

# Anatomy of Trauma, Emergency Medicine and Operative Procedures

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Recent advances in the identification and characterisation of dental stem cells and in dental tissue- engineering strategies suggest that bioengineering approaches may successfully be used to regenerate dental tissues and whole teeth. As clinically relevant methods for generation of bioengineered dental tissues and whole teeth continue to improve, interest in the application of tissue regeneration increases. This paper describes dental derived stem cells and their characterization.



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# WJMER

World Journal of Medical Education and Research  
*An Official Publication of the Education and Research Division of Doctors Academy*

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A career in Military Medicine



An Introduction to Emergency Medicine

Anatomy of Trauma, Emergency Medicine and Operative Procedures



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The landmark technique remains a safe alternative to ultrasound guidance for performing a Fascia iliaca block: A cadaveric study

How does addiction occur?



The diagnostic work-up of stable chest pain at a large university teaching hospital

Interview with Professor Laurence Kirmayer, Director of Cultural Psychiatry

### Introduction

The World Journal of Medical Education and Research (WJMER) (ISSN 2052-1715) is an online publication of the Doctors Academy Group of Educational Establishments. Published on a quarterly basis, the aim of the journal is to promote academia and research amongst members of the multi-disciplinary healthcare team including doctors, dentists, scientists, and students of these specialties from around the world. The principal objective of this journal is to encourage the aforementioned, from developing countries in particular, to publish their work. The journal intends to promote the healthy transfer of knowledge, opinions and expertise between those who have the benefit of cutting edge technology and those who need to innovate within their resource constraints. It is our hope that this will help to develop medical knowledge and to provide optimal clinical care in different settings. We envisage an incessant stream of information flowing along the channels that WJMER will create and that a surfeit of ideas will be gleaned from this process. We look forward to sharing these experiences with our readers in our editions. We are honoured to welcome you to WJMER.

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## Doctors Academy Events in Bristol, UK: Anatomy of Trauma, Emergency Medicine and Operative Procedures

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**Introduction**

In medical school, we are often inundated with a massive amount of information and we, as hard working medical students, bend over backwards to learn each and every minuscule detail. Often, however, we forget to take a step back and look at the bigger picture. On 11th May 2013, The Doctors Academy Group brought two of its exciting and innovative workshops to University of Bristol for the very first time to bridge this very gap that seems to exist amongst most medical students.

Doctors Academy is an internationally reputed non-profit educational organization that is known to conduct a wide variety of clinical events for both students and doctors in a local as well as international scale. We were first associated with Doctors Academy when we attended their National Medical Students Academic Winter conference in Cardiff. During our time there, we were captivated by the stimulating talks delivered by the speakers as well as the interactive workshops, which enabled us to use our clinical knowledge and apply it in "real-time" clinical scenarios. This motivated us to bring back our experiences to Bristol and share it with our colleagues here.

For its first event in Bristol, Doctors Academy agreed to provide the courses for free and took up all the expenses on its own. The courses that were organized in Bristol in collaboration with Doctor's Academy were structured as follows:

*Clinical Anatomy as Applied to Trauma & Emergency Medicine (Morning Session); Surgically Applied Anatomy in Important Operative Procedures (Afternoon Session)*

Both the sessions were divided into four stations and students were grouped accordingly. Each station was timed for a period of 45 minutes and the students were rotated after each station was completed. The stations were: Head & Neck, Abdomen & Thorax, Upper Limb & Lower Limb. Each of these stations was conducted by surgeons who are experts in their respective fields. The main goal of each station was not to discuss the theory of anatomy in detail but to expose the importance and significance of surface anatomy in routine scenarios experienced by surgeons and doctors in hospitals. This was primarily achieved by handing the tools to the students themselves. They were asked to use their acquired knowledge of anatomy and illustrate surface anatomy by drawing on each other with guidance from the faculty.

The objectives of the two courses were outlined in a similar manner, however, the morning session emphasized more on trauma whilst the afternoon session focused on the day to day elective surgical procedures.

**I. Head & Neck**

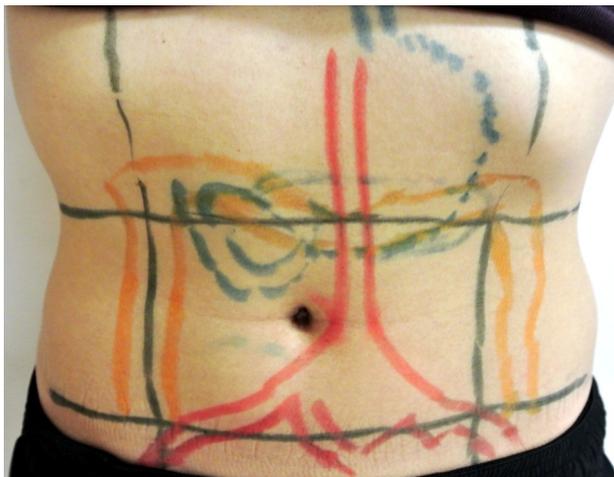
From a procedure that every medical student should be capable of doing in the case of an emergency such as cricothyroidotomy to being able to do a cranial nerve examination, it was all covered in this station. Alongside, the surface anatomy of the thyroid gland was demonstrated and it was interesting to see how many medical students were unable to pin-point the precise location of it although they knew where it was exactly on the cadavers.



**Figure 1:** Illustrates a student drawing out the surface anatomy of the thyroid cartilage, cricoid cartilage and sternum.

**II. Abdomen & Thorax**

Stab Wounds. Gunshots. Pneumothorax. This was definitely a station that was not to be missed! Alongside the detailed surface anatomy of the abdomen and thorax where students drew on each other vigorously, the trauma and numerous surgical procedures that occur



**Figure 2a:** Surface anatomy illustrating the nine quadrants of the abdomen. It highlights the location of the abdominal aorta and other relevant abdominal organs.



**Figure 2b:** Surface anatomy of the kidney seen from the posterior side.

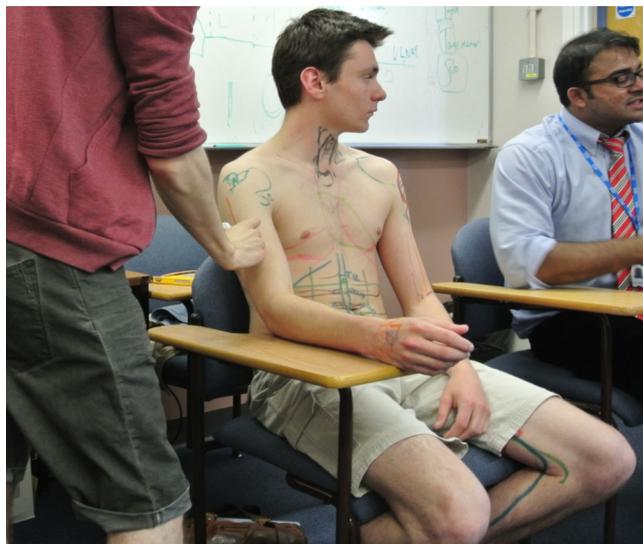
routinely in the hospital setting was covered in this station.

**III. Upper Limb**

The brachial plexus as we know is every medical student's nightmare! However, after the event, a lot of us felt that we could remember it much better and this was definitely due to the fact that we drew it out on each



**Figure 3a:** Illustration of carpal bones of the hand.



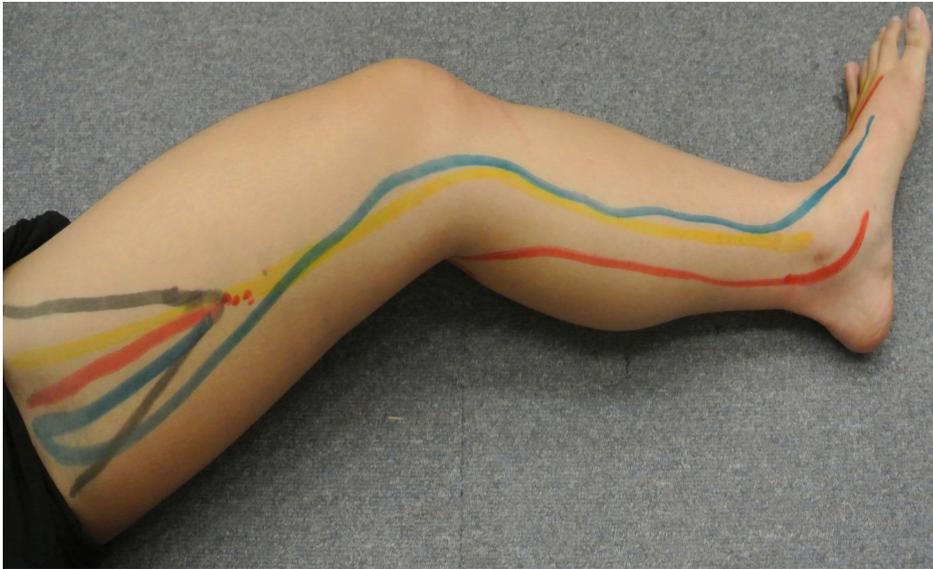
**Figure 3b:** Surface anatomy in the upper arm

other-an approach that we never undertook previously. Furthermore, common fractures of the upper limb was covered along with the treatment options.

**IV. Lower Limb**

During this session, it was revealed to us that the textbook version anatomy of the lower limb is quite different to the surface anatomy on real people. The courses of blood vessels and nerves are not exactly the same as that shown in textbooks! In this session, the other eye-openers were the different methods of

stabilization for limb fractures, i.e., casts, splints, intramedullary nailing, plates, and screws or K-wires as well as external fixators.



**Figure 4a:** Surface anatomy of illustrating the femoral triangle, long saphenous vein and posterior tibial artery.

After attending the events organized by Doctors Academy, we, as medical students, feel that this is an event not to be missed by medical students of any year! And this was proven by the feedback received where it was described as “one of the best revision sessions that I have ever attended”.



**Figure 4b:** Surface anatomy illustrating the location of the popliteal artery and its main branches, as well as the short saphenous vein.



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