British woman coughs up oral tumour

COVENTRY, UK: A woman from Coventry has coughed up a cancerous tumour. According to reports, 57-year-old Claire Osborn had two coughing fits, both of which produced pieces of the tumour. It is believed that the lump, which is thought to have been growing on the back of her throat, became dislodged before the coughing fits.

Osborn took the 2 cm heart-shaped lump to the doctors. “I knew something was very wrong so I went straight to my GP,” Osborn was reported to have said. Scans showed that the tissue was in fact an aggressive throat and mouth cancer. Osborn was informed that there was a chance that the tumour may not be the only one in her body.

“I was devastated. I just thought I was going to die,” Osborn was reported to have said. However, doctors were amazed to find that the cancerous tumour was in fact the only one in her body and after a scan at University Hospital Coventry she was given the all clear. According to one report, Osborn said: “The consultant turned round to me and said ‘it appears you have coughed up your cancer. Congratulations!’.”

Fewer than 50 similar cases have ever been recorded in the world. Head and neck surgeon Gary Walton was reported to have said: “We suspect the tumour grew on a stalk at the back of her mouth which is very difficult to detect. Somehow she dislodged this, the stalk snapped and she coughed up the tumour."

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action on bacteria is at the plasma membrane level (Mandel, 1998) where the positive charge creates an attraction between the molecule and the negative charge of the phospholipids that make up the bacterial cell membrane. Once the molecule attaches to the membrane, the non-polar side of the CPC penetrates and alters the cellular membrane. This alteration causes an osmotic imbalance and causes loss of cytoplasmic material and then cell death.

Even though it can also stain enamel, it does this at a much lower degree than CHX. Different in vitro and in vivo studies have proven that CPC at different concentrations is effective in reducing supra and subgingival dental bacterial plaque, which in turn also reduces inflammatory response12,13. Likewise, work carried out by Bolduan et al in 2005 clearly describes that a formulation with CPC, CHX and Zinc Lactate has very good results, significantly eliminating anaerobic microorganisms, such as F. nucleatum and P. intermedia from the tongue surface and from the saliva.

Similarly, a clinical study comparing different mouthwashes showed a reduction in anaerobic microorganisms in patients’ saliva samples. This same study also measured the quantity of volatile sulphur compounds (responsible for the bad odour of halitosis) and proved that they were reduced considerably when using mouthwashes with CPC as one of its active ingredients.14

In a review from year 2008, van den Broek et al compared results from different clinical studies where the activity of different mouthwashes against halitosis was tested. They pointed out that studies in which products like HALITA, which contains CPC, CHX and Zinc Lactate in its formula are the ones that yielded the best results.

Other clinical studies have tested mouthwashes with different formulations and concentrations of CPC15,16. In general, their results show that this compound, by itself at different concentrations has antiplaque effects. It has also been combined with Sodium fluoride, alcohol and CHX with the intention of reducing the concentration of the two latter compounds because of their adverse effects.

Thus, it has been proven that CPC can be used as a treatment for certain oral pathologies, like for instance, mucositis, especially in patients who have undergone irradiation for head and neck cancer or those who suffer from periodontitis or gingivitis.

Dr. Rubén León
Director of R&D at Dentaid, B.S. in Biology and PhD in Genetics.

What research has Dentaid carried out on the CPC molecule?

At Dentaid, a number of studies have been performed using this molecule, that have led to the concoction of diverse formulations that currently aid in human oral hygiene. Also, among these, we have studies on antimicrobial activity, stability studies of the formulations for replacing ethanol in mouthwashes and improving CPC’s bioavailability.

We have also carried out different clinical studies with national and foreign universities that have shown that products containing this molecule are among the most efficient on the market.

Having proven the properties of this molecule, how is Dentaid applying it in its products?

Dentaid has developed a line of products that contain CPC among its active ingredients, products that are meant for care and treatment of pathologies like periodontitis, gingivitis, halitosis or maintenance in patients that have been treated for periodontitis. Currently, a group of products is being developed where this molecule has greater bioavailability.

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