

New scan in town – TheStar.com.my, 10 July 2007

By PATSY KAM

The nuchal scan is non-invasive and there is no risk of miscarriage – good news for older pregnant women.

MANY women today have their own careers and the thought starting a family gets relegated to the backburner. By the time they are established at work and feel they are ready to settle down, it might be a little late.

Fortunately, this doesn't mean the outcome of late motherhood is always bad. Thanks to advances in medical science, most older women have healthy babies.

However, in some cases, the baby is born with a chromosomal abnormality such as Down Syndrome (Trisomy 21). It is the most common cause of learning disability in children; in the absence of antenatal screening, about 1 in 700 babies would be affected. Those born with Down Syndrome have varying degrees of learning disability, and often it is severe.

The common misconception is that only the woman who has her first child late in life is affected. But the fact is the risk increases with age regardless of the number of children she's had before. A woman at age 25 has a risk of 1 in 1,250. At 35 years, the risk increases to 1 in 365 as an older woman is more likely to have a screen-positive result as she starts with a higher age-specific risk of Down Syndrome.

About 50% of Down Syndrome pregnancies will miscarry between conception and term, but nine out of 10 affected babies who reach term will survive their first year.

In the past 15 years, antenatal screening for Down Syndrome has developed rapidly. It used to be that the only way to confirm this was to perform invasive tests such as chorionic villous sampling (CVS) or amniocentesis. However, these procedures carry a risk of miscarriage of between 0.5% and 1%.

“Some recent studies have shown that ultrasound measurements of the nuchal translucency (the thickness of the fluid-filled space under the skin at the back of the foetal neck) and presence of the nasal bone will detect almost 90% of Down Syndrome,” says consultant gynaecologist Dr S. Raman.



I did it, too: Consultant gynaecologist Dr Yap Moy Juan and her twin boys, Brandon and Bryan. She had a nuchal scan done when she was 12 weeks pregnant.

“Since it is non-invasive, there is no risk of miscarriage. The ideal time to measure this is between 11 weeks, and 13 weeks and 6 days gestation (crown to rump length of between 45mm to 84mm). The presence of the nasal bone is also noted.”

The trans-abdominal probe is used for this scan, which takes only 20 minutes. You don’t need any preparation but a full bladder is recommended.

“The absence of the nasal bone is another marker for Down Syndrome detection. The scan will also show accurate assessment of the gestational age, foetal heart rate, the number of foetuses and foetal viability. About 3% of pregnancies fail to carry on when scanned during this time. The diagnosis is made when foetal heart movement is seen on ultrasound,” he adds.

The foetal anatomy will also be examined as some physical (structural) abnormalities can be diagnosed at this stage of pregnancy.



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The detection rate can be further increased by the measurement of two hormones in the mother’s blood (Beta HCG and Papp-A) or the first trimester biochemistry. This combination of ultrasound scan and first trimester scan will increase the detection of Down Syndrome to well over 90%.

“I wasn’t aware that there was this nuchal scan. I learnt about it in a newspaper article and asked my doctor about it. He advised me to go for it if I wanted a more detailed scan. Since I was about 12 weeks pregnant then (the right time to perform the nuchal), I did,” explains freelance writer Joanne Tan, 40, who will be delivering this November. Her first child is four years old.

“I have to do the maternal blood test at some point. This particular blood test gives a more accurate reading, anyway. I’ve got friends who went through amniocentesis and are fine, but I don’t like the idea of poking a needle in my belly.

“Besides, it would have been traumatic to lose your baby at 17 weeks when you’re already visibly pregnant. Some women do an amniocentesis because they want to know (if there’s some anomaly) but I see it as a screening process to ascertain my risks. Given the chance of miscarriage, it’s not something I want to do at my age. Even for my first child, the doctor informed me of my choices but I didn’t feel the need to go through an amnio then. Thankfully, with this new scan, women who have babies later in life, like me, have more options.”

The three markers are used together with the woman’s age to estimate the risk of having a baby with Down Syndrome.

“Women with a risk of 1 in 250 or greater are interpreted as screen-positive and will be offered amniocentesis or CVS to confirm normality of the chromosome. Most will have a normal chromosome and they require a detailed scan at 20 weeks to look for cardiac anomalies. On average, about one in 30 women will have a positive screen and one in 35 with a positive screen will have a Down Syndrome baby,” says Dr Raman.

If there was a previous pregnancy with Down Syndrome, the result will be classified as “screen-positive” regardless of the woman’s individual marker levels or her individual risk which will still be calculated taking into account both the marker levels and her previous history.

For consultant gynaecologist Dr Yap Moy Juan, who gave birth to a pair of twin boys four months ago, the arrival of the nuchal scan on the local medical scene was a godsend.

“I prefer not to go through an amniocentesis. After trying for so long to have a child, I didn’t want to risk losing it. I’m quite pleased with the scan. Otherwise, I would’ve had to go through an amnio, and then bear the risk and fear for the next few months until the baby arrives.”

Dr Yap recommends the scan to her patients when they are about 12 weeks pregnant.

“The doctor also plays an important role in reassuring the patient, and helping her decide whether she should have an amnio or not.”

Funnily, even after having the scan herself, her husband (who is an orthopaedic surgeon) was still doubtful.

“He kept asking me whether I was sure it was good enough. I was more concerned that everything was in the right place,” she says with a laugh.

“I was hoping very hard that the scan would be normal. Since it was, I opted not to have the blood test. I’m at the right age for all the risk factors. The scan cuts down the risk that comes with invasive procedures. It also gives the patient more choices and the rate of accuracy is very high.”