Antenatal screening and its possible meaning from unborn baby's perspective

ABSTRACT

In recent decades antenatal screening has become one of the most routine procedure of pregnancy-follow up and the subject of hot debate in bioethics circles. In this paper the rationale behind doing antenatal screening and the actual and potential problems that it may cause will be discussed. The paper will examine the issue from the point of wiew of parents, health care professionals and, most importantly, the child-to-be. It will show how unthoughtfully antenatal screening is performed and how pregnancy is treated almost as a disease just since the emergence of antenatal screening. Genetic screening and ethical problems caused by the procedure will also be addressed and I will suggest that screening is more to do with the interests of others rather than those of the child-to be.

INTRODUCTION

Introduction Antenatal testing (ANT) is widely used in modern obstetrics and gynaecology. I shall discuss the procedures involved in ANT from different perspectives, beginning with definitions of 'antenatal screening' and 'antenatal diagnosis', the main objectives and indications for their use. Secondly, I will discuss the risks and complications of ANT, the concerns, doubts and moral controversies it raises. Thirdly, since counselling is an integral part of ANT, I shall try to determine what the ideal of counselling before and after ANT is meant to be. Finally, with particular reference to some relevant concepts like 'responsibility', 'suffering' and 'interest', I attempt to describe the whole issue more comprehensively. Recent studies have indicated that the major paediatric health problems are handicaps due to genetic disorder or congenital malformation. When it was noticed that more than a quarter of all deaths in the first year of life were due to fetal abnormalities, scientists were alarmed and parents sought a 'remedy' for the 'problem'. Although antenatal diagnostic techniques were initially described in the nineteenth century, it was not until the middle of 20th century that the techniques were applied to AND and management of various genetic disorders and congenital malformations. And, at the present time, antenatal screening and diagnostic techniques are almost the norm. It has been said that, probably around 90% of women in the UK have undergone one of these at some time during pregnancy. Although there is only a slight difference between the two procedures, the authorities do distinguish between antenatal screening (ANS) and antenatal diagnosis (AND). Aims of antenatal testing ANS services are based on population screening to identify people with a genetic risk, or a risk of having a child with a congenital or genetic disorder. In the Dutch Health Council report on genetic screening, the major aim is defined as: "To enable people to decide upon a course of action that is acceptable for them". ANS includes: 1. Screening for sporadic conditions affecting the fetus (infections, chromosomal disorders, malformations, maternal diabetes); 2. Family history for genetic risks; 3. Population screening for carriers of common recessively inherited diseases. Different health authorities in different countries have pointed out various aspects of ANS. While the Danish Health Council considers screening as a community-based form of help based on the obligation to help the weak, the Nuffield Council on Bioethics (in Britain) points out that, although the primary aim seems to be to improve the health of persons suffering from genetic disorders, the benefits should include enabling individuals to take account of the information for their own lives, and empowering them as prospective parents to make

informed choices about having children. Although the screening test is not usually in itself diagnostic, it detects a subgroup of those tested who are at higher risk of having the disease or disorder than the original population screened, in many cases it is possible to make diagnoses with considerable accuracy. Three different types of ANS methods are widely used; 1. Biochemical Screening In this technique, a single specimen of blood taken from a pregnant women at about 16-18 weeks of pregnancy, can be used to screen for Down's Syndrome and open neural-tube defects. This can detect about 60% of pregnancies with Down's Syndrome, about 90% of pregnancies with open spina bifida, and virtually all cases of anencephaly. Biochemical screening tests are used to identify those women who are at high enough risk to justify the hazards and costs of the diagnostic procedures. 2. Genetic Screening The sensitivity and the specificity of genetic screening is fairly high. The test is carried out either by amniosentesis or by Chorionic Villus Sampling (CVS) at 14-16 weeks and 8-9 weeks respectively. Using standard cytogenetic techniques it is possible to culture amniotic fluid cells from as little as 10 ml. of amniotic fluid at 12 weeks, although successful culture before this time is currently less reliable. In CVS chorionic tissue obtained via endoscopic biopsy is used to make the types of fetal diagnoses by culture of amniotic fluid cells The objectives of genetic screening developed by the Royal College of Physicians (London) are: - to allow the widest possible range of informed choice to women and couples at risk of having children with an abnormality. - to allow couples to embark on having a family knowing that they may avoid the birth of seriously affected children through selective abortion. - to ensure optimal treatment of affected infants through early diagnosis. 3. Ultrasound Screening The objectives of ultrasound screening are defined as: -to reduce the prenatal mortality and morbidity; and -to allow the identification of a group of babies for whom treatment in utero may be appropriate by defining structural abnormalities.

CONCLUSION

In conclusion we can say that, although there are different views in the wide bioethics community, antenatal screening and antenatal diagnosis are new technologies developed to contribute to our happiness and welfare, but like many other new technologies, they are accompanied by new moral controversies. It is not proper to conclude that "ANT is good", or "ANT is evil"; deciding this issue is firmly attached to a number of ethical dilemmas at the heart of which is the 'moral status of the prenate'. So, deciding the issue is dependent upon the views of the person, and a case-by-case approach can be suggested. If any embryological stage is defined as the beginning of a human individual, only testing but not termination may be allowed. We have stressed the vital importance of providing the parents with good counselling before and after ANTs. The aim of good counselling is to inform and enable parental understanding and choices with respect to their unborn child; health care professionals should not impose their own beliefs upon the parents. What they can and must do is to debate the issues among themselves, to review their criteria for advising ANT procedures, and for the choices that may follow, so that they are providing the best possible service to their patients who are, of course, 'persons', a category which the prenates may also belong, at least in the minds and hearts of their parents.