

CHANGES TO SCREENING FOR DOWN SYNDROME AND INTERPRETING THE NT SCAN

At the beginning of February 2010 major changes were introduced to the way antenatal screening for Down syndrome and some other conditions takes place. The new screening programme means that the nuchal translucency (NT) scan is no longer the main component of assessing the risks of the baby having Down syndrome during the first trimester of pregnancy.

There are now two options for screening for Down syndrome both of which are intended to improve the quality and safety of Down syndrome screening. The MSCC has become aware that the changes are causing some confusion for both health professionals and women. The confusion has been exacerbated by a very misleading letter that Ascot Radiology began sending out to maternity service providers in March.

The two options are exclusive meaning that a woman who has a first trimester blood test and an NT scan cannot then have a second trimester blood test. The two options are:

Option 1 – First Trimester Combined Screening

This option is only available to women who go to a doctor or a midwife prior to 14 weeks of pregnancy. It involves having a blood test (maternal serum screening) done between 9 – 13 weeks 6 days of pregnancy, followed by an NT scan which must be taken between 11 – 13 weeks 6 days. The blood test which is best done between 11½ to 13½ weeks, is available free of charge, but there may be a part charge for the NT scan.

Women are being encouraged to have the blood test prior to the scan, or at the same time as the NT scan if they have to travel some distance for these tests. The blood test measures the levels of plasma protein-A (PAPP-A) and beta human chorionic gonadotrophin (BhCG) which tend to be different if the baby has Down syndrome or some other condition.

The results of the blood test are combined with the NT scan result along with other information such as age and weight and how far through the pregnancy the woman is, to give a much more accurate assessment of the risk of the baby having Down syndrome or some of the other conditions that are able to be detected.

The Ministry now requires ultrasound scan providers to refrain from discussing the risk assessment for Down syndrome with the woman during her NT scan. Instead the new system requires the person undertaking the ultrasound scan to interact with the woman in their usual manner and then send a copy of the NT scan report to the laboratory. The laboratory will carry out the risk calculation based on both the blood test and the NT scan report. The risk result will be sent to the woman's LMC three working days after the blood and NT tests have been received by the laboratory.

If the nasal bone measurement is included in the ultrasound report, it will be incorporated in the risk calculation. However, it is important to note that there is no requirement to measure the nasal bone. This is due to the fact that there is uncertainty about how nasal bone measurement can be applied to the New Zealand population as there no robust data on measuring the foetal nasal bone in Maori and Pacific populations.

Option 2 – Second Trimester Maternal Serum Screening

As already noted option 2 is only available to women who did not have a blood test or an NT scan during the first trimester of pregnancy. It involves having a blood test taken between 14 and 18 weeks of pregnancy, although it can be taken up until 20 weeks.

The second trimester blood test will be more accurate than the triple test that was available prior to February 2010 because it measures four chemicals in the blood instead of three, and when combined with other information such as age and weight it provides a better risk assessment than was previously available. The four chemicals that are measured are beta human chorionic gonadotrophin (BhCG), alpha fetoprotein (AFP), unconjugated oestriol (uE3) and inhibin A. The levels of these chemicals tend to be different if the baby has Down syndrome or some other condition.

It is important to note that the results of each option give either a low risk or an increased risk of the baby having Down syndrome – only a diagnostic test such as amniocentesis can confirm whether the baby has Down syndrome or some other condition.

Copies of the two pamphlets produced by the National Screening Unit – “*First Trimester Combined Screening*” and “*Second Trimester Maternal Serum Screening*” – are on the NSU website: www.nsu.govt.nz/current-nsu-programmes/antenatal-screening.asp

On-line education for GPs and midwives

The NSU has developed a comprehensive programme of on-line education for GPs and midwives. There are two modules. The first module covers screening principles and practice, and the second module covers quality improvement in screening for Down syndrome and other conditions.

Unfortunately there has not been the response expected to the on-line education modules. While there have been around 14,000 views of the first module, only 176 practitioners have enrolled and only 68 achievement certificates have been awarded. There have been around 9,000 views of the second module, with 91 practitioners enrolling and 17 certificates being awarded.

The MSCC recommends that women ask their GPs or midwives what they know about the recent changes to screening for Down syndrome and whether they have undertaken the on-line education programme.

Further information is available from the National Screening Unit website:

www.nsu.govt.nz/current-nsu-programmes/2781.asp

www.nsu.govt.nz/health-professionals/3517.asp

**This article first appeared in the MSCC June 2010 newsletter
Issue Number 79**