

Danish Centre for Evaluation and Health Technology Assessment

PSYCHOLOGICAL ASPECTS, WOMEN'S VIEWS, AND EXPECTATIONS REGARDING ULTRASOUND DURING PREGNANCY – a Health Technology Assessment

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Psychological aspects, women's views, and expectations regarding ultrasound during pregnancy
– a Health Technology Assessment

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Summary

Background

The technological development within the field of obstetric ultrasound is constantly expanding. Vast improvements in imaging capabilities give increasing potential in the use and indications of obstetric ultrasound leading to the discovery of more structural markers, including those indicating chromosomal abnormality. Ultrasound is increasingly being used as a screening tool to detect or assess the risk of fetal abnormalities, which accordingly, may increase findings of uncertain clinical significance. The fact that a scan implies, intended or not, that fetal abnormalities might be detected, further implies that parents will have to consider whether to terminate the pregnancy. The ethical dilemma is intensified by the fact that ultrasound not always provides a hundred percent accurate finding and that the findings sometimes might be difficult to interpret.

However, evidence has shown that ultrasound examinations in low-risk or unselected populations do not benefit mother or child; moreover, as a standard routine, ultrasound might have some drawbacks: increased worry, anxiety, insecurity etc. due to an increase of unclear findings or findings of uncertain clinical significance.

Aims

The main purpose of the present study was to explore the extent of these potential drawbacks by investigating 'patient issues', i.e. psychological aspects, attitudes and expectations regarding ultrasound in a low-risk population of pregnant women undergoing screening for fetal abnormalities at different times during pregnancy.

Four main points has been considered to determine pregnant women's psychological reactions to ultrasound scans in general and to ultrasound screening for fetal abnormalities in particular.

- to determine pregnant women's psychological reactions to ultrasound scans in general and to ultrasound screening for fetal abnormalities in particular
- to unveil pregnant women's attitudes, expectations and motives for obstetric ultrasound
- to examine whether selected clinical and socio-demographic factors might be independent predictors for heightened anxiety in a low-risk population of pregnant women
- to explore potential differences in the above between randomised groups of pregnant women.

Material and methods

The study was designed as a part of a prospective randomised multi-centre study, a Health Technology Assessment (HTA), which main purpose was to estimate the detection rates of fetal abnormalities visualised by first and second trimester ultrasound on women considered to be low-risk pregnant. Women were consecutively randomised for: 1) no ultrasound scan. 2) nuchal translucency (NT) scan. 3) scan for fetal structural abnormalities or 4) both NT- and abnormality scans. Randomisation was done if there were no anamnestic indication for ultrasound.

Constituting one part of the HTA, the present study was designed to analyse "patient issues", which were identified by a series of four questionnaires comprising the State Trait Anxiety Inventory and the Cambridge Worry Scale among non-standardised questions. A subgroup of the full HTA comprising 2500 low-risk pregnant women consecutively enrolled and randomised from March 2002 through November 2003, constituted the study population. Questionnaires were sent at gestational

weeks 8, 22, 35 and 12 weeks after estimated date of delivery and an additional one was completed immediately after NT-scan and ultrasound screening for fetal abnormalities.

Main results

Ultrasound in pregnancy is very popular to pregnant women. 90% revealed that ultrasound should be an offer by choice in antenatal care. Major part of women wanted ultrasound offered as NT-scan or abnormality scan and compared with invasive testing only 10% might receive such an offer in case of free choice.

The major motives to have a scan were to be assured that everything was normal, to feel safe, and to be informed if something was wrong with the baby, and the study confirmed that women theoretically wanted the information about fetal health to be as specific as possible, even though they did not want to be confronted with ambiguous findings. About 40% allegedly might accept an invasive testing if a risk assessment on Down's syndrome was 1:400. If Down's syndrome were diagnosed, about 48% might choose abortion. Women's nationality, age, educational level, and ultrasound in a previous pregnancy were predictive of attitudes towards these matters.

Routine ultrasound (NT- or abnormality scan) caused an immediate but transient decrease in anxiety level. Across ultrasound groups, no significant differences in anxiety were found. Adverse or suspicious findings caused a significantly higher and persisting anxiety score mean also when related to earlier pregnancies. Anxiety level seemed to be associated with number of scans. Analyses revealed that heightened anxiety in pregnancy at baseline evidently was associated with several potential predicting factors constituting ethnicity, age, educational level, reproductive history and ultrasound scan findings in a previous pregnancy.

Conclusion and perspectives

Identification of the subgroups for heightened anxiety may contribute significantly to anxiety reduction if adequate antenatal counselling, advising and suitable care may be provided for these particular vulnerable subgroups of pregnant women. In addition, future studies on the association between heightened anxiety in pregnancy and predicting factors are required. The fact that attitudes towards risk assessment, termination and related matters additional are associated with certain socio-demographic factors may also be highly relevant for clinical practice.

The study unveiled big discrepancy between factual performed terminations on Down's syndrome (98%) and pregnant women's attitudes towards the condition before diagnosis (48%). Health professionals are important sources of information and counselling, and their views may have significant influence upon women's decisions to accept risk assessment and to terminate an affected pregnancy. Future research might focus on women's knowledge about ultrasound screening for fetal abnormalities and further on attitudes and expectations of health professionals towards some of these qualitative matters to compare with present results. Of particular interest, though predictable, is the revealing of heightened anxiety subsequent to an ambiguous ultrasound finding. A condition that was found to influence the anxiety level in a later pregnancy too. This implication calls for an evaluation of the extent of these ambiguous findings, which inevitably may increase, due to more ultrasound examinations comprised by the newly implemented risk assessment for Down's syndrome.