The first hypothesis was tested as follows: we used a preparation that was known to produce the above phenomenon in some dogs. We made injections under barbital anesthesia in 20 dogs with vagi cut and in 10 without the vagi cut. The phenomenon occurred in 5 of the 10 dogs with the vagi intact. In the 20 dogs with the vagi cut, the phenomenon occurred in 4 cases. In one, the fall of blood pressure amounted to only 20 mm. Hg., but was a typical slow fall and return to normal. In another the fall was marked, 80 mm. Hg., and in the other the fall was 50 mm. Hg. If we had not used 20 dogs, we would not have observed the last 3 cases, and would probably have been led to an erroneous conclusion. These results show that this phenomenon will occur after the vagi have been cut. We have also observed a fall occur in one dog after atropine.

Our results indicate that this phenomenon is due to some toxic substance against which the body rapidly immunizes or adjusts itself.

Abel and Geiling[1] report that some 6% of dogs have a natural immunity to "peptone" and that dogs that survive "peptone" shock are immune to repeated injections. The causative agent of the phenomenon we have observed is precipitated by NaCl from acid solution and by 5% trichloracetic acid, and is not coagulated nor denatured by heating at boiling temperature for 30 minutes.

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Effect of Histamine on Gall-Bladder Evacuation.

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It has been shown in a previous article that 0.4% HCl in the duodenum causes the gall-bladder to contract on the basis of a humoral mechanism.[1] It has also been shown that histamine when injected intravenously causes the gall-bladder to contract, but the contraction is a mirror-image of the fall in blood pressure which led us to believe that the contraction was due to the fall in blood pressure.

It occurred to us that since it is well known that histamine subcutaneously causes gastric juice to be formed, such an injection

[1] Abel and Geiling, *J. Phar. Exp. Therap.*, 1924, xxiii, 1.

[1] Ivy, A. C., and Oldberg, Eric, *Am. J. Physiol.*, 1928, lxxxvi, 599.

might lead to gall bladder evacuation by the passage of the gastric juice into the duodenum. The gall-bladder of 5 normal men, 5 patients, and 10 dogs was visualized by the phenoltetraiodophthalein technique. One milligram of histamine was then injected subcutaneously and pictures of the gall-bladder were made at 30 minute intervals for one and a half hours. It was found that in the normal men the shadow was not changed in any way. In 2 of the dogs there was a slight decrease in the shadow, in the others it was not changed. In 3 of the 5 patients there was no change in the gall-bladder; in 2 there was a slight, but insignificant change; but in one of the patients, the gall-bladder emptied so completely within 30 minutes that only a narrow bandlike shadow remained.

Our observation shows that the subcutaneous injection of one milligram of histamine only occasionally leads to evacuation of the gall-bladder, and hence it offers no possibility of being a gall-bladder function test. The question logically rises that since on theoretical grounds histamine would serve to evacuate the gall-bladder, why does it not act uniformly? Several possibilities might be suggested: first, the gastric juice formed is not ejected into the duodenum in sufficient quantities to act, which is likely since it was found[1] that more than 10 cc. of 0.4% acid had to be introduced into the duodenum of the barbitalized dog to cause gall-bladder contraction. Second, the gastric juice may have been neutralized by regurgitated intestinal contents. Third, the histamine may cause an increase in tone of the sphincter of Oddi or the duodenal musculature which would prevent the evacuation of bile from the gall-bladder. Other suggestions might be presented, but we think these 3 possibilities are the most likely.

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Emptying of Gall Bladder in Children.

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While studying catarrhal jaundice in children, it was found necessary to ascertain the emptying time of the gall bladder in non-jaundiced individuals of comparable age. This paper deals with 3 normal cases. In each instance 75 mg. of "Iodeikon" per kilo were

* The patients were secured from the Department of Pediatrics through the cooperation of Dr. Julius Hess and his assistants.