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Organ weights in albino rats with experimental rickets.

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Of the 118 rats used for this work, 37 were normal controls and 81 were young rats which had been fed various diets by Professor McClendon to produce experimental rickets.[1] The 81 test rats were autopsied and classified on the basis of gross skeletal appearance and previous X-ray examination as follows: 27 apparently normal, or nearly so; 19 with slight rickets; 19 with moderate rickets; and 16 with severe rickets. The diagnosis was also confirmed by microscopic examination, although the histological changes were found somewhat variable.

The weights of the various organs and parts were compared with the norms for corresponding body length or weight established by Hatai, Jackson and Donaldson. The percentage deviation was calculated for each organ and averaged for the five groups. The chief results are briefly summarized.

The body weight and tail length appear nearly normal (for corresponding body length) in all. In the rachitic rats the organs may be grouped as follows:

A *decrease* occurs in the weight of the integument, hypophysis, dry skeleton, empty stomach and intestine, and especially in the thymus.

An *increase* occurs in the weight of the eyeballs, heart, gastrointestinal contents, and especially in the submaxillary glands, kidneys and suprarenals.

No regular changes of importance were noted in the weight of the head, ligamentous and cartilaginous (moist) skeleton, musculature, brain, lungs, liver, spleen, ovaries, testes and epididymides, although marked variations occur in some groups.

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[1] PROC. SOC. EXP. BIOL. AND MED., 1922, xix, 356.

ABSTRACTS OF COMMUNICATIONS

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The dominant reacting tissues in anaphylactic, peptone and histamine shock.

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Canine anaphylactic shock, peptone shock and histamine shock are currently assumed to be physiologically identical reactions. In each shock there is a sudden, pronounced fall in arterial blood pressure, the carotid pressure being reduced to about 25 mm. Hg. by the end of two minutes. Recovery usually begins about the tenth minute, the arterial pressure being restored to normal in from 30 minutes to 90 minutes, depending upon the severity of the reaction. In each shock, fatal results may be produced by the injection of large doses or by the use of highly sensitized animals. In each shock there is a pronounced splanchnic engorgement and cyanosis, the production of hemorrhagic lesions in the intestinal mucosa, and a reduction in blood coagulability. In order to test the assumed physiological identity of the three shocks, we have endeavored to determine the topographical distribution of the dominant reacting tissues in each shock.

1. *Canine anaphylactic shock.* Anaphylactic shock (fall in arterial blood pressure) does not take place in dehepatized (Eck-fistula) dogs. This is not only true for the mildly sensitized dogs previously reported,[1] but is equally true for highly sensitized dogs giving the fatal type of the reaction. Practically no change in arterial blood pressure is produced in these highly sensitized animals, even on the intravenous injection of as large a dose as 30 c.c. of specific foreign (horse) serum. The liver

[1] Manwaring, W. H., Der physiologische Mechanismus des anaphylaktischen Shocks, *Zeitschr. f. Immunitätsf.*, 1910, viii, 1.