

SUMMA (Hugo)

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IN THE
TREATMENT OF ANÆMIA

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THE year 1893, with the publication of the results of very careful chemical investigations of the conditions of the blood in various diseases, especially those of the blood itself by Professor von Jaksch (1), the well-known author of the *Handbook on Clinical Diagnosis*, marks a new era in our understanding of the various anæmic processes. Our former vague knowledge of these conditions was molded into definite shape and form chiefly by his successful effort to elucidate all the characteristic features common to the various forms of anæmia. He was thereby enabled as the first one to give a definition of this, up to this time, so pliable and undoubtedly much-abused term, anæmia.

Anæmia, in the broadest sense of the word, includes all those processes characterized by a decrease in the amount of albumin and by an increase of the liquid part of the blood; in other words, hypalbuminæmia and hydræmia are conditions present in all forms of anæmia, and

this holds good not only in cases of primary anæmia, like leucæmia and chlorosis, but also in all so-called secondary anæmia.

This discovery enables us to understand the hitherto empirical fact that the treatment of anæmia requires not only or exclusively the administration of iron, but that all the metabolic processes, especially the introduction and assimilation of albuminous substances, must be increased, should the treatment be followed by success. But just this part of the treatment is exceedingly difficult, since one of the most constant symptoms which we meet with in the various forms of anæmia is a more or less high degree of anorexia. This anorexia completes the "circulus vitiosus" so frequently observed in clinical pathology—a circulus vitiosus which must be understood in each individual case in order to be amenable to successful treatment. For it is evident that a continuous anorexia will lead to insufficient nutrition, to subnutrition, thereby constantly increasing the condition of hypalbuminæmia.

The anorexia is, however, a natural sequelæ of this abnormal condition of the blood, in consequence of which, at least in the greater number of cases, the secretion of hydrochloric acid is decidedly diminished (2).

In the treatment of these cases, therefore, we must constantly bear in mind the condition—hypalbuminæmia. In order to facilitate the increase of albumin in the blood, notwithstanding the anorexia already existent, its administration in the form of easily assimilated peptones would be most rational.

Prompted by this thought, I began in the spring of 1893 to make use of Dr. Gude's preparation, known as pepto-mangan, in most all cases of anæmia that came under my observation, with the exception of those accompanying or following chronic infectious diseases, such as

tuberculosis, or of malignant tumors, such as cancer, etc. I collected from my clinical record thirty-four cases. The greater number of these were closely observed, not only as to the influence of the remedy upon the subjective symptoms, but also as to its effects upon the blood by careful examinations which I carried out with the aid of Gärtner's hæmatokrit (3).

This excellent instrument, which requires the use of Professor Gärtner's *Kreisel* (spinning top) centrifugal machine, enables, in a very accurate manner, a determination of the volume percentage of the red blood-cells within about ten minutes.

I prefer this method of determining the efficacy of a remedy against anæmia to the old method of counting the red blood-corpuscles.

Although, generally speaking, the number of the red blood-corpuscles bear a certain proportion to the volume percentage, yet it would be wrong to identify both. In blood diseases especially, the knowledge of the volume percentage is undoubtedly of great importance.

During the above-mentioned period I observed neither cases of leucæmia nor of pernicious progressive anæmia. The thirty-four cases I treated with pepto-mangan were partly cases of chlorosis and partly secondary anæmia, occurring chiefly after subacute malaria and typhoid fevers. Of these I select six as paradigmata, as it were.

Two of these were cases of chlorosis and four cases were secondary anæmia:

CASE I.—Miss A. S., aged eighteen years; chlorosis rubra; oligocythæmia and oligochromæmia; palpitation of the heart; frequent pulse; coated tongue; fætor *ex ore*; constipation; irregularity in menstruation; easily fatigued; muscular weakness.

At the beginning of treatment, thirty-per-cent. volume; eight days later, thirty-eight per cent.; at the end of the fourth

week, forty-eight per cent. Great improvement, slight catamenial disturbances only remaining.

CASE II.—Miss E. B., aged sixteen years; paleness of skin and visible mucous membranes; slight dyspnoea, short breath; oligocythæmia and oligochromæmia; palpitation of the heart; tachycardia; anæmic systolic murmurs, increased second pulmonary sound; disturbances in menstruation; tired feeling; sleepy condition.

At the beginning of treatment twenty-eight-per-cent. volume of red blood-corpuscles were found; increased within eight days to thirty-five-per-cent. volume; after four weeks, forty-five per cent. Apparently complete recovery.

CASE III.—R. T., aged five years; first treated for subacute malarial disease extending over two months. Patient had greatly decreased in weight. No appetite, retarded action of the bowels; great pallor; continuous tiredness and weakness. On examining the blood, I found thirty-five-per-cent. volume of red blood-corpuscles; eight days later they increased to forty-two per cent.; at the end of four weeks to forty-eight per cent. Complete recovery.

CASE IV.—Mrs. A. R., aged twenty-eight years; suffered from chronic malarial disease. Mother of two children, the youngest four months old. Far advanced case of secondary anæmia. Patient unable to do any kind of work. Digestive disturbances. Determination of volume of red blood-corpuscles showed thirty-two per cent., which increased within eight days to thirty-eight per cent., and finally reached forty-five per cent. Great general improvement.

CASE V.—Mr. T. K., aged nineteen years, butcher. Typhoid fever of moderate severity; during this disease panaritium of right thumb followed by lymphadenitis axillaris. Slow recovery. Anæmic condition very pronounced. No prominent single feature. General languor. Shortly after patient had entered the period of convalescence the blood exhibited twenty-six-per-cent. volume of erythrocytes; fourteen days later an increase to but thirty-two-per-cent. volume; after four weeks, forty-six per cent. Patient now in very good health.

CASE VI.—Mr. T. M., aged twenty-four years, saloon keeper. Ulcus ventriculi rotundum chronicum for seven years. Intense localized pains with frequent attacks of vomiting, sometimes of pure blood. Hyperchlorhydria of moderate degree, 3.2 per cent. Quite pronounced anæmia. After recovery from primary disease the volume of his red blood-corpuscles amounted to thirty-six per cent.; eight days later we found forty-per-cent. volume; finally, fifty-per-cent. volume. Patient up to this time was free from symptoms of any kind.

In conclusion, I should like to state that similar good results were obtained in the remaining twenty-eight cases. It is especially worth while mentioning that no bad after-effects could be detected. In this connection I call special attention to the absence of constipation that could be traced back to the use of this preparation.

The dose varied from a teaspoonful to a tablespoonful three times a day an hour after meals, either in sherry or milk, according to the individual case, especially according to the condition of the digestive organs.

Literature referred to.

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2. Bouveret, L. *Traité des maladies de l'estomac*, Paris, 1893, pp. 709, 710, with complete enumeration of literature.

3. Friedheim, Dr. Ueber die Volumbestimmung der roten Blutkörperchen mittelst des Gärtner'schen Hämatokrit und der Kreisel-Centrifuge. *Berliner klin. Wochenschrift*, 1893, No. 4.

Gude's

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