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MINI-REVIEW

Academic development for urologists in the Kurdistan region of Iraq

Dirk J. Kok [a,*], **Delshad M. Maghdid** [a], **Maqsood S. Mohammed** [b], **Govand H.S. Sherwani** [b]

[a] *Department of Urology, Erasmus MC, Rotterdam, The Netherlands*
[b] *Ministry of Higher Education & Scientific Research, Kurdistan Regional Government, Erbil, Iraq*

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ABBREVIATIONS

KRG, Kurdistan Regional Government;
KRI, Kurdistan region of Iraq;
AAU, Arab Association of Urology;
EAU, European Association of Urology;
HCDP, Human Capacity Development Program;
AMR, antimicrobial resistance;
ESBL, extended spectrum β-lactamase

Abstract ***Objectives:*** Continuous education is mandatory for all urologists, and undertaking cooperative research is a very effective means for this. We describe the experience and possibilities for continuing education for urologists in the Kurdistan region of Iraq. We hope to provide a framework for stimulating urological education and research in other countries where urologists face the same obstacles.

Methods: Data were obtained from the perspective of two academics who co-operate with urologists from Iraq, and from the perspective of two officials from the Ministry of Higher education of the Kurdistan Regional Government who are responsible for stimulating continuous education.

Results: Based on a co-operative and supportive attitude of both Government and Academics, urologists in the Kurdistan region of Iraq have brought the standards of education and cooperative research to an internationally competitive level.

Conclusion: The authors hope that the examples given here can stimulate urologists from Arab countries to fully engage in new urological developments, despite the obstacles that they perceive.

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* Tel.: +31 10 7043690; fax: +31 10 7033968.
E-mail address: d.kok@erasmusmc.nl (D.J. Kok).

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Introduction

There are two aims of this report, to describe to urologists from Arab countries how they can develop their professional and academic skills, and to encourage them to engage in research. The paper is drawn from personal experience and from data provided by the Ministry of Higher education of the Kurdistan Regional Government (KRG) on the efforts that they undertake to support such initiatives. Although the data on funding opportunities and research experience are specific for the Kurdistan region of Iraq (KRI), the general approach described here, the problems that can be encountered, and the ways of solving these problems, are relevant also for other countries.

Continuous academic training

Continuous education is mandatory for all urologists, and involves keeping up with the relevant literature, attending relevant international symposia/workshops and courses, joining an (international) urological society, attending and possibly even organising workshops/courses inside the country, obtaining feedback from outside experts, both from a distance and on-site, and following hands-on training (preferably in the local setting). To what extent is this all possible in the KRI?

Opportunities for continuous academic training available to KRI urologists

Keeping abreast of the literature

The usual problems with this are the overwhelming number of journals, limited time and limited access. Universities in Kurdistan have limited subscriptions to research journals. Obviously, what is actually required is access to literature that is relevant to the clinician. An efficient way of filtering out relevant information and gaining access to it is to join a urological organisation like the Arab Association of Urology (AAU, www.araburo.net), the European Association of Urology (EAU, www.uroweb.org) and the AUA (www.auanet.org). Their journals provide a general view of developments in urology. They also provide electronic material for continuing education, information on scheduled relevant symposia/workshops/courses and access to specific courses. It is also possible to use a specialised medical information service like http://f1000.com or http://www.biomedexperts.com. These provide expert opinions on current clinical and research developments, and opportunities for networking.

Attending meetings is arguably the most time-efficient way of gathering new information. It also allows for hands-on training in new clinical approaches and meeting experts in the field. The KRG stimulates such visits within the Human Capacity Development Program (HCDP, see below). When a new technique is encountered, how is it implemented in your particular clinic?

Local courses

The first step is to organize a course in the local setting, supported by experts. This will have two benefits, i.e. it exposes the whole team to the new information or technique, and it allows an analysis of how it can be implemented in the specific setting. This is not a theoretical dream, but it requires the time of local organizers, funding and finding experts willing to participate. The EAU and AUA support such efforts by providing content in the form of speakers on request, and stages in between, up to complete courses. The KRG financially supports such initiatives. What remains is to form a group of local organizers who recognize an opportunity to improve their daily practice and are willing to make the required effort. In 2012, 10 courses were thus organized in the KRI, including one on a urological subject described below.

A 2-day workshop on urolithiasis, Sulaimania, 2012

This workshop was organized by the departments of Urology from Hawler Univeristy (Dr. Bahzad Koyeb) and Sulaimania Universiy (Dr. Ismaeel Aghaways) in cooperation with members of EULIS (the section for Urolithiasis of the EAU, Dr. N. Buchholz, Dr. J. Reis-Santos, Dr. C. Seitz and Dr. D.J. Kok) and co-funded by the KRG Ministry of Higher Education. The reason for organizing this workshop was the need felt by urologists in Iraq to better deal with the growing number of patients with urolithiasis. The workshop provided presentations on the mechanisms that lead to urolithiasis, on medical and lifestyle management for preventing urolithiasis, on the specific problems associated with setting up a stone clinic in a region like the KRI, on the newest approaches using ureteroscopy and percutaneous nephrolithotomy for stone removal, and live surgery sessions where these techniques were undertaken by the local team and EULIS members. The workshop was attended by about a third (50) of all urologists working in Iraq. It was judged to be extremely useful by all attendants. Most importantly, the participants saw at first-hand how these approaches can be used in their daily practice, highlighting existing problems of the infrastructure and ways for surmounting these problems.

The final step remains the actual implementation in the local clinics. The individual urologist must now begin to accumulate experience. This must be supported by return visits of the external experts and by additional hands-on training during an exchange programme (sab-

batical) abroad. The first is supported in individual cases by the KRG. The latter is also supported financially by the KRG, but is complicated by the fact that the KRI urologist might not be allowed to participate in the surgery at the foreign institution. At present, this follow-up part is the most difficult and overlooked aspect.

Support for exchange programmes

The KRG supports exchange programmes at several levels. It provides funds for master studies, postdoctoral education and continuing education abroad of staff members. A major obstacle is fluency with the English language. Many of the applicants for KRG funds thus aim specifically at improving their foreign-language skills, either within the country or abroad.

Cooperative research

An effective way to stimulate continuous education is to be involved in (co-operative) research. This requires colleagues with shared interests (obtained for instance by networking at conferences), funding and infrastructure. One reason that urologists from a region like the KRI are interesting research partners is the access to large specific patient populations and a specific local environment. Starting cooperative research in the KRI is stimulated by the KRG Ministry of Higher Education through the so-called split-site PhD programme, and in the form of support for individual projects. Existing problems can be the lack of infrastructure (availability of specific research techniques) and a culture where individualistic research is preferred above cooperation. Below an example is given of an ongoing cooperative project that started a few years ago and proved to be a success.

Bacterial resistance in the KRI

This project was focused on the development of *Escherchia coli* and *Klebsiella* multiresistance in the KRI [1]. As stated by the WHO 'The development of antimicrobial resistance (AMR) in bacteria is a developing worldwide crisis in health care driven by appropriate and inappropriate use of anti-infective medicines for human and animal health and food production together with inadequate measures to control spread of infections' [2]. A large variety of extended spectrum β-lactamases (ESBL) currently renders bacteria multiresistant, including Gram-negative species [3]. From neighbouring Turkey two papers reported on ESBL in *E. coli*, the major cause of UTIs, evolving both in the community [4] and in a hospital setting [5]. KRI urologists noticed anecdotally that AMR is increasingly complicating their treatment of UTI. A report from Iraq showed alarming numbers of cases with resistant *Klebsiella* in the town of Hilla [6]. These signs indicated that the control of AMR is needed in the region. In 2001 the WHO defined a strategy to control AMR. It includes surveillance, the rational use of antibiotics in humans and animals, infection prevention and control, and innovation. In the KRI the opposite is taking place. Previously restricted access to antibiotics has rapidly been replaced by unlimited, unrestricted access, also to the newest generations of antibiotics. The sale of low-quality drugs adds to the problem. Furthermore, measures to control the spread of infections in institutions need to be improved. Researchers from hospitals in Duhok, Hawler, Shaklawa, Sulaimania and Halabja, and from the Erasmus MC in the Netherlands, decided to co-operate on the first WHO step, i.e. surveillance. The focus was on the development of AMR in *E. coli* and *K. peumoniae*, two common causes of UTI [1]. In all, 200 urine and skin-wound samples were collected and cultured in the KRI hospitals, to identify the species and susceptibility pattern. Because there was no standardized culture approach in the hospitals, the samples were re-analysed in one centre, the Erasmus MC in the Netherlands, where the underlying genetic profile was also studied using the polymerase chain reaction and pulse-field gel electrophoresis. The practical reasons for using these techniques in the Netherlands were that the experience with the techniques existed there, and because there was a lack of equipment in the KRI. Apart from the scientific results (shown below) the project also showed that it is possible to undertake cooperative research in the individualistic academic field of the KRI, that the logistics of undertaking such an international study are surmountable, even when it involves shipping pathogenic samples from Iraq to the Netherlands, and it identified infrastructural problems that can be solved to carry out the next phase of the research within the KRI.

The research aims were to document the existing situation of AMR in clinical samples collected countrywide, and to identify if such multiresistance derives from the community or from single sources. The complete paper is currently being completed [1]. For the purpose of this article the main findings are reviewed. Only 18% of almost 200 samples were of the wild-type bacteria; 8% showed the classic type of resistance caused by β-lactamases; the remainder (74%) showed ESBL. On average, two-thirds of the ESBL specimens were multiresistant. In two hospitals no wild type bacteria were found, and in one hospital all ESBL bacteria were of the multiresistant type. The anecdotal impression of the KRI urologists, that they encounter much AMR, is more than supported by these data. Finally, the genetic analysis showed that most of the resistance had probably developed in the community, but that some single-source multiresistance was also present.

Overall, the project achieved several things. It produced data, i.e. that the situation of bacterial resistance

to antibiotics in the region is very serious, and that the inappropriate use of antibiotics is a major culprit. These data can be used to direct the controlling actions of the local clinicians, pharmacists and of the local government. For the researchers involved the project provided a starting point from which they can conduct further research at a level that competes at the international level, an incentive to start national monitoring of more types of AMR, an insight into what infrastructure is needed for that, and a research consortium that can also benefit other projects.

In conclusion, there are no reasons why urologists from the Arab world would not be able to participate in high level (academic) urology; on the contrary, there are ample opportunities.

The HCDP

The KRG Ministry of Higher Education and Research has started this US$ 100 million programme to support the following projects.

Split-site PhD

Local holders of a Master degree can apply for a 3-year PhD project that has both a local and a foreign supervisor, and is conducted both at the local and the foreign institution. The programme provides funding for the stay abroad. Up to 2013, 153 split-site PhD projects have been granted that were initiated by the following Universities: Salahaddin University, 30; Sulaimani University; 31; Duhok University, 12; Hawler Medical University, 10; Zakho University, 11; Koya University, 29; and Soran University, 30.

Post-doctoral development

This supports language training (US$ 10,000 fees per year), sabbatical leave (US$ 1800 monthly living expense, US$ 1000 annual health insurance, US$ 2000 annual flight ticket, tuition fees). To date, 4351 scholars have received a grant, of whom 2351 left the country to study abroad. More than 700 candidates are improving their English language skills inside the country, and the remainder are preparing to leave to go abroad. Recognizing this language problem, extra efforts are started to include language training in the curriculum.

Continuing education of medical doctors

Travel funds are provided for visiting symposia abroad (200 were awarded in 2012). In 2012 several medical symposia were supported, including 10 practical workshops on subjects like paediatrics and the prevention and/or treatment of urinary stone disease.

Collaborative research

Apart from the split-site PD programme, collaborative research is encouraged and supported for individuals by universities, through foreign foundations and by the Ministry.

Conflict of interest

None.

Source of funding

None.

References

[1] Maghdid DM, Goessens WHF, Alnakshabandi A, Assad D, Friaisam M, Mansoor IY, Kasm S, et al. Characterization of resistance mechanisms in *Escherichia coli* and *Klebsiella peumoniae* in 8 different hospitals in the Kurdistan region of Iraq. in preparation.

[2] WHO. The evolving threat of antimicrobial resistance – Options for action. World Health Organization 2012. ISBN: 978 92 4 1503181.

[3] Bradford PA. Extended-spectrum b-lactamases in the 21st century. Characterization, epidemiology, and detection of this important resistance threat. *Clin Microbiol Rev* 2001;**14**:933–51.

[4] Yumuk Z, Afacan G, Nicolas-Chanoine M-H, Sotto A, Lavigne J-P. Turkey: a further country concerned by community-acquired *Escherichia coli* clone O25-ST131 producing CTX-M-15. *J Antimicrob Chemother* 2008;**62**:284–8.

[5] Gonullu N, Aktas Z, Kayacan CB, Salcioglu M, Carattoli A, Yong DE, et al. Dissemination of CTX-M-15 b-lactamase genes carried on Inc FI and II plasmids among clinical isolates of *Escherichia coli* in a University Hospital in Istanbul Turkey. *J Clin Microbiol* 2008;**46**:1110–2.

[6] Al-Charrakh AH, Yousif SY, Al-Janabi HS. Occurrence and detection of extended-spectrum b-lactamases in *Klebsiella* isolates in Hilla Iraq. *Afr J Biotechnol* 2011;**10**:657–65.