

thetia, his students numbered only 35, but the number increased to 284 within ten years. He kept his students under strict control and taught them with vigor. They could not graduate from the school until Hanaoka was assured that they had mastered the principles of general surgery.

Hanaoka's motto was, "Naigai-goitsu Kat-subutsu-Kyuri," meaning, "Physicians should master the principles of surgery and surgeons should learn those of internal medicine." All patients, even those with the same diseases, have peculiar problems, and medical doctors must do their best to heal them, not solely to cure the diseases.

Finally, Hanaoka was interested in poetry, in his day a requisite study for physicians. At present, 235 of his poems are known to us, and he had astonishing skill in calligraphy.

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Drugs

METHOXYFLURANE The effects of methoxyflurane on the resistance, potential difference (PD) and hydrogen ion (H^+) secretory rate of frog gastric mucosa were determined in both chloride (Cl^-) containing media and chloride-free media. In Cl^- media, methoxyflurane increased resistance considerably as the H^+ rate decreased to zero. The PD usually passed through a relative maximum prior to zero H^+ rate. The short-circuit current decreased as H^+ decreased to zero. Other anesthetics, including chloroform and halothane, were studied also. Again, resistance increased with decreasing H^+ rate. In Cl^- -free solutions, the absolute magnitude of the PD decreased essentially linearly with decrease in H^+ rate. The separate-site theory accounts for the variation of electrophysiologic parameters. A simple model which explains in part anesthetic inhibition in frog mucosa is the entrance of anesthetic into membrane channels, thereby interfering with ionic movements. (MacKrell, T. N., and Schwartz, M.: *Electrophysiological Effects of Methoxyflurane (Penthrane) on Frog Gastric Mucosa*, *Amer. J. Physiol.* 216: 572 (March) 1969.)