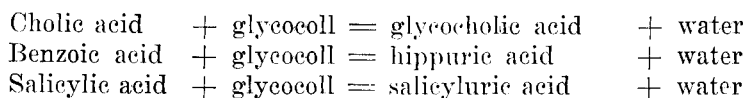


and myocardial manifestations. The pain on swallowing suggested the presence of pericarditis, but we were unable to find any physical sign of it. I may add that we were agreed that the patient was not suffering from typhoid fever. At no time during the course of the disease was there evidence of bone or joint infection.

I shall conclude this report with a few remarks on the pharmacology of salicylic acid. I shall also mention some observations on the subject which I made four years ago (*Canadian Practitioner*, October, 1907).

When salicylic is given internally it combines in part with glycocholic acid, forming salicyluric acid, a compound analogous in composition to glycocholic acid and hippuric acid. This may be illustrated as follows:



In my experiments I showed that glycocholic was much less toxic than cholic acid. This observation, as well as the fact that hippuric acid is non-toxic or of very slight toxicity, suggests to one that salicyluric is less toxic than salicylic acid. This was shown by Stockman to be the case, and my experiments confirmed his views. We found that salicyluric acid had very little antiseptic action and had very little effect on the fever of acute rheumatism. In my experiments I also showed that the proportion of the salicylic acid which appeared in the urine as salicyluric acid (combined salicylic acid) varied with the dose. With a dosage of 60 grains a day, nearly all the salicylic acid was excreted as salicyluric acid; and with larger dosages the proportion of "combined" salicylic acid diminished. In other words, the larger the dose the more uncombined salicylic acid appears in the urine. This appears to me to have an important bearing on the pharmacology of salicylic acid, because, if salicyluric acid is not wholly formed in the kidney, which is probable, then the larger the dose of the drug the more uncombined salicylic acid is present in the blood and tissues and the greater the antiseptic action. If, for instance, it were shown that the combination of salicylic acid and glycocholic takes place in the liver, which is not improbable, then the exhibition of 60 grains of sodium salicylate a day would exercise very little antiseptic action, because, as I have already mentioned, with this dosage almost all the drug becomes converted to salicyluric acid. This is, I believe, in accordance with clinical experience, because salicylic acid appears only to be of special value in acute rheumatism when exhibited in large doses, say 100 to 300 grains a day.