One in five Italian dentists not qualified to practise

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LEIPZIG, Germany: A large number of dentists and dental technicians in Italy are practising illegally. According to estimates from the National Association of Italian Dentists (ANDI), approximately one in five or a total of 15,000 dentists are not qualified to practise. The organisation admitted that there might be over 1,000 bogus dentists in Rome alone.

Practising dentistry without being qualified to do so is common in Italy, with many clinics and practices operating undetected for many years—even decades. In September, police raids in Palermo and three other cities found at least seven clinics that employed dentists who were not qualified to practise dentistry. However, only very few unqualified dentists are prosecuted. Last year, fewer than 500 people were charged with the unauthorised practice of the dental profession, according to police reports.

ANDI said that most illegal dentists are able to practise dentistry through diplomas gained from countries that recently entered the EU or from South American countries, where educational standards are generally lower. The penalty for the unauthorised practice of dentistry in Italy is six months’ imprisonment or a fine of €500 to 600.

Nano paint fights off superbacteria

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NEW YORK, USA/LEIPZIG, Germany: The emergence of antibiotic-resistant bacteria is becoming a major challenge in the fight against hospital-related infections. Researchers from New York and Albany in the US have now reported the successful testing of a new nanoscale coating that can be used for surgical equipment or hospital walls and that kills even super-resistant bugs like Methicillin-resistant Staphylococcus aureus (MRSA) within 20 minutes of contact.

MRSA is a bacteria strain usually found on the skin and sometimes nasal passages of healthy people from where it can make its way into the body through cuts or medical equipment accessories like catheters and breathing tubes. Infections caused by MRSA are difficult to treat because they do not respond to antibiotics used to treat staphylococcus infections, such as penicillin or cephalosporin. In countries like Australia, more than 700 patients die of MRSA-related infections each year.

The new coating, which is based on a natural enzyme called lysostaphin, can be used with any type of surface finishes, the researchers said. It is only toxic to MRSA and works by first attaching itself to the bacterial cell wall and then killing it by slicing it open.

“It’s very effective. If you put a tiny amount of lysostaphin in a solution with Staphylococcus aureus, you’ll see the bacteria die almost immediately,” said Prof. Ravi Kane, Department of Chemical and Biological Engineering at the Rensselaer Polytechnic Institute in Troy, New York. “At the end of the day, we have a very selective agent that can be used in a wide range of environments—paints, coating, medical instruments, door knobs, surgical masks—and it’s active and it’s stable.”

Kane added that the coating has a dry storage shelf life of up to six months and can be washed repeatedly without loss of effectiveness.

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Experts discuss dentine hypersensitivity at forum

Daniel Zimmermann

SALVADOR DA BAHIA, Brazil/LONDON, UK: Experts in the field of dentine hypersensitivity gathered last month at the FDI's Annual World Dental Congress in Salvador da Bahia, Brazil, to discuss the latest developments and updates in managing the condition.

Prof. Martin Addy, lecturer at the University of Bristol's School of Oral and Dental Sciences in the UK, set the scene by considering the accepted definition of hypersensitivity and possible reasons for the condition. He described the history of the profession's knowledge of dentine hypersensitivity as "an enigma being frequently encountered but ill-understood," quoting Johnson et al. (1982). Although there has been an awareness of the condition for more than 100 years, much is still unknown about it.

To define dentine hypersensitivity, Prof. Addy looked to Holland et al. (1997): "Dentine hypersensitivity is characterised by short, sharp, pain arising from exposed dentine in response to stimuli, typically thermal, evaporative, tactile, osmotic or chemical and which cannot be ascribed to any other form of dental defect or pathology." He commented that it is very difficult to diagnose sensitivity clinically, as sensitive and non-sensitive dentine look similar at the level at which a clinician sees dentine.

Prof. Addy described the most accepted theory for hypersensitivity—hydrodynamic theory. Explaining the hydrodynamic mechanism in relation to the teeth, he referred to a study in which a sensitive tooth and a non-sensitive tooth were analysed. It demonstrated that the sensitive tooth had eight times the number of tubules, and that the tubules themselves were twice the diameter of those in the non-sensitive tooth.

Next to speak was Prof. Nicola West from the University of Bristol Dental Hospital. In her presentation, Dentine hypersensitivity: The importance of patient factors, she looked at the aetiological factors for hypersensitivity. She highlighted the behavioural effect of dentine hypersensitivity on patients whose quality of life is impaired by the condition. Prof. West focused on the issue that dentine needs to be exposed to cause hypersensitivity and that the exposure is mainly caused by gingival recession, compromise of gingiva by periodontal disease or enamel erosion.

Gingival recession is often caused by trauma to the margins, usually by the vigorous brushing of the sufferer. Prof. West advised looking at patients' toothbrushes and their brushing methods when seeking a cause for hypersensitivity, but did caution that this may be difficult, as patients will modify their behaviour when being observed.

Prof. West also discussed enamel erosion at length. She explained the difference between intrinsic (i.e. gastro-oesophageal reflux disease) and extrinsic (i.e. acid challenges) enamel erosion.
caused by food and drink) erosion. In considering extrinsic erosion, she focused on the acidic challenges to teeth as a result of the diet of a hypersensitivity sufferer. Many of the problems appear to stem from the number of acidic drinks available. According to 2009 sales figures for soft drinks in the UK, a staggering 229.1 litres of soft drinks are consumed per person per year; that’s 0.65 litres a day! For a person susceptible to erosion, this can present a significant acidic challenge to teeth.

Prof. West called for routine screening for tooth wear and erosion, especially in face of the rise in patient and tooth longevity and the availability of treatments to help reduce the severity of the sensitivity for patients. She also listed some recommendations for patients: reduce frequency of acid exposure; avoid acidic foods and drink at night-time; no swishing or frothing drinks around the mouth; avoid brushing teeth directly after an acidic challenge.

The next presentation was by Dr Stephen Mason. His presentation, Sensodyne Rapid Relief—instant and long-lasting protection, detailed the latest GSK product offering to combat sensitivity. Dr Mason detailed the different formulations of Sensodyne in the past using strontium chloride and the particular challenges this presented, namely a taste many consumers disliked and non-compatibility with fluoride.

Strontium chloride was then surpassed by strontium acetate because of its compatibility with fluoride, non-staining properties and improved taste. This has now been developed into a marketable product called Sensodyne Rapid Relief. Dr Mason discussed some of the clinical research that has been conducted for the Rapid Relief product, first against a fluoride control toothpaste and then against a competitor brand using 8% arginine calcium carbonate. The studies demonstrated that there was a marked reduction in pain felt by the subjects both after immediate application with a pea-sized amount directly to the tooth, and after set periods of time brushing twice a day. In nearly every study, the group using Rapid Relief demonstrated the most improvement.

The final speaker at the symposium was Prof. Eduardo M.B. Tinoco, Associate Professor at Rio de Janeiro State University. His presentation, Practical approaches to management of dentine hypersensitivity in practice, considered the diagnosis and management of sufferers in practice. After a brief overview of the prevalence, possible causes and definition of dentine hypersensitivity, which Prof. Addy had already covered in more depth, Prof. Tinoco then posed the question: “Dentine hypersensitivity: How do I treat this?”

A good starting point for managing hypersensitivity in practice once a correct diagnosis has been made and other causes have been excluded or treated, said Prof. Tinoco, is the identification of aetiological factors and their exclusion by means of diet modification or oral-health instruction. Other factors he discussed beyond those already mentioned in previous presentations included occupational factors, such as the damage sustained by competitive swimmers and professional wine-tasters. Obviously, wine piqued the attention of many attendees!

Prof. Tinoco explained the way in which to taste wine properly: “To experience the taste of a wine fully, swirl a little bit of it in your mouth to cover all your taste-buds. Take a moment to enjoy the flavour before either swallowing or spitting out the wine. In addition to the initial taste, you will find there is also an aftertaste to the wine, usually referred to as the finish.”

Prof. Tinoco then discussed treatment adjuncts, both for patients at home and clinical interventions in surgery. Clinical treatments included the use of varnishes and primers; the use of glass ionomers to cover the affected area; laser treatments or mucogingival surgery.

He concluded that there should be proactive screening of all patients to help with correct diagnosis. Advising patients about diet modification etc. should help remove or modify the severity of the sensitivity, and the recommendation of brushing with a desensitising toothpaste twice daily, as well as rubbing it on affected areas is an extremely efficacious, low-cost, non-invasive treatment.