular pacing delay, the earlier the timing will occur.

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Is Pentobarbital Analgesic in the Rat Formalin Test?

To the Editor:—In an interesting article, Gilron and Coderre[1] demonstrated lack of analgesic effect of systematically administered pentobarbital in the rat formalin test, contradictory to our results that showed that pentobarbital produces preemptive analgesia *via* activation of $GABA_A$ receptors.[2] To make this issue even more complex, another group of investigators reported hyperalgesic effects of pentobarbital in this test.[3,4] Although the mechanism for this discrepancy is unclear, we raise a few issues missed by Gilron and Coderre.

First, whether pentobarbital produces analgesia appears critically dependent on the dose administered. In our study, the preemptive analgesic state was created by doses of pentobarbital sufficient to produce loss of righting reflex (16–20 $mg \cdot kg^{-1}$).[2] However, the smallest dose (10 $mg \cdot kg^{-1}$), which did not produce loss of righting reflex in any animal, was slightly hyperalgesic,[2] in agreement with Abbott *et al.*[3] showing hyperalgesia by a subhypnotic dose (10 $mg \cdot kg^{-1}$). In the study by Gilron and Coderre, where pentobarbital failed to show analgesia, even rats receiving the largest dose (20 $mg \cdot kg^{-1}$) did not lose righting reflex, indicating that this dose was

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