

[330] hepatic parenchymatous changes). According to Münzer, urobilinogenuria is not present in pseudo-cirrhosis (Pick's disease), or in chronic passive congestion of the liver, where true liver disease is absent. He, therefore, considers the test of importance in differentiating between atrophic cirrhosis, on the one hand, and chronic passive congestion or pseudo-cirrhosis, on the other. Bauer,<sup>23</sup> however, states that it occurs in almost all diseases of the liver.

It is purely a qualitative test for the existence of liver disease. It probably has the advantage of specificity, since to no other cells has been ascribed the ability to convert urobilinogen into the ordinary bile pigments. From their own work and from a study of the literature, Falk and Saxl<sup>24</sup> conclude that urobilin excretion occurs in very slight injury to the liver, in which it is impossible to detect decreased carbohydrate tolerance or the N partition changes characteristic of insufficiency.

#### FIBRINOGEN.

Doyon and Kareff,<sup>25</sup> and Nolf<sup>27</sup> and his school showed that the extirpation of the liver was followed by the rapid disappearance of fibrinogen from the blood. In the report of an occasional experiment on animals, Doyon and his co-workers,<sup>28 29 30</sup> showed that decreased fibrinogen content occurred after chloroform poisoning, and Corin and Ansiaux<sup>31</sup> and Jacoby that it occurred also after phosphorus poisoning.

According to Whipple and Hurwitz,<sup>32</sup> fibrinogen normally exists in plasma of dogs in amounts varying between 0.2 to 0.5 gm. per 100 cc. blood. With the occurrence of liver injury produced by chloroform poisoning it decreases, falling at the time of injury and returning to above normal during the repair which rapidly follows. It may be present in such small amounts that hæmorrhage or hæmorrhagic tendency results, the clots being too soft to check bleeding.

In cases of acute hepatic disease (chloroform poisoning) in dogs and human beings it may fall to 0.048 to 0.034 gm. per 100 cc. blood, in chronic liver cirrhosis (Whipple<sup>33</sup>) to 0.05 gm. or even lower. This decrease is not constant. A