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Abstract
OBJECTIVE: To evaluate the effectiveness of routine ultrasound scanning in pregnancy by a meta-analysis of various outcome measures.

DESIGN: Meta-analysis of randomised controlled trials evaluating the effect of routine ultrasound scanning on perinatal mortality and morbidity. Live birth rate (that is, live births per pregnancy) is included as a measure of pregnancy outcome in addition to the conventional perinatal mortality.

SUBJECTS: 15,935 pregnancies (7992 in which routine ultrasound scanning was used and 7943 controls with selective scanning) from four randomised controlled trials.

MAIN OUTCOME MEASURES: Perinatal mortality, live birth rate, rate of miscarriage, Apgar score < 7 at 1 minute, and number of induced labours.

RESULTS: The live birth rate was identical in both screening and control groups (odds ratio = 0.99; 95% confidence interval 0.88 to 1.12) although the perinatal mortality was significantly lower in the group who had routine ultrasonography (0.64, 0.43 to 0.97). Differences in perinatal morbidity between the two groups as measured by the proportion of newborn babies with Apgar score < 7 at 1 minute were not significant (1.05; 0.93 to 1.19).

CONCLUSION: Routine ultrasound scanning does not improve the outcome of pregnancy in terms of an increased number of live births or of reduced perinatal morbidity. Routine ultrasound scanning may be effective and useful as a screening for malformation. Its use for this purpose, however, should be made explicit and take into account the risk of false positive diagnosis in addition to ethical issues.

Comment in
Routine ultrasound scanning in pregnancy. [BMJ. 1993]
Routine ultrasound scanning in pregnancy. Apgar scores are poor predictors of outcome. [BMJ. 1993]
Routine ultrasound scanning in pregnancy. The benefits are clinical… [BMJ. 1993]
Routine ultrasound scanning in pregnancy. The benefits are clinical … and psychological. [BMJ. 1993]