HERNIATION OF THE HEART: REPORT OF CASE

The following report of a case may be of interest to anesthesiologists since they may be the first to recognize the existence of herniation of the heart and ask that steps for its correction be initiated.

A 41 year old man was subjected to right pneumonectomy for carcinoma. Removal of some of the pericardium was necessary to complete the dissection. At the end of the surgical procedure, when almost all layers had been closed, it was noticed that although there was no particular change in the patient's breathing, he had suddenly become cyanotic and the blood pressure and pulse were absent. A quick check of the anesthesia apparatus disclosed that a flow of 100 per cent oxygen was being maintained and no technical errors were apparent. It was suggested to the surgeon that the anesthetic was not the cause of the findings and that possibly the heart had herniated through the pericardial window or that cardiac arrest had taken place. The chest was immediately reopened and it was found that the heart had extruded through the pericardial opening and was beating futilely in an angulated position outside of the pericardium. When it was pushed back, the blood pressure and pulse quickly returned to normal, and the patient's color was restored to normal. It was decided to open the pericardium widely. This was done and the chest wound was again closed. Postoperative roentgenograms demonstrated a considerable shift of the heart toward the right but other than this, convalescence was normal. Cardiac irregularities existed on some occasions but were controlled by medical means.

This complication has not been reported frequently. In 1947, Beck [1] mentioned such a case and speculated that a cure might have been obtained by replacing the heart in the pericardium. In 1948 Bettman and Tannenbaum [2] reported a similar case with survival.

It is possible that herniation of the heart may occur more frequently but be unrecognized. It should be considered as a possibility when at the close of a surgical procedure involving the pericardium, the patient suddenly becomes cyanotic, blood pressure and pulse are not obtainable but respirations continue. Death from herniation of the heart could occur suddenly even in the first few postoperative days in any case in which the pericardium has been partially removed.

REFERENCES

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2. Bettman, R. B., and Tannenbaum, W. J.: Herniation of Heart Through Pericardial Incision, Ann. Surg. **128**: 1012–1014 (Nov.) 1948.

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STOCK SOLUTION OF PENTOTHAL SODIUM
AN ECONOMICAL AND CONVENIENT METHOD

The use of stock solutions of pentothal sodium in the operating room is quite a common procedure. The greater the volume of anesthetic work in any one operating suite or hospital, the greater is the advantage of this system.

In our hospital we have used various methods, finally devising one which we find the most convenient to date. The intravenous solutions used in this hospital are those of the Baxter Laboratories, and one advantage of our method is that disposable parts of their equipment are used in the set-up.* It is herewith described:

A 250 cc. vacoliter of normal saline solution is the container. There is usually an extra 30 cc. in this vacoliter which may be discarded to bring the quantity to an even 250 cc. Next, 5 gm. of pentothal sodium is dissolved in part of this solution, thoroughly mixed in a medicine glass, and re-inserted into the bottle. Two nipples are used, one from either end of the

* Since the preparation of this manuscript, a unit for stock pentothal sodium has been made from the Abbott disposable intravenous apparatus, which is very similar to that of the Baxter unit.