Cunningham, and Burgess, 1936). The patient at that time was thought never to have received horse serum, and so the guinea-pig's kidney absorption test may not have been performed and a false positive result accepted. While, of course, one cannot prove that she did not have glandular fever, I think the balance of evidence is in favour of a prolonged serum sickness. This is supported by the presence five months later of fever, joint pains, lymphocytosis, and a Paul-Bunnell reaction of 1:128. Unfortunately, at that time we had no guinea-pig's kidney and so could not do the absorption test. There is no history of urticaria.

It is tempting to believe that the "infective hepatitis" was really a homologous serum jaundice due to the use of an infected needle and that her "acute appendicitis" was due to mesenteric adenitis or hysterical abdominal pain. The abscesses resulted from self-mutilation; and her own story, confirmed by the biopsy of a skin nodule, suggested that the "erythema nodosum" was the result of self-inflicted lesions. The whooping-cough may have been genuine, but even this can be closely simulated by a paroxysmal cough due to enlarged mediastinal glands.

Thus, in a little less than a year, a patient suffered a series of illnesses which at first sight appeared to be quite unrelated, but which were found to have a common origin in repeated self-inoculation.

I wish to thank Colonel F. T. Escritt, Officer Commanding the Royal Victoria Hospital, Netley, for permission to publish this case.

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Absorption and Excretion of Pheniodol

Iodine-containing contrast agents for use in radiology should be stable in the sense that they should not yield inorganic iodine to the tissues; for cholecystography they should also be excreted in the bile. "Biliselectan" (α -phenyl- β -(4-hydroxy-3:5-diiodophenyl)-propionic acid) was introduced in 1940 (Dohrn and Diedrich) for peroral use, with the claim that it possessed both these properties. This claim would seem to have been justified by the extended use of the compound and the fact that it has received an official British name, pheniodol. Nevertheless, there are few quantitative data on its absorption and excretion, apart from some early work of Junkmann (1941).

Admittedly, experiments with laboratory animals can give no more than presumptive evidence of the behaviour of a substance used in human treatment, but the difficulties of carrying out metabolic experiments on patients led us to attempt to examine the claims of Dohrn and Diedrich by studying the absorption and excretion of pheniodol in rats and cats, making use of the "labelling" technique with radioactive iodine (I^{131}).

Single doses of pheniodol, equivalent to between 50 and 74 mg. per kg. of body weight, were administered by one of three routes—oral, subcutaneous, or intravenous—to pairs of rats, the excretion of iodine being studied during three-day periods by measurement of radioactivity. Single doses at about the same relative level were also injected intravenously or intraduodenally into cats under chloralose anaesthesia; in these animals the total iodine in blood, urine, and bile was measured

for six-hour periods and the proportion of iodine present in organic combination was also determined by means of a butanol extraction procedure. The results are summarized in Tables I and II.

TABLE I.—*Excretion of Iodine by Rats Three Days After a Single Dose of Pheniodol*

Excretion Route	Oral Dose		Subcutaneous Dose		Intravenous Dose	
	A	B	A	B	A	B
Urine ..	25	78	20	80	33	82
Faeces ..	49	90	38	92	53	92

A, Total iodine as percentage of iodine in dose. B, Organic iodine as percentage of iodine in sample.

TABLE II.—*Excretion of Iodine by Cats Six Hours After a Single Dose of Pheniodol*

Excretion Route	Intraduodenal Injection		Intravenous Injection	
	A	B	A	B
Urine ..	9	60	33	66
Bile ..	36	84	20	87

A, Total iodine as percentage of iodine in dose. B, Organic iodine as percentage of iodine in sample.

It will thus be seen that in rats little inorganic iodine is liberated from pheniodol administered by any of three routes, and that after oral or intravenous dosage nearly all the iodine was eliminated in the urine and faeces by the end of 72 hours; examination of the curves of excretion show that further small quantities would have been eliminated subsequently. Further, it is clear that the small amount of iodine eliminated as inorganic salts was rapidly excreted by the kidneys. Similarly, in cats a large proportion of the compound was eliminated during the first six hours after intravenous and intraduodenal administration, and in these animals also any breakdown of the compound was effectively handled by their excretory mechanism. In the cats rapid passage of the compound into the bile is also evident. It is of interest to note that experiments on a single pregnant cat indicated that the compound cannot pass the placental barrier.

Therefore, so far as experiments with rats and cats permit valid extrapolation to human patients, the work summarized above, of which it is hoped to publish full experimental details elsewhere, gives support to Dohrn and Diedrich's claims to have brought forward a satisfactory cholecystographic agent.

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The report for 1950 on the work of the rheumatism department of the Royal Free Hospital shows that rheumatoid arthritis was by far the commonest diagnosis (42%) among the in-patients. Ankylosing spondylitis and osteoarthritis were each found in 12% of the patients admitted during the year, and 7% suffered from prolapsed intervertebral disk. Multiple diagnoses were not uncommon, especially in the old patients. Follow-up records have been kept, and a relatively high number of patients discharged from the hospital have been kept under review.