6. The periodontal membrane contains an abnormal increase in the number of epithelial rests. These are usually proliferative and larger than normal. In advanced cases some of them are found to form into small cysts or to become calcified. The blood supply is below normal.

7. The alveolar bone shows an increased number and crowded arrangement of cementing lines. Bone apposition is found to be continuous throughout the entire post-operative life.

The actual conditions in a given case are progressive and thus depend on the time elapsing between the operation and the death of the animal.

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A New Method for Determining Intravenous Pressure.*

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Intravenous pressure may be estimated clinically either by direct or indirect methods. Direct methods, while more accurate, have certain disadvantages—impossibility of frequent determinations in the same patient, the necessary prerequisite of strict asepsis, the possibility of clot formation in the needle, the difficulty sometimes encountered in puncturing a vein in obese persons, and occasionally apprehension of patients which results in an elevated venous pressure.

The indirect or bloodless methods are free from most of these objections but the prevailing procedures have other disadvantages. The most serious objections are that the end-point is not sharp and correct estimations are therefore difficult, that the impossibility of applying such methods to obese persons in whom the veins are not visible above the surface of the skin, and that the end-point must be determined quickly.

The method we have developed is based on the principle that the superficial veins on the dorsum of the hand can be visualized easily in a darkened room by placing a small light, such as an ordinary pocket flashlight, against the palmar surface, preferably in the inter-

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osseous spaces. By this transillumination the superficial veins appear as black bands which can be obliterated by moderate pressure, thus distinguishing them from shadows cast by ligaments or bone. The mouth of a small glass funnel is covered by thin rubber dam held securely in place by thread tied tightly in a previously prepared groove near the rim. A small hole is then cut in the center of the rubber dam through which the vein to be examined is visualized. Such a vein is previously selected in a darkened room in the manner indicated and its location marked. The surface of the rubber dam is then covered with rubber cement and the funnel is placed on the dorsum of the hand so that the previously selected vein is seen through the aperture in the rubber. It is held in place by moderate pressure until the rubber is adherent to the skin. This makes an air-tight seal. The tip of the funnel is then connected by rubber tubing to a suitable water manometer which is so graduated that pressure may be read in millimeters of water. The room is again darkened or a black cloth placed over the head of the observer, and the light is placed against the palmar surface of the hand in order to visualize the dorsal vein within the aperture of the rubber dam. The air pressure is then slowly raised in the instrument by a suitable rubber bulb—with the leak valve shut—until the vein under examination becomes obliterated as a result of the external compression. It is important to distinguish 2 stages—first, the obliteration of the vein, and second, further blanching of the skin. We have selected the former as the end-point at which the pressure is read off in the manometer in millimeters of water. Two observers were used—one to read the end-point, the other the manometer, and several readings were taken on each patient. A series of 12 patients were examined

TABLE I.

Name	Diagnosis	Direct Reading (H_2O)	Indirect Reading (H_2O)
H.S.	Rheumatic, mitral stenosis and insufficiency. Moderate decompensation	135	135
I. R.	Normal	55-60	50
B.P.	Non-cardiac	70	75-80
A.C.	Non-cardiac	65	65
K.	Hypertensive heart disease. Compensated	45	40-45
S.P.	Non-cardiac	65	60-65
C.M.	Non-cardiac	60	70-75
W.L.	Non-cardiac	90	105
J. L.	Non-cardiac	60	60
A.S.	Hypertensive heart disease. Moderate decompensation	110	115
G.D.	Non-cardiac	85	85-90
R.G.	Hypertensive heart disease. Obesity. Slight decompensation	100	90

by this procedure and the results compared with those obtained by the direct method.[1] These included patients with and without cardiac disease. An obese patient, whose veins were not visible above the surface of the skin, is included in this series. The table shows that a high degree of accuracy is possible when the results of our indirect method are compared with those obtained by the direct method.

We are presenting this preliminary report for the purpose of describing a new principle in the estimation of venous pressure. We believe that further experimentation will lead to improvements in the instrument and simplification of technic so that the method may be adopted for general clinical use. The advantages over other indirect methods are its greater accuracy, the simplicity of the apparatus, the absence of haste in reading the end-point, and the possibility of its use in obese and other patients where other indirect or direct procedures may fail.

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A Note of the Corneal Anesthesia Produced by Pilocarpine Administration.

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(Introduced by C. I. Reed.)

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The mydriasis which the administration of pilocarpine causes in the rat (Waddell,[1] Koppanyi[2]) is one of the numerous paradoxical responses elicited by this drug. During the course of an investigation on the nature of iris sphincter tone in this animal, it was noticed that the topical or subcutaneous administration of pilocarpine resulted in corneal anesthesia. Inasmuch as it has been shown that substances capable of acting as surface anesthetics would cause the pupil of the rat to dilate (Barnard[3]) it was thought, at first, that we held the key to the explanation of the pilocarpine mydriasis. Certain facts, however, indicate that pilocarpine does not owe its pupillo-dilator properties to the corneal anesthesia following its ad-

[1] Katz, L. N., Hamburger, W. W., and Rubinfeld, S. H. Observations on Oxygen Therapy. II. Measurements of Respiration and Circulation. In press.

[1] Waddell, J. A., *J. Pharm. Exp. Therap.*, 1926, **27**, 247.

[2] Koppanyi, T., and Sun, K. H., *Am. J. Physiol.*, 1926, **78**, 358.

[3] Barnard, R. D., *Am. J. Physiol.*, 1928, **74**, 407.