A Case of Lower Limb Myiasis in Hong Kong: Case Report and Brief Review of Existing Literature

Single Stitch Mesh Fixation During Laparoscopic Trans-Abdominal Pre-Peritoneal Groin Hernia Repair: A Retrospective Study of 3800 TAPP Repairs

Medical Student Involvement in and Attitudes towards Audit and Research: The MEDical Student Experience of Audit and Research (MED-SEARCH) Survey

Body Mass Index and Pregnancy Outcomes in Expectant Women at Moi Teaching and Referral Hospital, Eldoret Kenya

Impressions of Musculoskeletal Medicine Education in Current Doctors

The High Ratio of Undiagnosed Cases of Low Back Pain: Implications for Its Management

Abstracts from the 8th International Academic and Research Conference 2018
Introduction
Basic competency in musculoskeletal (MSK) medicine is vital in many specialties including GP, Rheumatology, Emergency Medicine, and Trauma and Orthopaedics, and is a key educational recommendation of the GMC. MSK medicine has been reported to comprise between 15-30% of encounters in general practice, with similar amounts presenting to the Emergency Department and considerably higher to Rheumatology and Orthopaedics. Despite this, musculoskeletal medicine does not form a core part of the medical school curriculum and may be further deteriorated by decreasing exposure to cadaveric work where visual 3D understanding of anatomy and its relations is learned.

The UK government has been very positive in introducing many initiatives to encourage an increasingly sedentary population to become more active. This includes such innovations as ‘Couch to 5K’ and ‘Change4life’, as well as increasing fitness-focused programmes on public television. However, there is a disproportionately low amount of time dedicated to MSK medicine considering this and the high proportion of clinical MSK encounters seen in medical practice. Medical schools rarely teach sports and exercise medicine and have limited exposure to sports orthopaedics. A study from Canada reported that less than 3% of the curriculum was dedicated to MSK medicine. The secondary knock-on effect of this lack of exposure is then the lack of doctors wishing to pursue a career in SEM, leaving a gap in overall NHS care for the public, especially the amateur athlete. Further, 8.9 million work days were lost to MSK issues in the UK in 2016-2017. This underlines the real significance of a financial impact to the economy of the lack of availability of MSK medicine specialist knowledge.

Knowledge and confidence in MSK medicine post-qualification has been tested across the world, all with disappointing results. In a survey of 297 GPs, Abuo-Rayat showed low confidence, with 80% stating they lacked confidence in dealing with MSK presentations. This is elaborated upon by Roberts et al, who showed very low levels of confidence in GPs dealing with specific MSK issues including lower back pain (LBP), with 69% saying they were not comfortable dealing with LBP, 62% uncomfortable when dealing with osteoarthritis, and 58% lacking...
confidence when dealing with sports injuries.

Knowledge of MSK topics has widely been shown as lacking through tests administered to a variety of groups across the world and chosen specialties within medicine. Abou-Rayel showed that 75% of practicing GPs failed a basic MSK rheumatology test. Similarly, 70% of GPs failed a MSK exam set by Queally. A variety of doctors (n=334) were tested by Matzkin where only 21% passed their MSK test. Similar levels of scoring have been shown in many similar tests run in the US looking at medical students and doctors.

Methods
A questionnaire was designed which focused on current doctors and their impressions of their preparation for their current experiences within medicine. The main body of the questionnaire is included in Figure 1. This survey was disseminated over closed social networks and across trainees at Hillingdon Hospital. It was left open for a total of

1. During Medical school, how many weeks were spent in
   a. Orthopaedics
   b. Sports Medicine / MSK
2. In your current practice, what percentage of time is spent dealing with MSK/SEM consultations?
3. Do you feel you were adequately prepared for the demands of your current workload regarding
   a. MSK medicine
   b. Orthopaedics
4. How satisfied are you that medical school prepared you adequately for your current workload in
   a. MSK medicine
   b. Orthopaedics
5. How satisfied are you that Foundation training prepared you adequately for your current workload in
   MSK medicine/Orthopaedics
6. What aspect of MSK medicine do you find most challenging?
7. Which anatomical system do you find most challenging?
8. Do you think additional time at Medical School in MSK medicine would have been useful?
9. Do you think additional time at Medical School in orthopaedics would have been useful?

Figure 1: Body of the Questionnaire circulated

Figures 2a, b and c. Demographics of respondents (n=50) in their current position within medicine (a), their year of qualification (b) and country of qualification (c).

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
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<tbody>
<tr>
<td>GP</td>
<td>5</td>
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<tr>
<td>GP Trainee</td>
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<td>2</td>
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<td>Foundation Trainee</td>
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Figure 2a
one month. Fifty responses were received. The demographics of the respondents are shown in Figures 2a-c.

**Results**
The total number of weeks spent in Orthopaedics and SEM/MSK medicine in medical school is presented in Figure 3. Figure 4 shows the different rotations experienced by recent trainees in the Foundation and Core Training. On average, the participants report that MSK/SEM consultations represent 30% of their total workload and 26% is orthopaedic. When asked whether they felt adequately prepared by medical school for their current workload regarding SEM/MSK medicine 54% said ‘No’. When asked to rate their satisfaction with SEM/MSK preparation from medical school, only 28% were ‘Satisfied’ or ‘Very Satisfied’. This only changed very slightly when asked the same question of Foundation Training, with 32% saying they were ‘Satisfied’ or ‘Very Satisfied’. When asked if they thought more time dedicated specifically to MSK/SEM medicine at medical school would have been helpful, 72% said ‘Yes’.

In terms of what our current doctors find most challenging, Figure 5 shows the majority of doctors lack confidence when dealing with paediatric MSK issues. Four respondents answering ‘Other’ felt they found no aspects challenging and one felt he/she found all aspects of MSK/SEM medicine most challenging. Further defining this into anatomical systems, Figure 6 shows that most find Foot and Ankle and Spine to be the most challenging regions to see and assess. Within the two respondents answering ‘Other’, one stated he/she did not find any aspect most challenging and 1 stated he/she found all of it most challenging.

**Discussion**
Despite many and international representative organisations in sports and exercise medicine being
formed in the 1900s (e.g. BASEM), it was not until 2007 that MSK/SEM became a separately recognised medical specialty. Nevertheless, since then there appears to have been no change in the fundamental teaching within the medical school environment. Not only can MSK/SEM medicine be considered a separate, stand-alone specialty, but our survey shows a huge overlap of this topic within many other specialties. In line with previous studies, it is clear that doctors in a range of specialties encounter MSK issues in around 30% of their practice. Basic competency and confidence in MSK medicine, therefore, really should be expected. Many studies have shown this not to be the case and made suggestions of how to readdress this issue. The most logical starting point would be at medical school since MSK medicine is represented across many different specialties within medicine and surgery including, but not limited to, Primary Care, Emergency Medicine, Orthopaedics, and Rheumatology. Further, with the shift in health, fitness and exercise within the UK, possibly as part of the legacy following the London 2012 Olympic Games, as well as the recognition of the need to
improve public health, increasing numbers of MSK-related issues are likely to present in the future.

Our study showed that no-one reported studying more than two weeks in MSK/SEM medicine within their medical school programme. This is consistent with the findings of Craton and Matheson who showed that exposure to MSK medicine was less than 3% of the total programme in Canada. We additionally show that 72% of our cohort believe that more time dedicated to this discipline would have been useful for their current practice. We point out that our cohort was from a very mixed background of specialties within medicine. Further, only 28% of participants reported they were satisfied or very satisfied with the teaching they received at medical school in this topic. This would suggest that the potential argument postulated that MSK/SEM is taught within and as part of other specialities such as Orthopaedics is therefore rendered somewhat moot since only just over a quarter of respondents are satisfied with this current approach to MSK teaching. In addition, Matzkin demonstrated that this assumed integrated method of learning MSK medicine within the overall teaching in medical school is not effective since only 21% passed a basic MSK exam. Notably, only 58% of those passing being from an orthopaedic background suggesting that even postgraduate exposure to a higher percentage of MSK issues is insufficient. It is important to recognise that even small, focussed interventions can make a big difference to skills learning. Even something as small as a one-day course on MSK medicine can lead to a significant improvement in confidence in examination skills in the medical student.

This basic questionnaire raises several very important points regarding medical school exposure and the importance of MSK/SEM teaching. Despite its high prevalence throughout many medical and surgical disciplines, and being recognised as a speciality in its own right, SEM/MSK medicine is still not being adequately addressed in medical education, leaving doctors dissatisfied with their preparation in this topic from medical school and leaving them with low confidence in dealing with this type of consultation.

References:
2. www.gmc.org.uk
The World Journal of Medical Education & Research (WJMER) is the online publication of the Doctors Academy Group of Educational Establishments. It aims to promote academia and research amongst all members of the multi-disciplinary healthcare team including doctors, dentists, scientists, and students of these specialties from all parts of the world. The journal intends to encourage 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 interaction will help develop medical knowledge & enhance the possibility of providing optimal clinical care in different settings all over the world.