

Dr. T. L. Shipman - H-DO

January 14, 1959

C. C. Lushbaugh

TRANSCRIPT OF TELEPHONE CONVERSATION WITH
WEBB HAYMAKER ON JANUARY 13, 1959

H-4

The central nervous system specimens of Cecil Kelley at the Armed Forces Institute of Pathology are designated Case No. 905226.

This summary was made by Webb Haymaker in haste in order that we would be appraised of his estimate of the central nervous system damage by January 14, 1959, as requested. A more definitive written report of preliminary nature follows this week.

The outstanding finding was an edematous process being produced by fluid of low molecular weight. It was seen best in the white matter of the cortex, where there was no true acute radiation vasculitis but where some areas showed an increase in number of mononuclear cells in the vascular adventitia. In the meninges a rare polymorphonuclear leucocyte was seen, along with histocytes in the process of becoming larger. In the meninges, there were also macrophages containing broken down blood pigment which was probably not yet hemosiderin. Sections through the chorioid plexus showed nothing except rare collagen swelling. There was also swelling in the arachnoid membranes, where the collagen appeared to show damage. There was, however, no clear-cut collagen swelling of the blood vessels. There was edema of the second layer of the cerebral cortex. In the cerebellum, the granular layer appeared to be normal, and there was no necrosis as is expected with doses of around 5,000 rads. In the cerebellar tonsil, however, the granular layer was edematous and the cells pale, as is usually found in cases of serious intracranial pressure. These changes were also seen in the uncinate gyrus (the brain grossly showed cerebellar tonsil herniation and uncinate herniation). Some of the larger vessels of the base of the brain showed an early vasculitis, and of considerable interest

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January 14, 1959

was the finding of intravascular destruction and dissolution of leucocytes. The white matter of the cerebellum showed suspiciously pyknotic oligodendroglia. There were also many paravascular hemorrhagic foci in the wall of the third ventricle and vicinity. A rare nerve cell of the cerebellar cortex was found to be necrotic.

Dr. Haymaker's rough estimate of the dose to the head was about 2500 rads, on the basis of these observations. He stated that he was to speak on the neuro-pathologic changes in the high dose monkeys at a meeting January 20-21, 1959, at the Walter Reed Hospital, and was wondering whether he would be permitted to speak about the changes he was finding in this case. Since no one was around to make the decision, I took the liberty to give him permission to do so.

C. C. Lushbaugh, M.D.

CCL:ES

CC:W. H. Langham - H-4

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