children, especially babies, the patients are much affected by loss of blood and if this bloodletting is performed it seems to me that a saline infusion should always be used to take its place. I am of the opinion that it would be very important to have a standard whereby we could know just how much blood to let in certain cases according to the age and condition of the child. I should say that it would be indicated only if the child was robust and strong and contra-indicated in cases of anemia and malnutrition.

DR. ABRAHAM JACOBI, New York: I can only repeat what I said forty years ago (*New York Med. Record* of 1870), and forty years ago I spoke on an experience of seventeen years in practice in New York. I have not modified my opinion expressed at that time. We must not forget that we cannot say beforehand uniformly just how much blood should be taken. The patients and the cases are not alike. We should remember that the amount of blood is present in a different percentage in the adult. The baby has about 5 per cent. of its weight in blood (1 part blood in 19½ body weight) while the adult has nearly 8 per cent. (1 part blood in 13 body weight). If a child weighs 40 pounds, about 2 pounds only would be the amount of blood in that child and in that proportion only the blood should be taken. No large percentage of the amount circulating in the body should be taken away.

DR. HEINRICH STERN, New York: Dr. Jacobi has again hit the nail on its head. The amount of blood to be abstracted in the young should always be in proportion to the amount contained in the organism, and we know that the blood ratio in children is decidedly smaller than in the adult. It should never exceed, in the general run of cases 50 to 100 c.c.

AN ORIGINAL METHOD FOR PREVENTION OF PERFORATION IN SUBMUCOUS RESECTION

RICHARD M. NELSON, M.D.

Eye, Ear, Nose and Throat Clinic, Colon Hospital
CRISTOBAL, CANAL ZONE

In every adverse criticism of the operation of submucous resection for the correction of deviation or deflection of the nasal septum which I have read or have heard, the greatest stress has always been laid on the danger of perforation resulting therefrom. Indeed, such great emphasis is laid on this danger, that in every such operation which I have performed the dread of this occurrence has ever been foremost in my mind.

Posterior nares

Anterior nares

Diagrammatic horizontal section through a septum deflected to the right. A, initial incision through mucous membrane down to cartilage. (Usual method is to cut through cartilage also here.) B, incision through cartilage only, a quarter or an eighth of an inch posterior to incision in mucous membrane. Both incisions, of course, are made from the right.

Believing that it ought to be possible to devise some modification of the usual steps of this operation rendering the danger of perforation less than was to be apprehended with existing methods, I set to work to put into practical use an idea that had often suggested itself to me in operating after the usual method. I noted on several occasions that in dissecting or separating the mucous membrane from the cartilage on both sides, although I several times made "buttonholes" in the mucous membranes of both sides in a single operation, I never had a perforation result.

In looking for an explanation for this I noted that in no case had any two "buttonholes" been

made opposite one another. The idea naturally suggested itself to apply this principle in making the initial incisions. In the next operation, after making the first incision through the mucous membrane, etc., down to the cartilage, and separating the membrane from it as far back as necessary, instead of cutting through the cartilage at the same line of incision followed in going through the membrane, the cartilage was carefully cut through from one-eighth to one-fourth inch posterior to the incision through the mucous membrane. The rest of the operation was done after the usual methods. At the close of the operation, instead of the cartilage being cut off flush with the incision through the mucous membrane, there was left a projecting ledge of cartilage extending from one-eighth to one-quarter of an inch posteriorly from the line of this incision. In bringing the raw surfaces of mucous membrane together this projecting ledge of cartilage was found not only to be completely covered over, but also to appear to aid very materially in holding the edges of the wound in close apposition, acting somewhat as a natural splint.

I have tried this method in a series of cases with uniform results, without a perforation, and I would state that in my opinion with ordinary care and reasonable exercise of even moderate skill it is practically impossible to produce a perforation in using this method of making the primary incisions.

A PRACTICAL MECHANICAL METHOD OF END-TO-END ANASTOMOSIS OF BLOOD-VESSELS

USING ABSORBABLE MAGNESIUM RINGS

V. D. LESPINASSE, M.D., G. CARL FISHER, M.D., AND
J. EISENSTAEDT, M.D., D.D.S.

CHICAGO

This work was done in the laboratory of the department of Experimental Surgery of Northwestern University Medical School, with the cooperation and assistance of Prof. Robert Zeit and Drs. Wolfer, Violet Deason and Solomon. It is accomplished by the use of rings of metallic magnesium.

PHYSICAL PROPERTIES AND METALLURGY OF MAGNESIUM

Magnesium is a hard, silver-white metal, having a specific gravity of 1.75 and possessing a melting point of 800 degrees. As it tarnishes in the air the bright luster is soon lost, but the change is unimportant at the ordinary temperature. At a high temperature combustion follows, with production of the well-known brilliant white light. At ordinary room temperature the action increases and hydrogen gas is slowly liberated, the hydroxide of magnesium being formed at the same time.

The action of water on magnesium is hastened by the presence of salts, such as sodium chlorid, from which it follows that in the juices of the body the solution or disappearance of the metal would be more rapid than in water alone. However, even with salts present, the action is relatively slow and the hydrogen set free is scarcely appreciable. Under proper conditions 24 milligrams of magnesium will liberate 2 milligrams of hydrogen, or 22.4 c.c. at the normal temperature of zero centigrade. This volume would be somewhat greater at body temperature; approximately, 1 mg. of the metal will liberate 1 cubic centimeter of the gas.