Jackson, D. E., and Smith, M. T. CAUSE OF EARLY DEATH FROM ARSPHENAMIN. [Jour. Pharmac. and Exp. Therap., Nov., 1918, 12, No. 4, p. 221.]

The first toxic symptoms were a dilatation of the heart, perhaps mainly of the right side at first, a progressively increasing pulmonary blood pressure, and a slow, gradual, but not severe, fall of the systemic pressure. The cause of this rise in pulmonary arterial tension they believe to be due partly to the alkalinity of the solutions of arsphenamin used, and partly to the specific action of the drug itself. With large toxic doses the right heart may have to contract against a pulmonary pressure increased by 100 per cent. above the normal, while at the same time the left ventricle may be contracting against a systemic pressure reduced by 25 to 50 per cent. below the normal. These peculiar conditions may tend to establish a state of increased irritability in the heart, and in rare instances delirium cordis may result. The reactions of the internal organs when arsphenamin is injected are variable, and the reasons therefore are obscure. Apparently both central and peripheral influences are concerned. As a rule, oncometric tracings of the spleen and intestinal loop show a dilatation, while the kidney usually contracts, sometimes in a most vigorous fashion. The toxicity of arsphenamin is not increased by the breathing of high concentrations of carbon dioxide, nor by the injection of calcium hydrate, calcium lactate, or of monosodium phosphate. A number of intermediary compounds, produced in the manufacture of arsphenamine, also studied by the authors were found not to be very poisonous, and not to be held responsible for the variation in toxicity of different samples of arsphenamin. Tyramin is suggested as the most beneficial drug in cases where severe acute toxic symptoms suddenly appear at or after intravenous injection of arsphenamin.

Campbell, Harry, and Ballance, Charles. TREATMENT OF GENERAL PARALYSIS. [Lancet, April 12, 1919.]

These authors reported in 1914 the injection of salvarsanized serum into the lateral ventricle in three cases. The first of these patients, a violinist, is still alive and has returned to his occupation though he is a little less expert than he was before. Nevertheless his cure has been apparently complete, except for the fact that destroyed cells could not be restored. This method of treatment was employed because it is well known that drugs introduced into the blood stream do not reach the parenchymatous tissues of the brain in effective concentrations, while drugs free in the subarachnoid space do bathe and penetrate deeply into the cerebral tissues. The best method of introducing large amounts of a drug into this space is by injection into the lateral ventricle. Cases of general paralysis are unfortunately not often diagnosed until there has been extensive damage to the cerebral cortex, whereas the greatest bene-