



University
of Glasgow

School of Medicine

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Dental Mirror

The Newsletter of the Glasgow Dental School Issue 13
November 2015

University Teacher wins Early Career Educator Award

Dr Ziad Al-Ani, a University Teacher in Biodental Sciences at Glasgow Dental School, has recently won a prestigious Early Career Educator Award as part of the Excellence in Dental Education Awards Programme administered by the Association for Dental Education in Europe (ADEE).

The programme exists to promote and reward the highest standards of learning and teaching in dentistry. Applicants submit a portfolio that contains a curriculum vitae and a reflective commentary. The award was made by Professor Damien Walmsley, President of ADEE, during the General Assembly of ADEE at the conclusion of its 2015 Conference in Szeged, Hungary on 28 August. Ziad, who teaches Oral Biology and is also the lead academic for the Scottish Dental Education Online (SDEO) programme of activities in Glasgow, celebrated his success by joining other conference delegates for a traditional Hungarian evening of music and cuisine at the famous Fehertoi Fish Soup Restaurant.



Professionalism and Ethics Study Club – All Years (PESCAY)

The past academic year has seen the establishment of a unique forum within Glasgow Dental Hospital & School, which brings staff and students together onto a “level playing-field” to facilitate the discussion of current aspects of ethics and professionalism. Following a meeting of University of Glasgow staff members Al Dowie, Viv Binnie, John Gibson and student representative Grant Creaney, an idea started to form within the building of the need for a regular meeting wherein staff and students together could discuss the potential impact of decisions made by the General Dental Council’s Fitness to Practise Panel on the practise and delivery of dentistry. This would allow our students to see the evolution of ethics and professionalism in practice – seeing it not as something which is learned from a textbook but rather as a true-to-life dynamic and developing process.

We agreed that the forum should be open to all staff and students with freedom to comment and participate by all those attending. The acronym “PESCAY” seemed entirely appropriate – Professionalism and Ethics Study Club – All Years - and has taken hold! We also decided that staff and students should contribute together in leading the presentations and also to facilitate discussions. Accordingly, a member of staff and a senior student worked together in creating the initial presentations for each meeting, based on pre-selected topics which were grabbing the headlines during the year. PESCAY met three times during the past academic year (2014-2015) – on Wednesday late afternoon/early evenings on each of 19th November, 4th February and 25th March. Those attending are encouraged to feel free to contribute (or not) and to arrive and leave as their commitments elsewhere dictate. Numbers attending rose steadily over each of the three meetings, as did the sense of excitement and anticipation.

Sessions take place over two hours or so with the first half dedicated to a recent case or cases before the Fitness to Practise processes at the General Dental Council; and the second half was used to consider a major, ongoing ethical issue within Dentistry or wider healthcare. What fun we have had!

The first session of PESCAY explored, with John Gibson, the case of a senior clinical academic who had been called before the GDC’s Conduct Committee on multiple Heads of Charge. The determination from that case generated much discussion and several take-home messages, including, it would seem, that it is the individual clinician’s responsibility to accept (or reject) the safe number of patients being seen on his/her clinic. Final Year student Grant Creaney then opened up the debate on the academic fraud exemplified by the case of Wakefield (and others) versus the General Medical Council in the context of the MMR vaccination scare. He applauded the work of the investigative journalist Brian Deer who pursued the story tenaciously. Grant also looked at the responsibility of academic journals in ensuring rigorous standards of scientific content, statistical analysis and ethical practice.

The second session of PESCAY was mysteriously entitled “The Ethics of Infection: Decontamination, BBVs, Viagra ... and How Clean is Your Cat?” and the audience simply couldn’t get enough of this topic! Jeremy Bagg and Kirsty Roy (Senior Epidemiologist with Health Protection Scotland), along with Final Year student Caity Aitken led us through a fascinating case before the GDC of failures in decontamination practice, followed by a very challenging and thought-provoking discussion on the science (or rather the lack of science) behind how and why so-called “look-back” exercises are carried out when breaches in decontamination practice are deemed to have occurred in dentistry. A number of “big name” cases of such breaches already in the public domain were explored.

The third session of PESCAY proved most popular of all and this was hardly surprising, given the title: “Taking professionalism to the abyss – child protection, self-regulation and whistle-blowing”.

Al Ross, Christine Park and Final Year student Craig Hogg took us on a truly excellent and challenging journey on the issues of whistle-blowing and its repercussions, including a number of cases that had been considered by the healthcare regulators. We were asked to consider whether or not “raising concerns” and “making complaints” were the same thing. They then looked at a case before the GDC which had involved alleged indecency and extended the discussion into child protection and the expectations laid before the dental team. These were emotive and challenging issues which left the participants opening up much discussion and debate.

The forum has been warmly received by staff and students alike – the format and style seem to work well and, for the forthcoming academic year, we have built three more sessions of PESCAY into the timetable. I, for one, cannot wait for more debate and further discussion!

John Gibson is Professor of Medicine in Relation to Dentistry and Honorary Consultant in Oral Medicine in Glasgow Dental Hospital & School. He chaired the Conduct and Health Committees at the General Dental Council for several years and is currently Chairman of Dental Protection Ltd and a Council member of the Medical Protection Society.

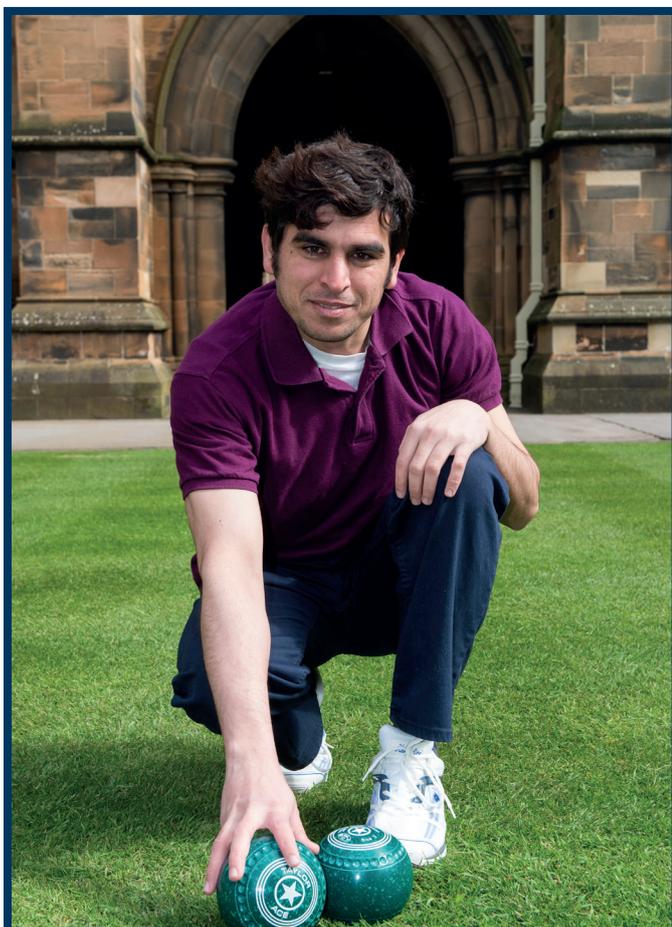


Glasgow Dental Alumnus Association

Welcome to the 'Alumnus Section' of the Dental Mirror. In this Issue we hear from a recently graduated alumnus of Glasgow Dental School with a rather interesting story – he tells us how a gentle game of lawn bowls took him on an amazing journey! We also hear from the Class of '75 who after 40 years continue to keep in touch with each other and their alma mater.



Muhammad Shahzad



Muhammad Shahzad – Bowled over by his time in Glasgow. Muhammad Shahzad is a recently graduated University of Glasgow Alumnus (graduated in 2015). Here, we tell how he not only defended his thesis successfully, but also how he became one of Pakistan's first ever Lawn Bowls athletes who represented Pakistan in the Commonwealth Games in 2014.

Muhammad was born on 25th December 1983 in Kalu Khan, a village in Swabi District in the rural highlands of Pakistan near the border with Afghanistan. He was born to a poor family. His father is a farmer and was the sole bread winner. Though his parents were not educated, they saw the importance of education and put in every effort to educate Muhammad. It was very hard for his parents to afford his

education but he saw this, always worked hard, and was a talented student. Throughout his academic career, he received Talent Scholarships from his government, ranging from as low as 250 rupees (£2.50) in fifth grade to 10 million rupees (£100000) to fund his PhD studies in Glasgow. After attending High School in his home town, Muhammed passed the entrance exam and entered Khyber College of Dentistry, Peshawar, from which he graduated with his BDS in 2007. After graduation, he was offered a scholarship by Khyber Medical University Pakistan to pursue his PhD studies at University of Glasgow.

Muhammad found the early days after arriving in Glasgow challenging and he started feeling home sick. However, he remembers how he received huge support from his supervisor and new friends at the University and soon discovered that the land in which he now found himself offered opportunities to prove his abilities on many fronts. Besides his PhD studies, he became actively involved in various clubs and societies.

He didn't limit himself to activities on campus, but went exploring beyond. In early 2011, he tried his hand at bowling during an impromptu visit to an open day at Willowbank Bowling Club in Dowanside Road. His first shot was on target and the comments he received from the club members and coach were so encouraging that he decided to take bowling seriously. The secretary of the club let him practise on the club green, lending Muhammad his shoes and bowls. When Muhammad came to know that Pakistan had no representation in lawn bowling in the Commonwealth Games, he wrote to the President of the Pakistan Olympic Association to ask if he could represent Pakistan in the Commonwealth Games in Glasgow. In late 2013, he received word that he would indeed represent his country at the Games. Muhammad recalls how important his supervisors and colleagues at Glasgow Dental School were during his journey into the games. During his preparation and participation in the games, he continued with his lab work for his PhD project, writing research papers and his PhD thesis. In the end all went well, and despite not winning a medal in the games he successfully defended his thesis before returning to his home country as an assistant professor at Khyber Medical University Pakistan. What a success all round and what stories Muhammad has for the students he teaches and supervises in Pakistan – a PhD experience and a half!



Glasgow Dental School works and plays hard at Health Professions Education Conference

The Dental School was well represented at the International Association of Medical Education in Europe (AMEE) conference which came to Glasgow in early September. Staff and students from Sauchiehall Street contributed to both the programme and organisation. AMEE is a large affair running over 3 days, with a 2 day pre-conference dealing with e-learning. In total, 3,400 participants representing 90 countries from across the globe attended. AMEE is multi-professional, with the majority of delegates engaged in teaching/research in health professions education, and it was great to mix with teachers of clinical students from many disciplines, including medics, vets and dentists. The conference was based at the SECC and surrounding hotels, though the Dental School itself featured as a venue, with a satellite symposium on virtual microscopy run by Carlos

Miguel, Ziad Al Ani and Zayneb Makki, helped by some of our students.

The opening ceremony on the Sunday evening featured a keynote speaker, Aviad Haramuti, on 'Mindfulness and chronic stress and burnout', followed by a Scottish themed welcome which included the stomping high octane Red Hot Chilli Pipers. It was quite a sight to see the normally sedate medical education crowd on their feet, and it was rumoured to be the best AMEE opening ceremony ever!

The days were busy with so much on offer, be it sessions on professionalism, feedback, communication, simulation, assessment, clinical teaching, new methodologies including the 'flipped classroom', as well as numerous workshops on every imaginable topic. Alison Cairns and David Cross were seen flying between sessions, with Niall Rogerson and Fiona Hogg

delivering poster discussions on their research (Niall on 'Enhancing dental electives through participatory research' and Fiona's entitled 'When do I become a professional?'). Viv Binnie chaired a lively session on Peer Assisted Learning, as did Al Dowie on Empathy. Rob McKerlie won the prize for attending all five days of the conference. Eight of our Year 4/5 students were chosen as volunteers to help out as part of the multinational multi-professional task force. This required stamina as the students had to report at seven in the morning and had a packed social calendar at night, so not a lot of sleep was to be had by many of them over the five days. Hopefully they managed to pick up some key learning from the sessions they participated in too.

Monday night saw the conference dinner at Merchant Square, with Lewis Olsson playing the bagpipes as



Team Dental' student volunteers



delegates entered, and Emily Morrison dancing with her usual consummate elegance as the participants took their seats. There was the obligatory ceilidh after the dinner, and Viv found her “Strictly” teaching skills put to good use as she managed a set of eight delegates, some of whom had never danced before!

The closing ceremony on Wednesday featured Ollie ten Cate talking about Entrustable Professional Activities (EPAs), an up and coming area of medicine, with some resonance in dentistry. There was so much to see, that inevitably some key sessions were missed, but happily these are posted online, so there is still quite a bit of CPD in the pipeline.

Roll on Barcelona, location of the AMEE conference in Aug 2016!



Emily Morrison with her poster

Trapping the cells responsible for the immune systems’ attack on the joints in rheumatoid arthritis. Dr Shauna Culshaw describes her recently awarded Arthritis Research UK grant for £267,088.

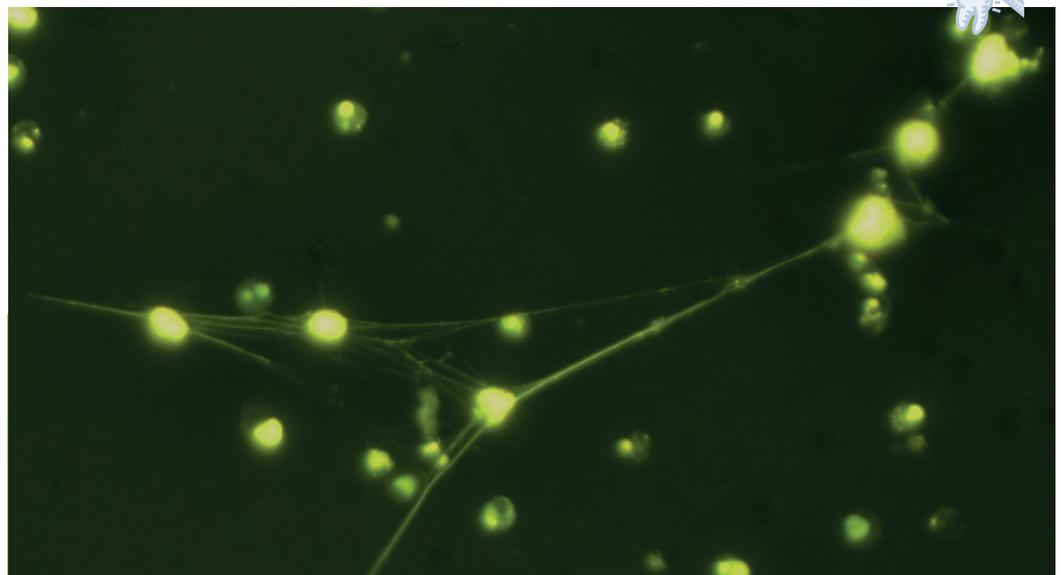
There are millions of immune cells in the body. The individual cells responsible for triggering the immune reaction seen in people with rheumatoid arthritis (RA) are rare, not easy to find and therefore not easy to study. We have developed a laser-based technology to manipulate these cells that, for the first time, will allow us to explore how they can provoke the development of RA. We will investigate how these cells behave and how they talk to other cells. Understanding this process may ultimately lead to new early stage treatments.

Cells of the immune system make antibodies to help fight infections. In RA, the immune system makes antibodies that stick to proteins in our joints (self-proteins) where they cause damage. These self-proteins have been chemically altered for some reason in RA to contain citrulline. We recently found that the presence of citrulline dramatically alters the way in which immune cells behave when they see self-proteins – in essence they become much more active and less easy to control. This could then lead to the immune attack on our self-proteins.

In the study, we will compare how immune cells respond to citrullinated proteins versus the normal version of the protein, mimicking the situation that occurs in RA. This will help us to better understand how the immune system responds differently to citrullinated compared with

normal proteins, and whether this is an important step in the development of arthritis.

Studies of the immune response have identified that antibodies that bind citrullinated proteins are a key element of RA, occurring years before the onset of joint swelling. We do not understand why the antibodies are made. Current treatments generally target the later stages of the disease. These treatments have yielded significant advances. The ‘holy grail’ of treatment is, however, to really understand the earliest cell switches that turn on the immune response in RA. Our studies will directly examine these very early events. Understanding them will allow us to develop better early treatments or even preventative medicines for RA.



Fluorescence visualization of structures involved in autoimmune diseases such as Rheumatoid Arthritis Image courtesy of PhD student Ana Adrados Planell

Root 75 Year Club 40th Reunion - Vancouver, Canada, August 2015

The Root 75 Year Club recently held their 40th anniversary Reunion at the Westin Bayshore, Vancouver. The year club has been meeting regularly since graduation from Glasgow Dental School in 1975, and the 40th reunion was an opportunity for many of the year to combine meeting old friends with a holiday of a lifetime. At the 35th reunion, held in Glasgow in 2010, Alan Ferguson, who emigrated to Canada soon after qualifying, expressed the thought that he always had to travel to these meetings, rather than the rest of the class going to other places, so it was inevitable that we took him up on this and the group announced that we would be visiting him in 2015.

Alan began his career in Newfoundland where he worked for 2 years before relocating to Montreal, remaining for 12 years and then moving west to develop a practice in North Vancouver. David Mitchell joined Alan in Montreal in 1977, followed by brother Charlie in 1979. Bill Kivlichan also moved back to Canada where his family had settled in Ontario, and still runs his own practice there.

The result of this was a spectacular weekend arranged by Alan and his partner Leanne. Twenty of the original year –including all nine women – and their partners attended. After an evening of catching up with people over drinks and dinner, they had time to explore Vancouver before meeting at the Bayshore for an evening sail around the city, complete with 70s music and a delicious buffet.

The academic meeting was arranged for Saturday morning, and with many of the year already retired, it had been

decided to provide something that would appeal to everyone. The theme of the meeting was “Planning for jobs that don’t yet exist”. Dentistry has changed and developed dramatically over the past 40 years, and the students of today have a far different experience to that which was available when the Root 75 Club members graduated.

The meeting began with a video made by Isobel Madden, showing the history of dental teaching in Glasgow from the founding of the School until today, and speculating on what might be available in 2055. This was followed by Isobel presenting some of Lesley Williamson’s quilting work to an appreciative audience. Lesley Williamson made a new career for herself since retiring from general practice in Derbyshire, and is now an accomplished needlewoman with a portfolio of quilting. Some of Lesley’s quilts have been displayed at the National Quilting Exhibition at the NEC, and she has contributed to a book on quilting. The group were then updated on the latest developments in implant dentistry by a video produced by Stan Brodie. Stan emigrated to Israel after graduating, and is now the Head of Implant Planning Service for AB Dental. Although Stan could not join us in Vancouver, he sent a video showing the development of 3D printing in implant planning used by the company. Continuing on the theme of implant dentistry Crawford Gray who is in practice in Aberdeen gave an excellent history of the subject from the very early uses of natural teeth in the 18th century to the high

tech materials now available. In 1975, implants were in the very early stages of development, and not included in the undergraduate programme. The group then heard from Rhona McLean. As well as practising as an Orthodontist Rhona is a well-known breeder of Aberdeen Angus cattle. Rhona gave a fascinating presentation about her cattle, and balancing a dental career with farming. After the meeting, she was able to visit a farm in Alberta to share experiences with farming colleagues. The penultimate presentation was given by Graham Lachlan. Graham who moved to Melbourne, Australia where he has settled in general practice is a keen photographer, and he provided a splendid portfolio of his work from clinical uses through landscape to portraiture. The final presentation from Isobel Madden was of the developments in NHS Education for Scotland in providing innovative methods of teaching to undergraduates throughout Scotland, using synchronous teaching, video conferencing and outreach.

Lunch was served on Saturday at the top of Grouse Mountain, the ski resort in North Vancouver, and after communing with the bears, they descended for the gala dinner at the Westin. Compered by Alistair Meek, who even remembered the famous 1970s ‘sideburns’, and including an excellent rendition of “We’re the Glasgow Dentals” around the piano in the hotel foyer for the edification of all other guests, the evening was the culmination of a very successful reunion.

We have a bond in the year group, said Graham as we said our goodbyes before going off to explore this amazing country. We pick up friendships where we left off, and we share experiences happily when we get together. The consensus is that we shouldn’t leave it for 5 years before we meet up again, so the proposal is that we organize another reunion in 2017 in St Andrews.

All Root 75-ers that couldn’t make it to Vancouver should do their best to be there. You will find some good old friends and pick up where you left off all those years ago.



SDEO – Developing Learning Resources for Scottish Dental Education

Scottish Dental Education Online (SDEO) is a collaboration between the Universities of Aberdeen, Dundee, Edinburgh, Glasgow and NHS Education for Scotland (NES) (www.sdeo.ac.uk). The primary role of SDEO is to develop interactive online learning and teaching resources to support dental education in Scotland.

By utilising a variety of media and digital teaching methods, SDEO aims to influence students' learning experiences by catering to their assorted learning styles through development of bespoke, high-quality digital dental undergraduate and postgraduate learning and teaching resources. The SDEO resources are freely available to staff and students of all Scottish Dental Schools as well as NHS staff in Scotland via the NES portal. The resources produced are quality-assured by leading experts in dentistry and education, developed to agreed standards and specifications to meet technical/ethical/legal requirements.

Two types of resource are available:

- Stand-alone learning packages that learners can use independently
- Learning objects that lecturers can incorporate into the material they produce for students

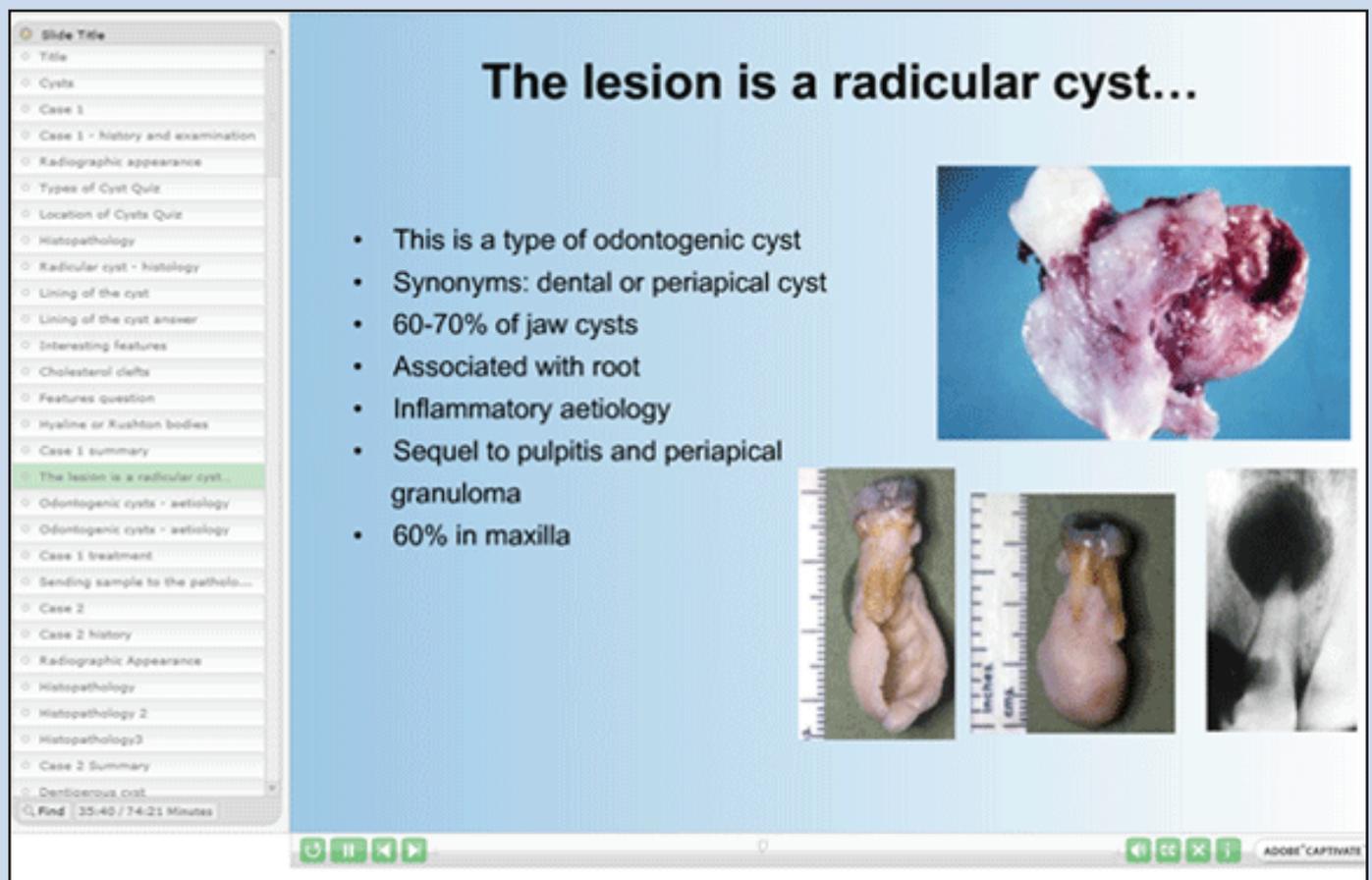
Resources include diagrams, photos, videos, interactive animations, and quizzes which can be used online anytime and anywhere. These objects can be used in a variety of learning environments either for group activities e.g lectures or seminars, or for individual study through a Virtual Learning Environment such as Moodle. There is now a browsable, searchable repository of learning resources, that enables users to download resources and deliver them locally.

This resource is constantly growing. Even the students have caught the bug for resource development and as part of a special study module in BDS5 groups are currently working on endodontic packages. Some examples of finished packages are illustrated, but do visit the SDEO website and explore the content – a QR code is included below.

Scan this QR code to go to SDEO.



The interactive package on Common Odontogenic Cysts discusses the pathology and clinical presentations of common cysts as well as the common radiological investigations used in the diagnosis of these clinical entities



The lesion is a radicular cyst...

- This is a type of odontogenic cyst
- Synonyms: dental or periapical cyst
- 60-70% of jaw cysts
- Associated with root
- Inflammatory aetiology
- Sequel to pulpitis and periapical granuloma
- 60% in maxilla

The Swallowing package is included in the Anatomy and Physiology category. This package explains the feeding sequence including the different phases of swallowing and describes the difference between liquid and solid food swallowing

Videofluorography

Videofluorography is a radiographic technique where X-radiation falls onto a fluoroscopic screen where it is converted into light energy. The differing densities shown by the fluorescent images are video-recorded from the screen.

Videofluorography in swallowing studies

- A method used to study the physiology and the pathophysiology of swallowing
- Food is mixed with barium salts to increase the x-rays absorption
- Allows visualisation of the movement of the oral cavity structures, larynx, hyoid, tongue base, pharyngeal walls and cricopharyngeal region, along with monitoring the bolus position



Simplified Schematic



Videofluorography still

In this package a simplified schematic version is animated next to a video from the original research by HIIEMAE, K.M. and PALMER, J.B. (HIIEMAE, K.M. and PALMER, J.B., 1999. Food transport and bolus formation during complete feeding sequences on foods of different initial consistency. *Dysphagia*, 14: 31-42.)



Staff News

Congratulations to the following:

Dr David Conway:

Appointed to a Personal Professorship.

Dr Ziad Al-Ani:

Awarded an early career award by the Association for Dental Education in Europe, presented at the meeting in Szeged, Hungary on 28th August 2015

Professor Gordon Ramage:

Appointed as Editor-in-Chief of the internationally renowned journal *Critical Reviews in Microbiology*

Staff Departures:

Mrs Laetitia Brocklebank,

Senior Lecturer/Honorary Consultant in Oral & Maxillofacial Radiology

Professor Daryll Jagger,

Professor in Restorative Dentistry

Dr Donald Cameron,

Senior University Teacher

Ms Lucy Dunbar,

Scottish Oral Health Collaborative Research Administrator

Ms Heather Gray,

Hopscotch Research Co-ordinator

Mr Tim Tomkinson,

Research Assistant

Mrs Michelle Carmichael,

BDS 3 Secretary

Ms Kate Cassels,

Childsmile Clerical Assistant

Ms Fiona Morrison,

NHS Liaison/Outreach Support Assistant

New Staff Appointments:

Ms Gillian Lappin, Laboratory Technician - Complex Model Oral Biofilms

Dr Tony Buckley, Research Assistant



University of Glasgow

Dental Mirror

The Dental Mirror can also be found on the University of Glasgow Dental School web-site - www.glasgow.ac.uk/schools/dental so feel free to click on that and read our online Dental Mirror.

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