Multicystic Ovaries

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You may have heard of polycystic ovaries – a common condition causing irregular periods and infertility. This condition is thought to be caused by an imbalance in the hormonal messages between the pituitary and the ovary. Far less common is the situation of multicystic ovaries. These are ovaries responding normally to lower than normal levels of pituitary hormones.

The diagnosis of these conditions is primarily by ultrasound. In polycystic ovaries there are multiple tiny cysts (immature follicles) approximately 2 - 8mm in size, usually on the periphery of an enlarged ovary.

In multicystic ovaries there are many follicles of various sizes (from 3mm - 12mm) in a normal sized ovary. These follicles are distributed throughout the substance of the ovary giving a 'swiss cheese' appearance.

In both polycystic and multicystic conditions there is no need for any concern that the 'cystic' pattern might be malignant or potentially cancerous. The cysts are in fact follicles which under a normal hormone environment would develop to produce mature eggs (oocytes). The lack of appropriate hormonal stimulation has led to their growth but not to development into mature eggs.

All girls going through puberty pass through a stage of having the multicystic appearance in their ovaries. It is usually at the stage of development (but before the first period) when they are starting to grow in height and gain weight, and the breasts are developing. It is thought the pituitary is just starting to send the appropriate messages to the ovary but these are either not in sufficient quantity or are at the wrong time to allow the normal follicle development which leads to production of an egg.

One of the main factors thought to contribute to the establishment of the right pattern and timing of messages is body weight. Stress can also play a negative role.

Therefore the situations when this abnormal multicystic picture occurs are when significant weight loss takes place (down to or below the weight at the time of a woman's first period) or when there is severe stress and anxiety. A classical situation with both of these situations is anorexia nervosa. Multicystic ovaries are seen more in the early stages and during the resolution of anorexia nervosa. In the severe situation the ovaries become inactive with no follicle activity.

Generally with multicystic ovaries, periods will be absent or extremely irregular. Oocyte (egg) production is rare or non-existent and so infertility is the norm. However, this does not mean the ovaries are in any way abnormal. They still have a full complement of immature eggs and so have the capacity to be stimulated to produce mature eggs.

If your doctor finds the multicystic picture on ultrasound he or she will inevitably ask about weight and personal stress. The doctor is not accusing the patient of being anorexic. If there has been weight loss, a diet to build up weight would be recommended. If stress is a major factor, counselling may be beneficial.

Doctors have some reservations about treating infertility if a women is seriously underweight. There is good evidence that pregnancies in such circumstances are more likely to result in premature deliveries and small babies (growth retardation) with long-term problems. In addition, significant stress does not provide the best environment for child-bearing. Weight gain and reduction of anxiety are the best cures.

However, with treatment excellent results are possible. The two options are:

- a pump connected by a needle under

the skin which releases GnRH (the hormone which tells the pituitary to release its hormones (FSH – Follicle Stimulating Hormone and LH – Luteinizing Hormone) in the correct amounts at the correct time

- direct stimulation of the ovaries by injections of the pituitary hormones on a daily basis

Both options outlined above have pregnancy rates of 60 to 70 per cent over a six month period of treatment (assuming all else is normal). These should be tried before any attempts at in vitro fertilisation (IVF).

Professor Michael Chapman