

the drug is given. This insidiousness makes it, as Dr. Wood points out, peculiarly ill-advised for a physician to allow a patient to go on repeating his prescription without supervision, not from the risk of habit-formation, as in other hypnotics, but for fear of chronic poisoning. Prophylaxis during the use of sulphonal is very important, the main point being absolute cessation for at least a week, with free clearing out of the bowels, in which, from the insolubility of the drug, unsuspected stores of it may be lying, especially if constipation, as is the rule, is a feature in the case. For this work, if absolutely necessary, small doses of morphine, with hyoscine, or chloral, may take its place.

During the course of the neurasthenia, the early symptoms of poisoning, such as nausea, general weakness, and alternations of constipation with a light watery diarrhea, are very apt to attract no attention, till as Dr. Wood says, "the patient assumes, with the suddenness of a thunder-clap the aspect of a dying woman."

As to chronic cases, later symptoms are paresis of varying grades, sometimes rather general, but usually confined to small groups of muscles; often ataxia, sometimes very marked, of both legs and arms. The digestive system shows more advanced signs of disorder, vomiting, colicky epigastric pain, and very obstinate constipation. And the most certain sign is the red urine, after which, though it may be the first sign noticed, recovery is rare. Of twenty reported cases of sulphonal poisoning, only three recovered, and of nine trional cases three died. The "port-wine urine" owes its color to the presence of hematorporphyrin, "probably a derivative of hematin of high acidity," and is later on albuminous.

Such cases must be promptly treated by, first, the withdrawal of the drug; second, free purgation, better with sodium sulphate; third, Müller's treatment with alkalies, suggested to him by the high acidity of the urine. His chief reliance was placed upon sod. bicarb., but the potash salts are known to alkalinize the urine more quickly, and any other antacid, as magnesium carbonate, may be used. An essential, too, is the use of large quantities of water, by enteroclysis, interstitial injections, and by the stomach.

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### Urotropin.

From experience and observations on the therapeutic action and effect of urotropin in diseases of the genito-urinary tract, the essential points may be summarized, in brief, as follows:

1. A urinary sterilizer, antiseptic, and acidifier—prompt and reliable in action—moderate in dose, which, if adhered to, render it both non-toxic and non-irritating to all parts of the animal economy.