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What a scan is ?

A scan is a technique that permits us to visualise the organs of our body, using of high frequency soundwaves (these soundwaves cannot be heard by the human ear). The scan works with the same principle of ship sonar system does in detecting submarines under water. In practice, a scan works in this way: a probe is laid on the mother's abdomen, sends out high frequency soundwaves which go into the area being examined. Some of these reflect, in part, onto the abdominal wall and, in part, onto the wall of the uterus, generating echoes. When these soundwaves hit the fetus, they bounce back and generate echoes, which turn into images on the monitor of machine. A scan makes it possible to have a detailed image of a fetus inside the uterus.

Why have a scan ?.

The most common reason is to determine with precision the gestational age of pregnancy, the position of the fetus and to verify normal fetal development.

What can be seen by a scan?.

In the first two to three months of pregnancy it is possible to assess if the development of the fetus corresponds with the gestational age, calculated using the last menstrual period date. Sometime this date does not correspond, because of an irregular menstruation: a scan within the first three months of pregnancy can gives a precise gestational age. From the end of the second month it is possible to visualise the fetal heart, fetal movements and the possibility of multiple pregnancy. Later, about the fourth month, the head, the abdomen, the femur are measured and compared with those expected at this period of pregnancy. In this way you can see if the fetus growth is in agreement with that expected for this period of pregnancy (following reference curve). At this time it is possible to see the location of the placenta and the amount of amniotic fluid and some internal organs are depicted (eg. kidneys, bladder and stomach).

Is it possible to evaluate internal organs of the fetus?

As well as the organs that are normally measured (head, abdomen, femur) the bladder, kidneys, stomach and intracranial structures can be visualised. Scan also permits examination of other parts of the fetal body (eg. the heart), although, the evaluation of some organs is done specifically, as requested (second level examinations). Detection of possibile abnormalitie depends on the its dimension, on fetal position in the uterus, the amount of amniotic fluid, and thickness of the mothers abdominal wall. Some fetal abnormalities therefore may not be detected by an ultrasound scan and several abnormalities present themseves later on in the pregnancy being detectable only after the seventh or eighth month. It should be noted that due to scan limitation there is a possibility an abnormality may go undetected. **Recent literature suggests that a not targeted scan allows the identification of 30% to 70% of all malformations.**

Is scan safe for the fetus?

Scans have been used in obstetrics for more than 25 years. There is no scientific evidence to suggest this procedure can cause dangerous effects in the long run to the fetus, for this reason ultrasound scan is considered free from risks.

DATE

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SIGNATURE