

**British Broadcasting Corporation
Radio Science Unit
Case Notes Programme No. 1 - Thyroid**

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Presenter: Mark Porter
Reporter: Lesley Hilton
Contributors: Mark Vanderpump**

PORTER

Hello and welcome back to a new series of Case Notes - as usual we'll be covering a diverse range of medical conditions over the next nine weeks, including herpes, knee problems, and the latest thinking on sciatica and prolapsed, or "slipped" discs. And there is still a chance to get in touch if you want us to cover a particular subject - I'll be giving you the details of how to do that later on.

But first today's programme - which is all about thyroid disorders.

The thyroid is a butterfly shaped gland lying under the skin just in front of the voice box. Despite weighing in at just 20g - less than an ounce - it packs a major punch thanks to its ability to manufacture and secrete two hormones that influence the metabolism of every one of the trillions of cells that make up the body.

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PORTER

Mark we haven't mentioned cancer yet, can abnormal thyroid hormone levels be a sign of a more sinister underlying problem?

VANDERPUMP

Thyroid cancer tends to present with just thyroid nodules and we don't associate either under-activity or over-activity with thyroid cancer.

PORTER

A lump basically.

VANDERPUMP

A thyroid lump yeah.

PORTER

But most lumps we find in the thyroid will not be cancerous.

VANDERPUMP

Well it's also important to recognise how common thyroid nodules are in the general population, so if you passed an ultrasound scan over every neck in London you'd probably find a third of the population would have thyroid nodules even very tiny ones. The problem is, is finding the very few that turn out to be thyroid cancer.

PORTER

Well to find out more about thyroid cancer we sent Lesley Hilton to Newcastle to meet Kate Farnell, and the team looking after her.

ACTUALITY

Hi Kate, how are you doing?

Hi Petros, I'm fine thanks. Feeling a bit tired but other than that okay.

Okay. Apart from that has anything else changed since the last time we met?

Yes I think I'm putting weight on. No matter ...

HILTON

Kate Farnell is at the Northern Centre for Cancer Treatment at Newcastle General Hospital for her regular check up with her consultant. She developed thyroid cancer eight years ago when she was in her 40s. Dr Petros Perros is a consultant endocrinologist in Newcastle. What does he think causes thyroid cancer?

PERROS

We know that there are certain cases where there is a genetic pre-disposition and that is the minority. It tends to be the medullary thyroid cancers and in certain cases there is a faulty gene which predisposes families to develop thyroid cancer. We also know that exposure to radiation predisposes people to it but in most cases we really don't know what causes it. And I think one way of thinking about it is that it's probably bad luck that a number of series of events happen to the same thyroid cell which causes its genetic content and predisposes them to produce cancers.

HILTON

Most people who have thyroid cancer will die of something else. The most common types of the disease are the papillary and follicular sorts. They are known as the differentiated cancers and have the highest rate of successful treatment with around 80-90% of patients being cured. But there's another rarer type called anaplastic - and that is a much more aggressive cancer which tends to kill within a matter of months.

ACTUALITY

I need to have a feel of your neck Kate, okay?

Okay.

Look forward, just look straight at me and swallow for me. Excellent. Very good. I'm going to feel from behind. Very good. Head down just a fraction, thanks.

HILTON

Kate had follicular thyroid cancer. Her only symptom was that one day she noticed that the side of her neck looked swollen. She had a scan and a biopsy and then surgery to remove her thyroid before she could begin radioactive iodine treatment. She found the whole thing very difficult which wasn't helped by having to be in virtual isolation because the treatment made her radioactive for a time.

FARNELL

It was awful I was particularly tired and very depressed. My son was coming up to his 13 birthday and we ended up having a Bart Simpson cake with all of us in bed eating the cake because by that time I was just so flat, miserable, my face was all puffed up. I went deaf in one ear and I actually had to go to theatre and have a grommet put in because of the build up of fluid. So yeah pretty awful time, pretty awful time. Dealing with all of that on top of the two operations and knowing that I had cancer.

HILTON

Consultant oncologist Dr Ujjal Mallick also works at the Newcastle centre. He outlines the treatment options for the different forms of thyroid cancer beginning with the differentiated type.

MALLICK

The treatment options available for that particular cancer is surgery first, followed by radioactive iodine. Radioactive iodine actually acts as a magic bullet for this particular cancer and in addition to radiation therapy, radioactive iodine, these patients also need a lifelong high dose of thyroxin which is necessary to keep another hormone called TSH well below the normal range. The mainstay treatment for medullary thyroid cancer is surgery. Radiotherapy has no - very little role, radio iodine actually has no role for this particular cancer. For anaplastic thyroid cancer the vast majority of patients are elderly and the disease presents itself late and very little could be done in the majority of cases.

HILTON

Kate is now doing well and living a normal life again although she'll always need regular checkups.

FARNELL

My prognosis is excellent. I am coming up to eight years on now. I've gone through all of the protocol of having treatment, having a number of what we call challenge scans to make sure that the treatment has been wholly successful. I will never be discharged from care. For the first five years it was pretty intensive - every four months, every six months, and now it's just once a year. I have good quality of life, although I have to be honest and say I don't feel the way I did before all this happened - I can't do as much, .I get tired.

PORTER

Kate Farnell talking to Lesley Hilton.

Mark, on a slightly different note, I've got some salt here, iodine used to be routinely added to table salt in the UK but doesn't seem to be any longer. Are thyroid problems becoming more common as a result?

VANDERPUMP

Well there are two issues. Firstly, historically, we were iodine deficient and this explains the Derbyshire neck, which was the thyroid gland growing and responding to the lack of iodine in the diet and indeed a third of the world is still iodine deficient.

PORTER

Derbyshire because it's presumably away from the sea?

VANDERPUMP

Away from the sea. And it's to do with the water, the iodine in the water supply. Nowadays we're considered to be iodine replete and we don't need to take any iodine supplements routinely.

PORTER

You do hear about people taking supplements - iodine supplements - natural seaweed and things, kelp, to improve their thyroid health, is there any evidence that that can help you with your thyroid?

VANDERPUMP

Well not really, is the answer, and there are two issues. One is if you've had an over active thyroid or are at risk of an over active thyroid iodine can actually precipitate that event.

PORTER

Yeah, act as an accelerant.

VANDERPUMP

And secondly, if you're on thyroxin replacement you've got your thyroid hormone ready made and you don't need iodine anymore because you're taking it within the molecule itself.

PORTER

Dr Mark Vanderpump, we must leave it there, thank you very much.

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