states that the division of medical sciences of the National Research Council has appointed the following committees to cooperate with the medical corps of the U. S. Army and Navy: *Committee on Chemotherapeutic and Other Agents:* Dr. Perrin H. Long, *chairman,* Baltimore; Dr. Francis G. Blake, New Haven; Dr. John S. Lockwood, Philadelphia; Dr. John F. Mahoney, Staten Island, N. Y.; Dr. Eli Kennerly Marshall, Jr., Baltimore. *Subcommittees:* Infectious Diseases, Dr. Blake, *chairman;* Tropical Diseases, Dr. Wilbur A. Sawyer, New York, *chairman;* Venereal Diseases, Dr. Joseph E. Moore, Baltimore, *chairman;* Wounds and Burns, Dr. Evarts A. Graham, St. Louis, *chairman. Committee on Transfusions:* Dr. Walter B. Cannon, Boston, *chairman;* Dr. Alfred Blalock, Nashville, Tenn.; Dr. Everett D. Plass, Iowa City; Dr. Max M. Strumia, Bryn Mawr, Pa.; Dr. Cyrus C. Sturgis, Ann Arbor. *Subcommittees:* Blood Substitutes, Dr. Sturgis, *chairman;* Anesthesia in Shock, Dr. Blalock, *chairman.* These committees are the result of an informal request for advice from the two medical corps.

DISCUSSION

THE RELATIONSHIP OF HISTAMINE TO ANAPHYLAXIS IN THE RABBIT

THE long-suspected possibility that histamine might play a rôle in the symptomatology of acute anaphylaxis in experimental animals was demonstrated by Dragstedt and Gebauer-Fuelnegg[1] for the dog, and by Bartosch, Feldberg and Nagel[2] for the guinea-pig. The significant relationship of histamine to the reactions in these animals has been confirmed by a number of workers.[3] The postulate of Dale that the effects of histamine are a prominent feature of the anaphylactic reaction has thus been verified for these animals. Recently Rose and Weil[4] have reported that during anaphylactic shock in the rabbit there is a marked decrease in the total blood histamine in contrast to the increased amounts that are found in the dog and guinea-pig. This observation has been confirmed in our laboratory. This apparent discrepancy would not be disturbing to any general concept of the anaphylactic reaction, were it not for the fact that the symptomatology of the reaction in the rabbit bears the imprint of the effects of histamine nearly to the same extent that the reactions in the dog and guinea-pig do.

We believe that the following observations explain this apparent contradiction, and indicate that histamine does indeed play a rôle in the reaction in the rabbit.

Of the rabbit's tissues, blood is one of the richest sources of histamine, and Code[5] has shown that the greater part of this is contained within the leukocytes. Leukopenia is a common manifestation of anaphylaxis in many animals, and is particularly striking in the rabbit. Abell and Schenck[6] have shown that during an anaphylactic reaction in a rabbit, the leukocytes become sticky, adhering in clumps to the endothelium of the smaller vessels and actually form leukocytic emboli, which may completely obstruct some of these vessels. A rapid reduction in the leukocytes would necessarily result in a reduction in the histamine content of the circulating blood unless histamine from other sources was added in quantities to compensate for such a loss. Since the lungs would provide the first filter for sticky leukocytes in an anaphylactic experiment when the antigen is injected intravenously, the following experiment was performed. A sensitized rabbit was killed and the lungs arranged for perfusion through the pulmonary vessels and for rhythmical ventilation through the trachea. The animal's blood was obtained, kept from clotting by means of heparin, and perfused through the lungs. Histamine determinations and leukocyte counts were made on the blood during several passages through the lungs. Antigen was then added to the blood and the determinations repeated. There was a marked reduction in the total blood histamine and in the leukocyte count after the first passage through the lungs following the addition of antigen, amounting to approximately 50 per cent. of the preceding values. Continued perfusion resulted in a still further reduction.

These observations explain why the total blood histamine is reduced in rabbits during anaphylactic shock. The question remains—does histamine play a rôle in the anaphylactic reaction? Katz[7] has shown that if antigen is added to blood from a sensitized rabbit, there is a release of a considerable fraction of the cellular histamine into the plasma. We have confirmed this observation. On the basis of the *in vitro* experiment, the calculated amount of histamine that could be liberated *in vivo* is in the neighborhood of 0.1 to 0.3 mgm of histamine base per kilo. Such a dose of histamine would undoubtedly produce marked effects. That histamine is released *in vivo* as it is *in vitro* is indicated by Abell and Schenck's observations

[1] C. A. Dragstedt and E. Gebauer-Fuelnegg, *Am. Jour. Physiol.,* 102: 512, 520, 1932.

[2] R. Bartosch, W. Feldberg and E. Nagel, *Pflüger's Arch.,* 230: 129, 674, 1932.

[3] C. A. Dragstedt and F. B. Mead, *Jour. Pharm. and Exp. Ther.,* 57: 419, 1936; G. Unger and J. L. Parrott, *Ann. de Physiol.,* 13: 939, 1937; C. F. Code, *Am. Jour. Physiol.,* 123: 40, 1938.

[4] B. Rose and P. Weil, *Proc. Soc. Exp. Biol. and Med.,* 42: 494, 1939.

[5] C. F. Code, *Jour. Physiol.,* 90: 485, 1937.

[6] R. G. Abell and H. P. Schenck, *Jour. Immunol.,* 34: 195, 1938.

[7] G. Katz, SCIENCE, 91: 221, 1940.

of a marked arteriolar contraction during anaphylaxis in the rabbit and by Rose and Weil's observations that an actual increase in plasma histamine can sometimes be detected. That the increase in plasma histamine in the intact animal is not more marked than it is, is probably due to the rapidity with which histamine is removed from the circulating blood. There is undoubtedly some release of histamine from other tissues as well as blood cells during anaphylaxis in the rabbit. We have been able to demonstrate this in the case of the lungs, using saline perfusion instead of blood. The amount that is liberated is quantitatively very small compared with that for the blood, however, so that it could not compensate for the histamine imprisoned with the leukocytes in the various capillary beds of the circulatory system.

There is substantial reason for believing, therefore, that histamine plays a significant rôle in the anaphylactic reaction in the rabbit, notwithstanding the fact that the total blood histamine value is reduced during the reaction.

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THE UTILIZATION OF IRON BY ANEMIC RATS

IN the issue of SCIENCE for February 9, 1940, a paper appeared by Miss Louise Otis and Dr. Margaret Cammack Smith on "Further Evidence of Sex Variation in the Utilization of Iron by Anemic Rats." I would like to point out that the finding of these investigators was previously established by Dr. Helen J. Hubbell and reported in the *Journal of Nutrition*, January, 1938, Vol. 15, pp. 91–102. This paper seems to have been overlooked by Dr. Smith and Miss Otis. That there is a sex difference in the utilization of iron was first suggested by Dr. Helen S. Mitchell in 1932, and shortly afterwards this observation was confirmed by Rose and Kung. In 1938 the influence of sex was quantitatively investigated by Dr. Hubbell, who found about 12 per cent. more iron in the bodies of female than of male rats which had been depleted to about 4 gms of hemoglobin per 100 cc of blood, and then given equivalent dosages of iron per gram of body weight until their hemoglobin reached the level of 14 gms per 100 cc of blood.

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THE "BABOON BOY" OF SOUTH AFRICA[1]

ON the basis of evidence which was at that time believed to be accurate and complete, the writer gave a brief account[2] of Lucas, the so-called "baboon boy" of South Africa, who has at various times been described in the popular press. In addition to excerpts from newspaper accounts, the writer published the contents of a letter written by Lieutenant Colonel O. J. T. Horak, deputy commissioner of the South African police commanding Cape Eastern Division, in which hearsay evidence regarding the discovery of Lucas among baboons was reported. A statement made by Constable W. J. Coetzer was also reproduced, in which he described in detail the story of Lucas' reported capture as told to him in 1921 by ex-Lance Sergeant Venter (now deceased). A brief statement of 152 words by Lucas himself, made before Constable G. G. Wright on May 8, 1939, was also reproduced, the statement describing his (Lucas') previous animal-like existence among the baboons. It was also reported that Lucas had been captured and taken to the Mental Hospital by the police, and that inquiry to date had failed to reveal a record of previous admission.

Since the time of the initial report, however, largely through the efforts of Dr. Dru Drury, 120 High Street, Grahamstown, and Dr. J. A. van Heerden, the present physician-superintendent of the Grahamstown Mental Hospital, additional information has been discovered. Dr. Drury has been able to interview and to examine Lucas, and has communicated with every available person who might possibly have had knowledge of the case.

It is now revealed that Lucas was admitted to the Grahamstown Mental Hospital as an indoor pauper on March 30, 1904, nothing being known about him or his people. He was certified at Burghersdorp by Drs. Herbert Caiger and J. Tandy Bolger on February 19 and 20, respectively. Upon admission, he was described as a Kafir boy approximately thirteen years of age, and the cause of admission was described as "injury to the head." He was said to show a "foolish and nervous manner," and was "destructive to his clothes and dirty in habits." When admitted, he was emaciated, and was described as suffering from a previously fractured right tibia and as having a large semilunar indentation over the left side of the skull for about five inches from tip to tip which, Lucas claimed, was the result of a kick from an ostrich. He was diagnosed as "acute mania," but being "neither epileptic, suicidal, nor dangerous," he was discharged as recovered on June 15, 1904. No mention of the baboon story was made in the Mental Hospital records.

[1] The writer is indebted to Dr. Raymond Dart, professor of anatomy, University of the Witwatersrand, Johannesburg, South Africa, for making available to him a copy of the documents and reports upon which this account is based.

[2] *Amer. Jour. Psychol.*, 53: 128–133, 1940; SCIENCE, 91 (2360): 291–292, 1940.