



MEETING REPORT- EASD POSTGRADUATE COURSE ON CLINICAL DIABETES AND ITS COMPLICATIONS, 29 – 31 OCTOBER 2015, PRAGUE, CZECH REPUBLIC

Roxana Adriana Stoica

National Institute of Diabetes, Nutrition and Metabolic Diseases “Prof. N.C. Paulescu”, Bucharest, Romania

received: January 17, 2016

accepted: February 14, 2016

available online: March 15, 2016

Abstract

Since 2005 the European Association for the Study of Diabetes (EASD) invests in the education of diabetologists and facilitates the implementation of patient care by organizing postgraduate courses in different countries. I attended at one of these courses that was held in Prague between 29 and 31 October 2015. The course consisted of six sessions of state of the art lectures entitled: type 1 diabetes update, diabetes and cardiovascular diseases, special situations, therapy, complications and the last one, diabetes treatment- what is on the horizon?. These sessions alternated with interactive workshops held in parallel sessions. I consider that this experience helped me improve my practice skills. I had the opportunity to interact with doctors from other European countries and exchange our experience in the field of diabetes. I hope Romania will organize again such constructive EASD postgraduate courses on clinical diabetes.

key words: *postgraduate course, diabetes, diabetes complications.*

Introduction

Since 2005 the European Association for the Study of Diabetes (EASD) invests in the education of diabetologists and facilitates the application of patient care by organizing postgraduate courses in different countries. I attended at one of these courses that was held in Prague between 29 and 31 October 2015. The topic for discussion concerned diabetes complications and its management. In the next sections I will present a brief report and my impressions from this postgraduate course.

Course structure and participants

This event was organized by Professor Leszek Czupryniak - Chair of the EASD

Postgraduate Education Committee and Assistant Professor Jan Brož - Chairman of the local organising committee, under the auspices of Professor Vladimír Komárek, with support from Czech Diabetes Society and Czech Diabetes Association.

The course consisted of six sessions of state of the art lectures, including type 1 diabetes update, diabetes and cardiovascular diseases, special situations, therapy, complications and the last one, regarding future perspectives. These sessions alternated with interactive workshops held in parallel sessions, each conducted twice, so that everyone had the chance to participate at two workshops of three that were previously chosen. The international faculty that held the

lectures was formed by (in the order of their last name): Robert Bém (Czech Republic), Jan Brož (Czech Republic), Ludmila Brunerová (Czech Republic), Leszek Czupryniak (Poland), Nicholas Finer (UK), Martin Fried (Czech Republic), Brian Frier (UK), Martin Haluzik (Czech Republic), Edward Jude (UK), Roger

Lehmann (Switzerland), Elisabeth Mathiesen (Denmark), Martin Matoulek (Czech Republic), Didac Mauricio (Spain), Iwona Partyka (Poland), Martin Prázný (Czech Republic), Dario Rahelic (Croatia), Kateřina Štechová (Czech Republic), Hood Thabit (UK) and Apostolos Tsapas (Greece).



Take home messages

Diabetes (and its complications) is a vast subject, but the course organisers managed to cover all important topics in the short period of three days. Although all the presentations succeeded in capturing my attention, I will further mention only the four of them which I appreciated most.

Insulin pump and CGM in treatment of diabetes mellitus – Hood Thabit

Doctor Hood Thabit held a lecture about the advantages of insulin pump (continuous subcutaneous insulin injection or CSII) and continuous glucose monitoring (CGM) use in type 1 diabetes. Beside mentioning the results from observational and randomized studies that demonstrated the benefit on glycated haemoglobin (Hb1Ac) and hypoglycemia risk reduction, he emphasized the fact that CSII is

associated with lower cardiovascular mortality than treatment with multiple daily insulin injections according to Steineck et al [1].

Disproving the main reason for restricting this therapy, he presented a cost analysis of insulin pump use in the UK [2], in which ICER (Incremental Cost-Effectiveness Ratio) was 25.648£ per QALY (Quality-Adjusted Life Year). This may seem a large sum, but NICE-UK (The National Institute for Health and Care Excellence) considers an ICER between 20.000 and 30.000£ as cost effective; he also put in balance the direct and indirect costs of hypoglycemia that are underestimated by current economic models, for example, parents missing work days because their child had hypoglycemia.

Going further in the future, he presented the results of his 12-week randomized control study [3], in which he compared a closed-loop system with sensor-augmented pump therapy in 58

patients with type 1 diabetes. He showed that the closed-loop system improves glucose control, reduces hypoglycemia, and, in adults, results in a lower glycated haemoglobin level.

Diabetes and driving - Jan Brož

Doctor Jan Brož explained to us the importance of driving legislation in patients with diabetes that experience hypoglycemia. In 2012, in agreement with the European Union legislation, the Czech Republic adopted a law which restricted the rights of diabetic patients with recurrent hypoglycemia [4,5], meaning that for personal vehicles driving (Group 1), two severe hypoglycemic events within 12 months is ground to revoke a driving license or deny its issuance. Physicians must inform the authorities when they suspect patients of having such episodes that impair their ability to hold a driving license [6]. In our country the law is similar [7], but its enforcement is equivocal.

In this situation, it is possible that not all patients will be honest about their symptoms, leading to incorrect treatments and fatal accidents. Doctor Brož studied this aspect in the Czech population. He demonstrated that 26.17% of potentially affected insulin-treated diabetic patients would definitely not report (or would likely not report) severe hypoglycemia events during consultations under the present legislation, and 25.86% of the patients were undecided [6]. In addition to the standard education for diabetic patients that should include the risks of driving with hypoglycemia and information about driving license revocation or suspension, physicians are advised to include warnings regarding the risk of hypoglycemic event concealment [6]. Doctor Brož published a patient brochure in order to better educate diabetic patients [8].

Current standards for managing diabetes in pregnancy – Elisabeth Mathiesen

Another interesting presentation was that of doctor Mathiesen. She began by presenting the changes in the insulin requirement in diabetic women during pregnancy. She synthesized all the current information about therapy in gestational diabetes comparing evidences for glibenclamide, metformin and insulin use [9].

Together with her collaborators, she developed a free smartphone application named <Pregnant with Diabetes> intended for pregnant women with type 1 diabetes and type 2 diabetes, women that develop gestational diabetes, and also, diabetic women who wish to become pregnant. It offers information about what is diabetes, planning, possible complications, level of blood sugar, weight gain, diet, physical activity, insulin dose, scans, delivery and what happens after the birth (more information at: <http://heyworld.dk/#/pregnant-with-diabetes/>). This is a useful tool to educate pregnant women with diabetes and influence them to have a proactive attitude.

Diabetic foot – Edward Jude

Doctor Jude shared his experience regarding the diabetic foot syndrome and highlighted its most important features. In this lecture, but also in the workshop that followed, he focused on the factors that are associated with underlying osteomyelitis or can predict lower-extremity amputation. Independent risk factors for amputation are: peri-wound edema, foul smell, (non)purulent exudate, deep ulcer, positive probe-to-bone test, pretibial edema, fever, and elevated C-reactive protein [10]. He emphasized on two steps during patient assessment for osteomyelitis: probing ulcer (palpable bone with a probe) which has a sensitivity of 66%, specificity of 85% and positive predictive value of 89% [11], and radiologic findings.

Another discussion was about diabetic Charcot foot. He asked about the management of this complication in our countries and we compared different approaches. Doctor Jude mentioned that the cornerstone of treatment is effective foot offloading [12]. Also, he specified one of his studies in which bisphosphonate treatment reduced bone turnover, symptoms and disease activity in diabetic patients with active Charcot neuroarthropathy [13].

Conclusion

I consider that this experience helped me improve my practice skills. I had the opportunity

to interact with doctors from other European countries and exchange our experience in the field of diabetes. I hope Romania will organize again such a constructive EASD postgraduate course, the last time being more than 10 years ago.

Acknowledgements. I would like to thank Mr. Brian Carey - Postgraduate Courses, Media, Press, Web and Executive Administrator at EASD for giving me one of the travel grants that covered my transportation for this postgraduate course.

REFERENCES

1. **Steineck I, Cederholm J, Eliasson B et al. Swedish National Diabetes Register.** Insulin pump therapy, multiple daily injections, and cardiovascular mortality in 18,168 people with type 1 diabetes: observational study. *BMJ* 350:h3234, 2015.
2. **Pickup JC.** Management of diabetes mellitus: is the pump mightier than the pen? *Nat Rev Endocrinol* 8: 425-433, 2012.
3. **Thabit H, Tauschmann M, Allen JM et al. APCam Consortium.** Home use of an artificial beta cell in type 1 diabetes. *N Engl J Med* 373: 2129-2140, 2015.
4. **European Union (EU) Commission Directive** 2009/112/EC of 25 August 2009 amending Council Directive 91/439/EEC on driving licences. Official Journal of the European Union. L223:26-30, 2009.
5. **EU Commission Directive** 2009/113/EC of 25 August 2009 amending Directive 2006/126/EC of the European Parliament and of the council on driving licences. Official Journal of the European Union. L 223:31-35, 2009.
6. **Brož J, Brabec M, Ždárská DJ et al.** Fear of driving license withdrawal in patients with insulin-treated diabetes mellitus negatively influences their decision to report severe hypoglycemic events to physicians. *Patient Prefer Adherence* 9: 1367-1370, 2015.
7. **Monitorul Oficial,** Partea I nr. 631. Ordinul 1162/2010 pentru aprobarea Normelor minime privind aptitudinile fizice si mentale necesare pentru conducerea unui autovehicul.
8. **Brož J, Šilhová E, Polák J, Kožera J.** Diabetes and driving. Accessed at: http://www.abbottdiabetescare.cz/dokumenty/edukace/Diabetik_za_volantem.pdf
9. **Damm P, Mathiesen ER.** Diabetes: Therapy for gestational diabetes mellitus--time for a change? *Nat Rev Endocrinol* 11: 327-328, 2015.
10. **Pickwell K, Siersma V, Kars M et al.** Predictors of lower-extremity amputation in patients with an infected diabetic foot ulcer. *Diabetes Care* 38: 852-857, 2015.
11. **Grayson ML, Gibbons GW, Balogh K, Levin E, Karchmer AW.** Probing to bone in infected pedal ulcers. A clinical sign of underlying osteomyelitis in diabetic patients. *JAMA* 273: 721-723, 1995.
12. **Mascarenhas JV, Jude EB.** The Charcot foot as a complication of diabetic neuropathy. *Curr Diab Rep* 14: 561, 2014.
13. **Jude EB, Selby PL, Burgess J et al.** Bisphosphonates in the treatment of Charcot neuroarthropathy: a double-blind randomised controlled trial. *Diabetologia* 44: 2032-2037, 2001.