

Ivy and Javois³ found also that histidine subcutaneously did not stimulate gastric secretion. Because of these facts we thought that it would be worth while to study the effect of other imidazoles on gastric secretion.

Professor Rose of the University of Illinois supplied us with imidazole proprionic acid, imidazole aldehyde, d-imidazole lactic acid and imidazole acrylic acid. Professor Hurd of Northwestern University supplied us with imidazole.

These imidazole derivatives were injected subcutaneously into 3 Pavlov pouch dogs a number of times in doses of from one to 5 mg. with negative results. Larger amounts were not used because Burgess, Sacks and Ivy⁴ have had gastrin preparations which were active in less than 0.5 mgm. doses.

These 5 imidazoles were also injected intravenously in dogs prepared for recording blood pressure changes. None of them in from one to 5 mg. doses had any effect on blood pressure.

It is interesting that β -imidazole ethylamine HCl is a very potent excitant of gastric secretion, whereas imidazole and the ethylamine HCl⁵ are inactive.

Conclusion. Imidazole, imidazole proprionic acid, imidazole aldehyde, l-imidazole lactic acid, and imidazole acrylic acid in doses of from one to 5 mg. have no effect on gastric secretion or blood pressure.

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Experimental Hepatogenous Cholecystitis.

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Gall bladder bile in dogs cultured in our laboratory has been shown by Rewbridge¹ to be almost invariably sterile.

In a series of experiments in which biliary stasis had been present for varying periods of time *B. welchii* and lesser numbers of cocci and *B. coli* were grown from the bile in 76% of cases. Biliary stasis had been produced not only by ligating the cystic duct, care being

³ Ivy and Javois, *Am. J. Physiol.*, 1925, **71**, 583, 591, 604.

⁴ Burgess, Sacks and Ivy, unpublished data.

¹ Rewbridge, Allan G., and Hrdina, Leo, *PROC. SOC. EXP. BIOL. AND MED.*, 1930, **27**, 528.

taken to avoid the cystic artery, but also by common duct ligation and by both procedures.

In most of these experiments not only were these bacteria present but marked evidences of cholecystitis were found. Gross specimens of these gall bladders revealed the interesting fact that the infection undoubtedly made its way into the gall bladder not through the bile or the blood stream but by direct extension from the liver. This could be seen by killing the dogs in various stages of the process. In the early stages (1-4 days), the gall bladders presented the picture of a cholecystitis only on the hepatic surfaces. The free peritoneal side at this period is thin, normal in appearance both grossly and histologically. The hepatic surface is thickened, often to 10 times normal and its wall shows edema and infiltration of leucocytes and round cells. Later the inflammation extends around the entire circumference of the viscus. The mucosa generally remains quite normal even in the later stages when the other layers of the wall show marked inflammation.

The work of Dragstedt² and later of Andrews³ on the rich anaerobic flora of the liver has shown that these organisms are constantly present and it now becomes evident that in stasis they may make their way into the gall bladder in large numbers.

The recent clinical experience⁴ of finding *B. welchii* in many cases of fulminant cholecystitis makes it seem quite possible that this route of infection may be a common one in the human being.

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Ovulation in the Rabbit as a Diagnostic Measure in Early Pregnancy.

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In a previous communication,¹ a preliminary report of 100 cases has been submitted, demonstrating the production of ovulation in immature female rabbits by the intravenous injection of urine from pregnant women, and its application as a diagnostic measure in early

² Ellis, J. C., and Dragstedt, L. R., *Arch. Surg.*, 1930, **20**, 8.

³ Andrews, E., *PROC. SOC. EXP. BIOL. AND MED.*, 1930, **27**, 987.

⁴ Gordon-Taylor, G., and Whitby, L. E., *Brit. J. Surg.*, 1930, **17**, 78.

¹ Schneider, *Surg., Gynec. and Obst.*, in press.