The impact of national guidelines on EBM implementation in clinical practice: a comparison between the practices in two countries

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Summary

Objective: To determine if the application of guidelines for obstetrical anal sphincter injuries (OASIS) management adopted by professional society in a country improves healthcare compared to a country where the guidelines are not adopted. Materials and Methods: In 2008 and 2016, a questionnaire was sent to every maternity ward in the Czech and Slovak Republics. In 2011, the guidelines for OASIS management were published in the Czech Republic. The authors compared the changes in the management of OASIS in both countries and evaluated the effect of the guidelines on healthcare improvement. Results: In 2008, the current Royal College of Obstetricians and Gynaecologists (RCOG) classification of OASIS was not used by any hospital in both countries. In 2016, the classification was used by 48.8% of hospitals in the Czech Republic and by 11.5% of hospitals in the Slovak Republic. The percentage of hospitals in the Czech Republic which used antibiotic prophylaxis while treating OASIS increased from 87.3% in 2008 to 100% in 2016. In the Slovak Republic, the percentage decreased from 85.7% to 73.1%. Active follow-up increased in the Czech Republic from 40% to 70.8%. In the Slovak Republic, it increased from 33.3% to 38.5%. In 2008, the management according to EBM was not performed by any of centres participating in the survey. In 2016, this percentage increased to 34.1% in the Czech Republic and to 3.8% in the Slovak Republic. Conclusion: The introduction of guidelines improved healthcare more significantly compared to the country where guidelines are not yet adopted.

Key words: Guideline adherence; Obstetrical anal sphincter injuries; OASIS management; EBM.

Introduction

Obstetrical anal sphincter injuries (OASIS) are the main risk factor of anal incontinence in young women [1]. Women with acquired anal incontinence after giving birth often suffer from severe psychosocial morbidity. A permanent feeling of impurity can lead to loss of dignity, feeling of isolation, changes in everyday habits, and feelings of fear and anxiety. Some women may feel mutilated and handicapped in their role of partner and mother [2]. Among other things, the occurrence of symptoms of anal incontinence depends on the quality of care [3]. This is the main reason why professional societies tend to accept guidelines for the management of OASIS [4, 5] and why workshops on the improvement of precise diagnostics and treatment of these injuries are organised in many countries [6, 7].

In addition, the adherence of centres to the guidelines on the management of anal sphincter injuries is equally important. A high degree of compliance with the guidelines improves the prognosis of patients [8]. In 2008, the present authors carried out a survey regarding the classification and management of extensive obstetric injuries in the Czech and Slovak Republics [9]. Neither of these two countries had published guidelines related to this issue at that time. The guidelines of the Czech Gynaecological and Obstetrical Society were published in 2011, but the Slovak Society of Gynaecology and Obstetrics has not accepted the guidelines as of now. Czech guidelines were published in the official nationwide journal, which is available to all members of the society. In addition, professional lectures and workshops were organised [10]. In order to evaluate the management of anal sphincter injuries after publication of the guidelines, the present authors conducted the survey once again. The aim of this study was to compare the changes in procedures in different centres in the Czech and Slovak Republics.

Materials and Methods

There were 101 maternity wards in the Czech Republic and 51 maternity wards in Slovakia in 2008. In 2016, the number decreased to 92 in the Czech Republic, while in Slovakia it remained the same. The same questionnaire was sent in 2008 and 2016. Each questionnaire contained ten questions concerning classification, repair, and follow-up of women with obstetric anal sphincter injuries or anal sphincter injuries involving the rectal mucosa. The questionnaire was anonymous, and every centre was instructed to specify their institutional status: university hospital or general hospital. The results of both surveys were statistically evaluated and both countries were compared.
Results

In 2008, 55 (54%) maternity wards in the Czech Republic and 21 (41%) maternity wards in the Slovak Republic responded to the questionnaire. In 2016, 41 (44%) Czech and 26 (51%) Slovak maternity wards responded to the questionnaire (Table 1).

Three specific examples of obstetric injuries were used in the questionnaire according to the recommended classification. Table 2 contains the answers to the following questions: How do you classify the injury to the perineal body with partial rupture of the musculus sphincter ani in your medical records? How do you classify the injury of the perineal body with complete rupture of the musculus sphincter ani without rectal wall lesion in your medical records? How do you classify the injury of the perineal body with complete rupture of the musculus sphincter ani with rectal wall lesion in your medical records?

The recommended Royal College of Obstetricians and Gynaecologists (RCOG) classification was not used correctly by any of the Czech or Slovak centres in 2008. However, in 2016, the classification was correctly used by 20 (48.8%) Czech and three (11.5%) Slovak centres. University hospitals used the correct classification more often than general hospitals (seven out of nine centres in the Czech Republic and two out of six centres in the Slovak Republic).

Table 3 contains the answers to the following questions: Who treats OASIS in your hospital? What kind of suture material do you use in the treatment of rupture of the musculus sphincter ani in your hospital? What type of antibiotics do you use as prophylaxis for treatment of OASIS? In 2008, antibiotic prophylaxis was used by 48 (87.3%) centres in the Czech Republic. However, in 2016, every Czech centre participating in the survey used antibiotic prophylaxis. In 2008, antibiotic prophylaxis was used by 18 (85.7%) Slovak centres. However, in 2016, 19 (73.1%) Slovak centres used antibiotic prophylaxis. In the Czech Republic, stool softeners or laxatives were administered after the treatment by 23 (41.8%) centres in 2008 and by 30 (73.2%) centres in 2016. In the Slovak Republic, stool softeners or laxatives were administered after the treatment by seven (33.3%) centres in 2008 and by ten (40.0%) centres in 2016.

In the Czech Republic, active follow-up after discharge
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from hospital was performed by 22 (40.0%) centres in 2008 and by 29 (70.8%) centres in 2016. In the Slovak Republic, active follow-up after discharge from hospital was performed by seven (33.3%) centres in 2008 and by ten (38.5%) centres in 2016 (Figure 1).

In 2008, none of the centres participating in the survey followed the recommended guidelines. In 2016, however, 14 (34.1%) Czech centres followed the recommended classification and management according to the guidelines published in the Czech Republic. These 14 Czech centres included six (out of nine) university hospitals and eight (out of 32) general hospitals. In Slovakia, only one university hospital followed the recommended guidelines.

Discussion

In the Czech Republic, the process of rationalisation of obstetrics is in progress. The obstetrics departments which are reporting less than one labour per day on average are being closed. Between 2008 and 2016, the ten smallest Czech obstetrics departments were closed. On the contrary, only one obstetrics department was closed, while one private obstetrics department was opened in Slovakia during the same period of time.

In published articles, the questionnaire response rate fluctuates between 29–86% [11, 12]. In the present survey, the questionnaire response rate was between 41–54%. The
present authors achieved a higher response rate from university hospitals. A similar survey carried out in the UK showed a response rate of 44.6% [13].

Using correct classification of obstetric injuries is important for adequate statistic evaluation. Also, the frequency of recognized and treated severe injuries is assumed to be an important quality indicator of the obstetric care provided [14]. Introduction and application of standardised classification leads to improved diagnosis and subsequent proper management of patients [15]. The recommended 4-grade classification is accepted as the most efficient in the incorporation of anatomic relations, enabling appropriate repair and standardised care [4]. Long-lasting consequences on patients and their health-related quality of life are also influenced by the severity of the musculus sphincter ani injuries, which were not evaluated by older classifications [16]. In the Czech Republic, the percentage of centres using the classification correctly increased to 48.8%. In Slovakia, the percentage is only 11.5%. University hospitals showed a higher level of adherence to the recommended classification. In 2012, 57.1% of centres in the UK used the classification correctly [17].

Healing and consequences of obstetric anal sphincter injuries depend directly on the quality of care [18]. Junior obstetricians and residents show inadequate erudition and insufficient level of skills in performing the surgery [19]. The limited experience of healthcare personnel is also a risk factor of failure of primary repair [20]. A consultant was present in maternity hospitals in Glasgow in 58% of cases, but 95% of treatments were conducted by a physician who attended the relevant training course [21]. In the Czech Republic, obstetric injuries of Grades 3 and 4 were managed by an older consultant in 90.1% of cases in 2008 and in 92.7% of cases in 2016. In the Slovak Republic, obstetric injuries of Grade 3 and 4 were managed by an older consultant in all cases in 2008 and in 88.5% of cases in 2016. The collaboration with a surgeon is not required by the guidelines. In the Czech Republic, the surgeon was invited in 11.5% of cases in 2008 and in 38.5% of centres in 2016. Active follow-up is also recommended courses, the percentage of patients who received the prophylaxis increased to 91% [21]. A great disparity is observed in the choice of antibiotic type. Only one multi-centre randomized controlled trial (RCT), which confirmed a decrease in postoperative complications after administration of single-dose second-generation cephalosporin against placebo, was published [23]. Based on the experience of colorectal surgeons, some centres prefer different types of schemes, most often the combination of broad spectrum antibiotics with metronidazole [24, 25].

An increase in the administration of stool softeners was also recorded (from 41.8% to 73.2% in the Czech Republic and from 33.3% to 38.4% in Slovakia). Although the positive effect of laxatives has not been studied by any randomized clinical trial, it can be predicted that the passage of a hard bolus of stool may disrupt the repair. Therefore, most surgical textbooks and experts recommend the use of laxatives. The administration of laxatives and stool softeners was confirmed by 78–100% of specialists [13, 21, 24].

In the Czech Republic, active follow-up after discharge from hospital in women suffering from OASIS was carried out by 40.0% of centres in 2008 and 70.8% of centres in 2016. In Slovakia, it was carried out by 33.3% of centres in 2008 and 38.5% of centres in 2016. Active follow-up is also recommended by professional societies [5]. In Glasgow, 99% of patients suffering from OASIS were invited for a follow-up with an obstetrician and 17% of patients were sent to a colorectal surgeon [21]. In the UK, 97% of centres perform active surveillance of patients with OASIS of which one-third has a special perineal unit [13].

**Conclusion**

The prognosis of patients suffering from OASIS depends on correct diagnosis, classification, and treatment. In the Czech Republic, the guidelines were followed by 34.1% of centres of which a higher percentage was represented by university hospitals. Slovak doctors often visit Czech scientific events; nevertheless, only one Slovak university hospital followed the guidelines (3.8%). It can be assumed that accepting the guidelines, its publication in a nationwide medical journal, and organizing of lectures and work-
shops may significantly improve the quality of hospital care. A greater influence can be expected in university hospitals. This work offers a unique information as it compares the changes in the management of anal sphincter injuries in two different countries after the introduction of guidelines by the professional society in only one of them. By this approach, the present authors eliminated the impact of other factors, such as attending workshops in other countries and acceptance of Evidence Based Medicine (EBM) facts by various centres, regardless of the opinion of professional societies.

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References


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