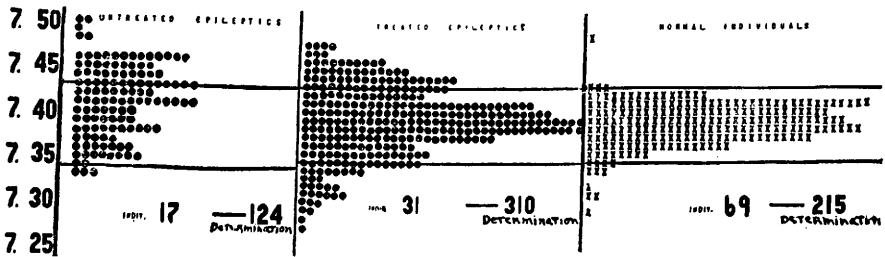


that the range for the latter is from 7.36 to 7.43. In contrast to this we find that the blood of treated and untreated epileptics ranges from 7.25 to 7.50. The blood of any given case of epilepsy shows a wider range of blood reaction than does the blood of a given normal individual. Chart No. 1 illustrates the extent of the range of blood pH determination in all the cases of epilepsy studied as contrasted with the range of variation observed in all the normal individuals studied. One case of hysteria, three cases of migraine and three cases of Jacksonian epilepsy, and one unclassified case show a range of blood hydrogen ion concentration which is similar to the range observed in normal people.



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The absence of both kidneys associated with hereditary abnormalities in mice.*

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Recently the writer recorded the occurrence of fifty mice having in each case a solitary kidney.¹ They constituted 16 2/3 per cent of a group of 300 autopsied animals, descendants of

¹ Bagg, H. J., PROC. SOC. EXP. BIOL. AND MED., 1923, xxi, 146.

animals that were subjected to light doses of x-ray irradiation. The treatment was apparently associated with the production of hereditary abnormalities of the eyes, feet and other parts of the body.

Several matings have now been made where in each case both parents had but one kidney, and the number of young per litter was considerably less than the average for animals with normal kidneys. Several of the young animals died during the first week of life and were promptly destroyed by their mother. The examination of a single litter of seven mice apparently throws considerable light on the high mortality shown in such animals and is considered of sufficient interest to warrant a brief report. In this instance, however, the male parent had but one kidney and was blind in the right eye, while the mother, although apparently normal, was heterozygous for such defects.

Two of the young of the above parents were found dead about 24 hours after birth. They had but recently died and at autopsy apparently showed complete absence of both kidneys. No other gross defects were noted except that one of the animals had a defective left eye. The remaining five animals were active and apparently in a good state of nutrition. Four of these were males with apparently no external deformities, and one was a female with a defective left eye. Three of the animals were killed about 24 hours after birth, and the point of interest is that the female with the defective left eye showed bilateral absence of kidneys and one male had only a very small remnant of renal tissue on one side of the body. One male had normal kidneys. The two remaining males of the litter were allowed to live and when examined two weeks later were found to be normal. No other visceral changes were noted in the animals and both adrenals were present in each case.

The above data apparently are very suggestive in accounting for the death of the young animals (with hereditary kidney abnormalities) during the early post-natal period. They show that in mice pre-natal development and at least several hours of post-natal life may continue despite the complete absence of both kidneys. Observations from similar matings may further show the average length of post-natal life compatible with such abnormal conditions of the viscera.