ned the impurities, when it was possible to record the mass spectrum, were always less than 20%.

For the Δ^5Pd and for the cholesterol = C, the impurities were almost always above 40%, making even a tentative evaluation impossible.

We would also like to stress that when the amount of steroid eliminated in 24 hours is less tha 50 - 100 μg, evaluation must be regarded as for guidance only and not absolute, in the sense that in reality it could be always polluted by other steroids or imputities, which at that level are very numerous in the urine.

The precision of the method has been determined by repeated analyses of the same sample of urine collected on the 21st day of a normal cycle (Table 2).

The results shown in Table 2 seem to us satisfactory. In this connexion we are unable to share the pessemism expressed by Vollmin ([6]), and indeed in an earlier work we also obtained, with the use of capillary columns and TMSi and MO-TMSi derivatives, acceptable standard deviation and coefficient of variation.

Figures 3 and 4 are examples of gaschromatographic analyses.

SUMMARY

The method for simultaneous gaschromatographic assay of the principal neutral urinary steroids using glass capillary columns is described. The advantages of this method are described.

Translated by Samil Pabyrn Foundation

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Therapeutic trials in placental insufficiency

by

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A study was made of the efficacy of two therapies for placental insufficiency, based on different precepts: the object of the first is to improve the placental blood flow, whereas the purpose of the second is to intervene positively in placental metabolism by the provision of phosphorylated glycide, fructose 1-6-diphosphate.

Evaluation of the functional conditions of the placenta and of its modifications by the two therapies was based on the radio-immunological assay of HCG ([1, 2, 3, 4, 5, 6, 7]) and HPL ([8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19]) by the double antibody method (Kit and CEA-IRESORIN-Sclavo).

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Clinical Exper. Obst. & Gynecology
Jan. 1974 Vol. I, pp. 45-48

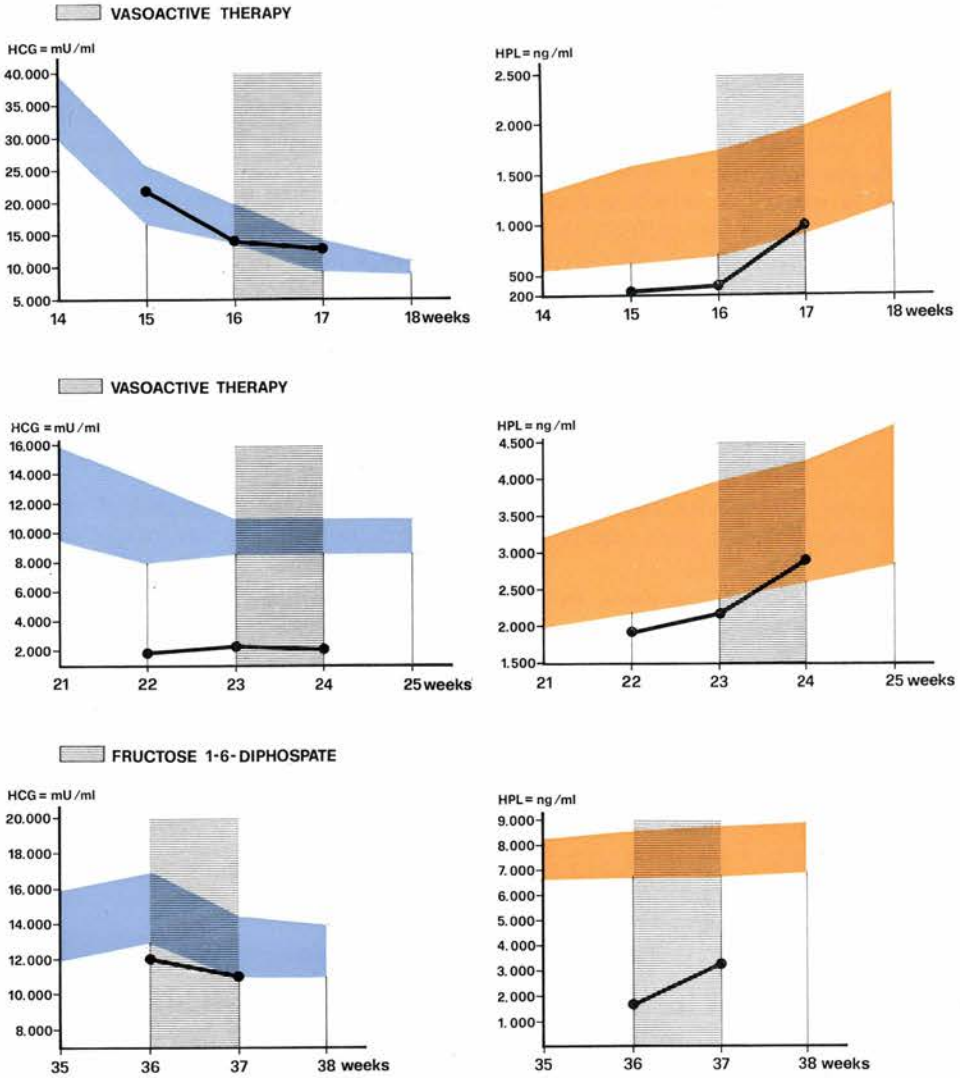

Fig. 1

On the basis of normal HCG and HPL levels both as reported in the literature ([1, 5, 8, 14, 16, 18]) and obtained from out-patients with no clinically demonstrable changes, in whom pregnancy took a normal course, cases were selected which presented pathological levels (a minimum of two standard deviations below the physiological mean).

Some were subjected to a therapy comprising isoxisuprine (Duvadilan) 50 mg plus xanthinol nicotinate (Complamin) 900 mg plus dipyridamole (Persantin) 100 mg in 500 ml 5% glucose solution intravenously for seven days. Others were given a therapy comprising fructose-1-6-diphosphate at a dose of 10 g/day

for seven days. The number of cases treated does not yet permit statistical evaluation of the results.

In the following graphs therefore we only give a few examples.

In four cases out of six vasoactive drug therapy improved the HPL level by an average of 27% and HCG by an average of 30%, taking into account the variations during the course of pregnancy. It had no positive effect in the remaining cases.

The fructose-1-6-diphosphate therapy improved the HPL level by an average of 24% and the HCG level by an average of 12% in 50% of the cases. There was no positive result in the remaining cases.

Administered to patients with pregnancies proceeding normally and with HPL and HCG levels within normal limits (2 standard deviations) neither of these therapies produced any significant change of hormonal production. These preliminary results obtained with a limited number of cases appear to show that in addition to haemodynamic treatment it is possible to give consideration to phosphorylated glycide therapy.

Dextrose therapy possibly associated with insulin which promote phosphorylation and therefore metabolization, appears to give positive results.

On the other hand beta-mimetics would also develop their action in patients with placental insufficiency through modification of glycidic metabolism.

By giving an already phosphorylated glycide such as fructose-1-6-diphosphate better and immediate utilization is achieved. Fructose-1-6-diphosphate should, therefore, give similar results to those of dextrose + insulin without all the other metabolic effects of insulin itself.

The changes of glycidic metabolism which have been observed in placental insufficiency, i.e. low fasting blood sugar levels, flattening of the glucose tolerance curve or fall of the placental fructose-1-6-diphosphate level should therefore be corrected by administration of fructose-1-6-diphosphate which intervenes directly in anaerobic glycolysis and provides preformed high energy rich phosphoric bonds. In addition, fructose-1-6-diphosphate increases placental protein synthesis.

Finally we would like to stress the value of this therapy for the foetus also. In our view it represents an improvement over the dextrose therapy.

SUMMARY

Two therapies for placental insufficiency are compared: the first one improve the placental blood flow, whereas the second provides a phosphorilated glycide.

The preliminary results are discussed.

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Incidence of Rh Immunisation using Intravenous anti-Rh (D) IgG

by

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INTRODUCTION

The intravenous administration of anti-Rh (D) IgG should present certain advantages over intramuscular injection.

To eliminate the Rh positive red cells from the mother's circulation it is clearly necessary that the anti-D immunoglobulin enters the circulation itself. Injected intravenously this is reached quickly and at the full dosage. Intramuscularly, it is achieved after a delay and at a lower level. After five days about 40% of the dose injected intravenously remains in the circulation while with intramuscular injection the maximum concentration in the blood is reached only between the fifth and tenth days and represents 35-40% of the dose injected ([14]).

The prevention of immunization does not depend exclusively upon the removal of the foetus' red cells. This is, however, the only method at present available to prevent the formation of anti-D antibodies.

Intravenous injection of the passive antibodies would more quickly block the antigen action and the central inhibition on the cells capable of immunization.

The method of preparing the intravenous product ([16]) should remove the risk of transmitting viral hepatitis ([17]).

Intravenous administration of the anti-D immunoglobin is more effective in eliminating from the circulation a certain volume of Rh positive red corpuscles than the same immunoglobin injected intramuscularly ([12]).

The time of latency is in fact reduced, the half-life shorter and the destruction of the foetus' red cells more rapid ([14, 15]). Intravenous administration is therefore to be preferred especially in cases of « massive » foetal-maternal transfusions (50 ml) ([12]) while bearing in mind the risk of haemolitic reaction and consequent renal damage ([10]).

Anti-D immunoglobins can be administered intravenously in considerably re-

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