may be estimated, while with one or two, such as the Erlanger instrument, both systolic and diastolic pressures can be determined. The principle in all is much the same. The improvements have been the substitution of a leather or canvas pneumatic cuff for compressing the vessel, and the use of some inexpensive, convenient form of manometer by which the pressure can be read off in millimeters of mercury.

Of the various instruments invented, that of Riva-Rocci has proven the most practically useful for general hospital and outside work, and is the one which is at present used in the Johns Hopkins Hospital. It was first described by Riva-Rocci in 1896, and since that time has undergone various modifications, the most important perhaps being the substitution of a wide for a narrow pneumatic cuff as in the original instrument. It has been experimentally tested by a number of investigators and found to be sufficiently accurate for general purposes. The principle on which it is constructed is the same as that of the Von Basch instrument—that is, it measures the amount of pressure necessary to obliterate the pulse peripheral to a point of constriction.

The instrument which is used at present in the hospital is shown in Fig. 2. It consists of a broad leather cuff (*A*) on the inner surface of which is a flat rubber bag connected with a rubber tube with a mercury manometer (*B*) and through it with a double rubber bulb (*C*). Compression of the air through this system causes the mercury in the chamber of the manometer to rise in the tube (*D*) which is provided with a millimeter scale so that the height of the column can be read off in millimeters of mercury. The determination of the systolic or maximum blood pressure with this instrument is very simple: it consists in determining the amount of pressure necessary to completely obliterate the artery—that is, to prevent a pulse from passing through the region under compression. The cuff is placed around the arm between the elbow and shoulder, and snugly but not too tightly buckled in place; then with the fingers on the radial artery at the wrist, so that the pulse can be most easily felt, the bulb (*C*) is "pumped" until the pulse at the wrist disappears. During the act of pumping, air is forced into the rubber bag under the leather cuff, causing compression of the brachial artery until it is obliterated; at the same time the pressure causes the mercury in the tube (*D*) to rise. Since the pressure throughout the system is everywhere equal, the height of the column of mercury in the tube will measure in millimeters the pressure necessary to obliterate the artery. The moment the pulse at the wrist disappears indicates the maximum or systolic pressure in the brachial artery. As the pressure is lowered again by allowing the escape of air, the pulse at the wrist reappears. The first, faintest, palpable return of the pulse at the wrist is used to indicate the blood pressure, and is measured by the height of the mercury column at which this occurs. Thus the blood pressure as obtained in practice is slightly lower than the actual blood pressure, the error depending upon the delicacy of touch and the practice of the individual taking it. The error should not be great, and, generally speaking, two individuals taking the same blood pressure should be able to read values within five millimeters of each other. The average blood pressure in young adults varies between 110 and 120 millimeters of mercury; in older adults is found to be between 120 and 140. In children it is lower, and with increasing age it generally rises. Prolonged rest in bed may cause it to fall to 85 or 90 even in adults, while, under pathological conditions, such as nephritis, it may rise to 220 or even 300. The absolute value of the systolic blood pressure is often of not so great importance as the relative change in the blood pressure; especially is this true in the acute medical and surgical conditions in which rapid rises or falls in the blood pressure may be expected.

It is not the purpose of this short note to enter into a discussion of the various medical and surgical conditions in which the estimation of the blood pressure is of value. As a means of clinical diagnosis; in following the results of therapeutic treatment, and in the field of surgery, its usefulness has steadily increased. Because of this increasing use it has become necessary that every nurse should be able to take accurate blood pressure observations in order that she may follow her cases intelligently. Especially in certain surgical conditions, such as states of increased intracranial pressure, it is of the greatest importance to follow the blood pressure, for it furnishes one of the most reliable means the nurse has of knowing the condition of her patient.

League News.

SHADWELL NURSES' LEAGUE.

The annual re-union of the Shadwell Nurses' League—the League of the Nurses of the East London Hospital for Children—was recently held at the hospital. We are asked to state that any former nurses or Sisters wishing to join the League are requested to communicate with Miss M. E. Knight (Hon. Sec.), Raphyus, Horsham, Sussex.

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