IRON DEFICIENCY AS A CAUSE OF INFERTILITY

A. Tulenheimo-Silfvast and N. Simberg

Dextra Fertility Clinic, HELSINKI, Finland

INTRODUCTION

Although even in industrialized countries 20-25% of women in fertile age suffer from iron deficiency, which is known to be associated with poor outcome of pregnancy, there is very limited information available on fertility in women with low iron deposits. It is known that ferritin is a good indicator of iron reserve. The presence of transferrin receptors in oocytes and granulosa cells has been documented. Further, the Nurses Health Study II showed an inversely related association between iron supplementation and infertility. We wanted to evaluate the effect of iron supplementation on the chance to conceive in infertile iron deficient patients.

METHODS

We identified 62 infertile patients younger than 42 years with iron deficiency, defined as ferritin level lower than 30 ug/l. They had been treated with 500mg intravenous iron supplementation. Patients were divided in 7 groups based on the reason for infertility. This retrospective chart study analyzed the conception results of these patients.

RESULTS and DISCUSSION

Unexplained infertility was clearly overexpressed in the group of iron deficient infertile women, in 29 of the 62 identified patients; 46.8%. Generally, in 10-20% of infertile patients, the cause for infertility remains unknown. Our patients had a long duration of infertility before iron supplementation, mean 33.6 months (range 0-120 months); median 36 months. Of patients who conceived, four had no previous infertility treatment, the remaining 12 had a mean of three previous IVF treatments (range 0-8), median 2.5.

After intravenous iron treatment, the pregnancy rate was 16/29 (55.2%), which is an extremely good result. The miscarriage rate was lower than expected; fifteen have ongoing pregnancies or have delivered, only one has had a miscarriage.

The hemoglobin level had been measured in only 13 patients with unexplained infertility. A single patient had a lower hemoglobin than 120g/l despite of a low ferritin level.

There was also a group of 4 patients with tubal infertility with no known hormonal or metabolic disturbance. They were 36-41 years old, and their ferritin levels were very low, 8-9 ug/l. In this group, 3 pregnancies were achieved after iron supplementation.

CONCLUSION

Low iron reserve is ignored as a reason for unexplained fertility. Further studies are certainly needed.

Dextra
Lapsettomuusklinikka