

the shape of Fowler's solution in doses of from m ii to m x t.i.d. The stomach would not tolerate a large dose, and on several occasions it had to be discontinued. Arsenious acid in pill form was better borne, and hypodermics of Fowler's solution in water were also tried, but proved painful, and were discontinued on the formation of a small abscess. A glycerine extract of bone marrow was used from January 8 to February 8, during which time the corpuscles decreased from 1,792,000 to 1,320,000, although there was a slight increase in the hæmoglobin 35 per cent. to 45 per cent. Bland's pills in doses of 10 to 15 grs. t.i.d. were used from February 8th to March 4th, the red corpuscles rising in this period from 1,320,000 to 1,770,000, but with a decrease of hæmoglobin.

On March 3rd thymol was commenced. A reference to the table below will show the relation of the blood count to the principal drugs used.

#### BLOOD COUNTS.

Nov. 25....	Red B.C.	1,928,000	Hglobin	45%	
Jan. 7.....		1,792,000	Fleischl	30%	to 25%
25.....		1,820,000		40%	
Feb. 6.....		1,320,000		40%	
12.....		1,340,000		45%	
March 4....		1,770,000		30%	to 35%
14.....		2,440,000		45%	
April 5.....		2,860,000		65%	
12....		3,140,000		65%	to 70%
30 ...		4,810,000		80%	to 85%
June 26....		2,197,000		40%	

#### TREATMENT.

Nov. 24th. Arsenic in v to x, and also alternating with 1-20 gr. arsenious acid t.i.d. taken during almost whole period of hospital residence. Jan. 8 to Feb. 8. Bone marrow.

March 3 to June 15. Thymol gr.  $\frac{1}{2}$  to gr.  $1\frac{1}{2}$  t.i.d.

March 17 to 22. Erysipelas.

On comparing the blood counts with the treatment, it will be noted that no improvement appeared with arsenic. All the blood counts made after March 4th showed a steady improvement, which was coincident with the use of thymol and arsenic, and which had not been effected by the use of arsenic alone. The experience of this case is certainly suggestive of the beneficial action of thymol. The attack of erysipelas complicated the case at this stage, and suggests the possibility of its exerting a modifying influence over the disease. It will, however, be noted that the improvement began *before* the attack of erysipelas, and co-incidentally with the use of thymol.

A blood count made June 25th showed a great decrease in the number of corpuscles and hæmoglobin, a relapse so frequently seen in pernicious anæmia.

*Case II.—Severe anæmia—Arterial sclerosis—Dilated heart—Absence of hydrochloric acid in Gastric fluid—Autopsy.*

R. O'C., æt. 61, laborer, admitted to the Montreal General Hospital on January 25th,

1895, complaining of weakness and shortness of breath.

*Personal history*—He has had measles, whooping cough and scarlet fever, but no venereal disease.

Present illness began in the spring of 1894 with frequency of micturition, and in November, there were severe paroxysms of pain in the right groin.

In October, 1894, began to be much troubled with shortness of breath, especially on going up steps, and about this time he noticed his face to be of a slight yellow color. He has noticed for some time back small red spots on the hands, lasting from a week to ten days, evidently subcutaneous hæmorrhages. He has had palpitation, dizziness, and has lost about 30 lbs. in weight. He has never had headache, nose bleeding or diarrhoea. He has vomited on three occasions, and suffered a few times from heartburn.

*Family history*—Father died from fever and ague; mother died at 57 from an illness attended by cough and expectoration.

*Present condition*—He is rather thin, the muscles are soft and the panniculus adiposus is small; weight 125 pounds. The face and back of hands are of a marked yellow hue; and there is marked pallor of the conjunctivæ and gums. Two small subcutaneous hæmorrhages on the back of the right hand.

The arteries show a moderate degree of thickening; pulse 84, slight irregularity in rhythm and tension not increased; the apex impulse is strong and in the nipple line, the cardiac sounds are normal. The lungs and abdominal viscera present no abnormality on physical examination. Urine pale, S.G. 1015, no albumen or sugar. Urobilin negative with the spectroscope.

Jan. 26.—Blood count, red cells 3,320,000; hæmoglobin 25 to 30 per cent. (Fleischl). Irregularity in size and shape of the corpuscles is well marked. Hydrochloric acid absent from gastric contents in a test meal by same tests as used in first case. Subsequent blood examinations were made as follows:

Feb. 12.	Red cells.	2,250,000	hæmoglobin,	20 to 25	per cent
" 28	"	2,660,000	"	20 to 25	"
Feb. 3	"	2,390,000	"	20 to 25	"

Numerous examinations were made of stained specimens of blood. These always showed marked irregularity in size and shape of the red blood corpuscles. Most of the cells were under rather than over the size of a red blood corpuscle, a very common size being 5.4 m.; microcytes were not numerous, and the largest cells have not been over 10 m. No nucleated red cells have been seen.

The urine has been for the most part pale in color, occasionally somewhat dark. It has frequently in both pale and dark specimens shown the presence of urobilin with Huppert's