

due to its deformability, and (c) low damping frequency of the entire hydraulic system ranging from 12 to 40 cycles per second. The volume change in the Clark Capsule is slightly larger than in the Hamilton type of capsule, for a given pressure alteration. This might affect slightly the form of the pressure tracing. In so far as can be determined by comparison with the Hamilton, however, the Clark Pressure Capsule appears to be adequate for the purpose of measuring systolic, diastolic and mean blood pressures (Fig. 1).

The advantages of the electrical recording device are: (a) the indefinite use of the capsule membrane, (b) the constancy of the linear calibrations, (c) the ease of rapid adjustment of the amplification in order to meet any pressure range, as required by displacement of the catheter from right ventricle to the right auricle, etc., (d) the absence of lead tubing, (e) the more rapid recordings and (f) better control of the base lines. The

disadvantages are: (a) the slightly larger volume change required in the Clark Pressure Capsule per unit of pressure change, as indicated above, (b) the high cost of the electrical amplification equipment as used in this study. The apparatus as described here for amplification has a much wider range than is necessary for blood pressure recordings. By further modification of this type apparatus, to meet the special needs of blood pressure recording, it should be possible to overcome these disadvantages.

Summary. 1. The Clark Capsule, an electrical pressure pickup device, has been found satisfactory for recording blood pressures from the right heart, pulmonary artery, systemic arteries, pleural and mask pressures in man, when used with a suitable amplification and recording device.

2. The tracings recorded with this apparatus compare closely with those obtained simultaneously with a Hamilton manometer system.

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Evidence that Virus of Herpes Simplex Does Not Cause Vincent's Angina of the Tonsil.*

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The etiological role of the virus of Herpes Simplex in acute infectious gingivostomatitis has been established.¹ Not infrequently the Plaut-Vincent spirochete and the fusiform bacilli are also present, perhaps as secondary

invaders, and prior to proof that the virus of Herpes Simplex was responsible, the spirochete-fusiform bacilli were regarded by some as causal. Thus, the disease was often called Vincent's gingivostomatitis.

It seemed worthwhile to investigate whether or not the virus of Herpes Simplex had any underlying causal role in Vincent's tonsillar angina. Each patient studied had a typical unilateral, craggy, yellowish ulcerated tonsil with membrane and foul odor. There was local adenopathy and low, if any, fever. Many Vincent's spirochetes and fusiform bacilli were seen on smear; no β -hemolytic streptococci or *C. diphtheriae* were cultured and no evidence of syphilis or infectious mononucleosis demonstrated.

Twelve young British soldiers (18 to 35 years of age) had the above typical picture.

* Work done while serving with the American Red Cross Field Hospital Unit, Salisbury, England, 1941-1942.

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1 a. Dodd, Katherine, Buddingh, John, and Johnston, Leland, *Am. J. Dis. Child.*, 1939, **58**, 907; b. Burnet, F. M., and Williams, S. W., *M. J. Australia*, 1939, **1**, 637; c. Scott, T. F. McNair, and Steigman, Alex J., *J. A. M. A.*, 1941, **117**, 999; d. Black, W. C., *J. Pediat.*, 1942, **20**, 145.

Swabs and membrane of the tonsillar ulcer of each patient, together with his saliva, were rubbed onto the scarified cornea of a rabbit. None of the 12 rabbits developed the acute keratoconjunctivitis characteristic of an infection with the virus of Herpes Simplex,¹ or survived a challenge dose of this virus when given intracerebrally after an interval of about 3 weeks. Neutralization tests done with early and convalescent sera of these patients against a standard (HF) strain of herpes showed that those patients with absence of antibodies during the disease did not develop them in convalescence, while those with neutralizing antibodies in the acute serum did not show a rise of titer in the convalescent serum.

Technics. Those used for virus and for antibody studies were identical with standard methods as used by the authors in a previous study.¹

Discussion. It has been shown that the common form of acute infectious gingivostomatitis as seen most frequently in children and occasionally in adults is due to a primary infection with the virus of Herpes Simplex. Since the etiology of this disease was in the past frequently ascribed to Vincent's organ-

isms, although it is now known that it is caused by the virus of Herpes Simplex, a study was undertaken to determine whether the so-called Vincent's angina of the tonsil was also caused by this virus with the spirochete-fusiform combination acting as secondary invaders. In the 12 patients with Vincent's angina of the tonsil here studied, neither was the virus demonstrated in the membrane or saliva, nor did neutralizing antibodies against Herpes Simplex virus appear during convalescence. These facts, together with the striking effect of penicillin² in this disease, would negate any etiologic role of Herpes Simplex virus and is suggestive of a primary etiological role of the spirochetes themselves.

Summary. A study of 12 typical cases of Vincent's tonsillar angina showed that none of the cases were caused by an underlying infection with the virus of Herpes Simplex.

² a. Denny, E. R., Stallenberger, P. H., and Pyle, H. D., *J. Oklahoma M. A.*, 1944, **37**, 193; b. Naegeli, F. C., and Morginson, W. J., *J. Am. Dental Assn.*, 1945, **32**, 1393; c. Shellenberger, P. L., Denny, E. R., and Pyle, H. D., *J. A. M. A.*, 1945, **128**, 706; d. Schwartz, B. M., *J. A. M. A.*, 1945, **128**, 704.

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Effects of Some Old and Proposed Anticonvulsants on the Threshold for Electrical Convulsions.

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Desirable improvements on diphenylhydantoin and other anticonvulsants in the treatment of epilepsy have stimulated the investigation of a large number of compounds with the hope of finding some agent which would prevent or mitigate epileptiform seizures without undesirable side effects.

Method. One of the methods used in these studies has been the production of epileptiform convulsions by passing an electrical current of varying amperage through the brains of animals. The threshold in

milliamperes (m.a.) for each animal is determined before (control) and after the administration of the drug to be tested, the difference being considered a measure of the effectiveness of the drug as an anticonvulsant. The method has been described in detail by Spiegel,¹ Putnam and Merritt² and Tainter

¹ Spiegel, E. A., *J. Lab. and Clin. Med.*, 1937, **22**, 1274.

² Putnam, T. J., and Merritt, H. H., *Science*, 1937, **85**, 525.