Anaemia is so commonly encountered in the pregnant patients under the care of our hospital and municipal antenatal clinics that it was decided to undertake a survey to determine the incidence of anaemia in pregnancy, the type of anaemia encountered and a logical approach to its prevention and treatment.

The type of anaemia encountered in a particular geographical area will vary. This may depend on dietary or other factors, for example the presence of an endemic disease such as malaria.

Folic acid has been widely advocated as important in preventing anaemia and it was therefore necessary to determine the incidence of megaloblastic anaemia in this community before accepting this therapy.

The following is a brief and preliminary report of the results of this survey.


THE INCIDENCE AND TREATMENT OF SEVERE PREGNANCY ANAEMIA IN THE CAPE TOWN AREA*
TABLE I. DETAILED INVESTIGATION OF ANAEMIA IN PREGNANCY
IN 100 PATIENTS

Total haemoglobin estimations performed .... 45,350
Total patients referred for detailed investigation (Hb. less than 8 G/100 mL) .... 250 (0·5%) Total complete investigations including bone-marrow examination .... 100

Race
Coloured 86
Bantu 8
White 6
Parity
Primigravida 14
Gravida 2 - 4 33
Gravida 5 plus 53
Age in years
< 20 13
20 - 30 48
> 30 39

RESULTS

The aetiology of the 100 severe cases of anaemia is shown in Fig. 1.

There was an overwhelming preponderance of iron-deficiency anaemia, accounting for 86% of the cases investigated.

Only 3 patients showed florid megaloblastic erythropoiesis and an additional 10 patients had mild megaloblastic erythropoiesis (grade 1) in the presence of iron-deficiency anaemia. One patient had haemoglobin-H disease. The over-all incidence of urinary tract infection on culture of mid-stream urine specimens was 10%.

Fig. 2 illustrates the means of the diagnostic criteria in patients who had iron-deficiency anaemia, and in all these cases there was a complete absence of stainable iron in the bone-marrow specimens.

Fig. 3 depicts the values of the red cell folates and the folates in patients with grade 1 and grade 3 megaloblastic erythropoiesis. As can be seen, both levels were very low in the patients with florid megaloblastic erythropoiesis, but in about half the patients with early megaloblastic erythropoiesis these parameters were within normal limits. In addition, 8 patients with normoblastic erythropoiesis had either a low serum folate or a low red cell folate level, possibly indicating folic-acid deficiency.

One may conclude that 21 patients had some evidence of folic-acid deficiency but only 3 had megaloblastic anaemia. On the other hand, as detailed later, the evi-
dence of folic-acid deficiency in the other 18 patients was probably of no significance in relation to the anaemia, which was basically due to severe iron deficiency.

ASSESSMENT OF TREATMENT
Folic-Acid Deficiency
In an attempt to ascertain whether patients with evidence of folic-acid deficiency in addition to iron-deficiency anaemia required folic acid, it was decided to treat such patients with iron only. This was done while keeping a careful watch on their haematological progress, as the development of megaloblastic anaemia can be acute and result in rapid deterioration.

It was only possible to do this adequately in 4 patients, as the other patients required urgent transfusion for obstetrical reasons.

The remarkable response to iron therapy is illustrated in Fig. 4. The serum folates and red cell folates were repeated on 2 of these patients once the haemoglobin had been corrected, and in both cases were found to be still below normal. None of these patients developed anaemia later in pregnancy or in the puerperium.

A fifth patient treated with folic acid alone failed to respond and was transfused.

It was thus decided to compare the response to oral iron with the response to total-dose intravenous Imferon.

An oral preparation, Ferro-Gradumet, containing 105 mg. of elemental iron as a single daily dose, was used. This was easy to control and previous studies had shown it to be both effective and well tolerated.

Intravenous Imferon was administered on an outpatient basis at the recommended dosage (0.3 x wt. in lb.

Iron-Deficiency Anaemia
Iron-deficiency anaemia will respond in most cases to the oral administration of iron. In many cases, however, the response is unsatisfactory, due either to patients failing to take their tablets regularly or, occasionally, to poor intestinal absorption.
the group investigated, in contrast to the groups quoted above.

The response to iron therapy in patients with additional evidence of folic-acid deficiency confirms the statement by Dawson that the presence of megaloblastic erythropoiesis in the marrow of a patient with iron-deficiency anaemia does not mean that the response to iron therapy will be suboptimal or that the patient’s anaemia will improve on vitamin B₁₂ or folic acid.

The reason for the better response to intravenous iron than to oral iron is probably partly due to patient failure, although every possible precaution was taken to avoid this. In certain cases there may have been inadequate intestinal absorption. In either case the more liberal use of intravenous Imferon is justified, and the early correction of tissue and bone-marrow iron stores is an additional advantage.

**SUMMARY**

A total of 45,350 haemoglobin estimations were performed on patients attending antenatal clinics in the Cape Town area. The incidence of severe anaemia (haemoglobin less than 8 G/100 ml.) was 0.5%. Detailed investigation, including bone-marrow aspiration, was performed on 100 such patients with severe anaemia.

By far the commonest cause of the anaemia was iron deficiency, and only 3 cases of megaloblastic anaemia were encountered. Certain patients with evidence of folic-acid deficiency responded to iron therapy alone. Total-dose intravenous Imferon was found to be safe and more effective than oral iron in the treatment of established iron-deficiency anaemia.

All pregnant patients should receive supplementary iron therapy during pregnancy, but folic acid is only indicated in this area in certain selected cases.

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**REFERENCES**


**BOEKBESPREKINGS : BOOK REVIEWS**

**PSYCHOTHERAPY TECHNIQUE**


Numerous changes and additions have been made to the one-volume 1957 edition of *Technique of Psychotherapy*, revealing the strides made in psychotherapeutic practice. There are new chapters on behavioural, existential and Kleinian therapies; indications and effectiveness of various types of psychotherapy; causes of failure in psychotherapy; therapy in children and adolescents; and religion and psychotherapy.

In this revised edition the ‘working-through’ process and the doctor-patient relationship are considered more important than 'intellectual' insight in reconstructive (analytic-type) psychotherapy. Somatic therapies and their indications are also included, as well as an extensive bibliography.

The author displays a refreshingly eclectic, though analytically oriented, approach to psychotherapy. D.S.V.

**VASCULAR DISTURBANCES**


This is a comparatively short but surprisingly complete account of most of the common vascular disturbances encountered in practice. The presentation of the material is to be highly commended and it is a work that is eminently readable.

The descriptions of the various pathological states and their clinical features are of necessity short and limited, but clear and very much to the point. As stated in the preface, this book is based largely on personal clinical experience, and this particular feature is evident throughout the subject matter.

This book is to be particularly recommended for students and general practitioners, and would serve as the basis of knowledge for specialists desirous of acquiring a more detailed knowledge of vascular diseases.