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Intravenous injection of hemoglobin in the treatment of anemia.

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Brugsch and Yoshimoto[1], and Whipple and Hooper[2] have shown that hemoglobin, when introduced intravenously into bile fistula dogs, is converted a short time after injection into bile pigment. Whipple and Hooper have also shown that bile pigment circulation does not exist, but that bile pigments are excretions.

On the other hand, McMaster and Haessler,[3] of the Rockefeller Institute, using rabbits, have demonstrated that hemoglobin intravenously injected cures anemia.

With these observations in mind, hemoglobin injections were given to five patients in the New York Hospital (First Medical Division). Altogether eleven injections have been given. The hemoglobin was prepared from fresh human blood. There were two cases of pernicious anemia; two of secondary anemia, and one of myelogenous leucemia. The results are encouraging, and the work is being continued.

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1 Brugsch and Yoshimoto, *Zeitsch. f. Exper. Path. u. Therap.*, 1910-11, viii, 639.

2 Whipple and Hooper, *Am. Jour. Physiol.*, 1917, xliii, No. 2.

3 McMaster and Haessler, *Jour. Exp. Med.*, 1921, xxxiv, 579.