same was true for the cerebro-spinal fluid. The feces or urine never became positive, even after five passages with the sensitive strain. The control was, of course, positive throughout the experiment. This experiment serves to demonstrate that a substance such as bacteriophage which can be detected in high dilutions is capable of passing from the cerebro-spinal fluid to the blood stream. This we might expect since the normal direction of flow is in this direction.

In a second experiment the blood serum, cerebro-spinal fluid, urine and feces of a normal rabbit were first tested for bacteriophage against the sensitive B. Coli "D". They were found to be negative. The animal was then given 5 cc. intravenously of B. Coli "D" bacteriophage active in a dilution of 1:10,000,000. The bacteriophage could not be demonstrated in the spinal fluid, feces or urine after seven passages with the sensitive strain though it was present in the blood serum in the third passage. The control bacteriophage remained positive during each passage.

These experiments indicate that a particular substance such as the bacteriophage is filterable from the cerebro-spinal fluid to the blood stream in rabbits but not from the blood stream to the cerebrospinal fluid. Our failure to detect the bacteriophage in the urine and feces is not conclusive evidence that it is not excreted through both of these channels, since the factor of dilution in both instances is quite different from that of the blood and cerebrospinal fluid.

[1] McKinley, E. B., and Holden, M., *J. Am. Med. Assn.*, in press.
[2] McKinley, E. B., and Holden, M., *J. Infect. Dis.*, 19??, xxxix, 451-456.
[3] Flateau, E., *Revue Neurologique*, 19??, xxxiii, 281-360.
[4] Hewett, L. F., *Brit. J. Exp. Path.*, viii, 1, 84-92.
[5] Le Fèvre, M. de A., *Comp. rend. de la Soc. de Biol.*, t, xcvi, 206-207.

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Liver Injury in Acute Alcoholic Poisoning.

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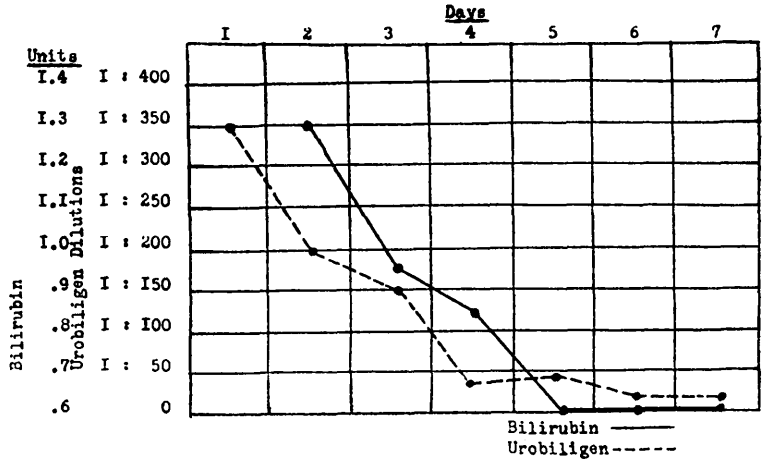
Although in most text books of Pharmacology and Medicine the statement is made that alcohol has a directly injurious effect on the liver, recently much doubt has been expressed as to an etiological relationship between alcohol and liver disease. An opportunity of

studying altered liver function in acute alcoholic poisoning has been taken advantage of in an attempt to throw light on this question, and a short statement of the positive results obtained is given.

The subjects of the observations were 17 of the patients admitted to Bellevue Hospital with the diagnosis of acute alcoholic poisoning. Two tests of liver function were employed, namely the indirect Van den Bergh quantitative test for bilirubin and the quantitative determination of urobiligen[1] in the urine. The blood and urine specimens were obtained at arbitrary intervals over a period of several days.

In all 17 cases there was found an increase in the amount of bilirubin in the blood serum. Accepting as normal .6 to .8 unit, the increase found ranged from .85 to 2.1 units and all except one were 1 unit or above. The increase persisted for four or five days with a gradual decline to the normal. In 5 cases urobiligen estimations were made. An increase was found ranging in dilutions from 1:90 to 1:350. The urobiligen curve closely corresponded to the bilirubin curve. This increase of both bilirubin and urobiligen was directly proportionate to the severity of the poisoning.

A typical chart is presented.



It may be concluded from these observations that in acute alcoholic poisoning there is definite evidence of liver injury and this is proportionate to the severity of the poisoning.

[1] Wallace, G. B., and Diamond, *Arch. Int. Med.*, 1925.