Compliance with Protocols in Dental Conditions

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Key Words

Compliance, protocols, dental conditions, local community pharmacies

Abstract

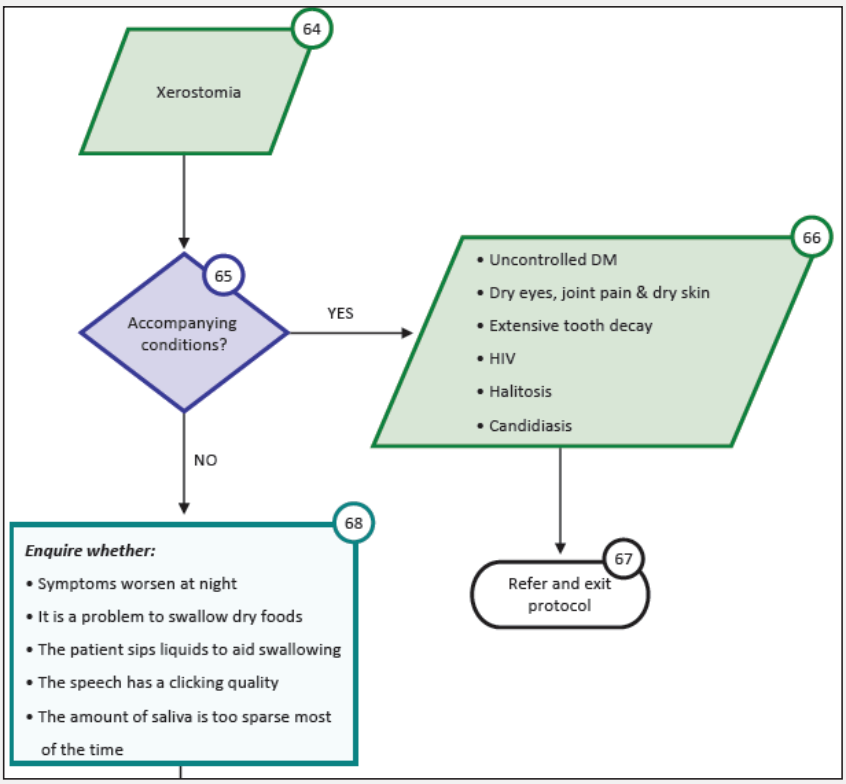
The aims of this study were to assess compliance with the developed treatment protocols through the dissemination of case studies. Out of 203 questionnaires distributed, 125 (62%) were collected. Community pharmacists were asked to complete case studies within a fortnight to indicate their line of action in three conditions presented. Average percentage compliance with the protocols was 73%.

Introduction

Evidence-based practice dates back to the 1980s following the establishment of 'evidence-based medicine',[1] and it was best defined by Sackett and colleagues as "The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients".[2] The intervention of the community pharmacist and other healthcare professionals is shifting towards this practice, implying that daily practice is strongly based on evidence, rather than traditions.[3]

Multiple factors may hinder the process of evidence-based practice, including inadequate knowledge and skills by healthcare professionals, misconceptions, lack of time and lack of counsellors to help guide along the change.[4] These barriers are faced by all healthcare professionals, irrespective of the motivation,[5] however knowledge can constantly be improved through continuing professional development.

Figure 1: Excerpt from the Xerostomia protocol, illustrating the colour-coded scheme for easier interpretation



Protocols and guidelines should be based on the latest information ensuring that they provide evidence-based practice. Using high quality evidence will increase overall quality care.[3]

A survey conducted in Scotland in 2002 illustrated that many patients with oral problems seek the help and advice of a pharmacist before that of a dentist. It was further established that the majority of conditions presented could easily be managed successfully within the pharmacy setting.[6] A study performed locally in 1998 by Caruana[7] demonstrated that all pharmacies that took part in the study (n=103) were consulted as first line of treatment for oral problems. The course of action taken by pharmacists when presented with an oral complaint varies, but immediate referral was not generally recommended, except for scenarios presenting with trauma to the anterior teeth or abscesses. In other circumstances, the patient was referred only if the complaint was severe or persistent, or after dispensing an emergency medication.

The aims of this study were to develop treatment protocols for recurrent aphthous ulcers, xerostomia and dental abscess, and to assess compliance of the pharmacists with the protocols through dissemination of case studies.

Method

An extensive literature review was carried out and three treatment protocols on recurrent aphthous ulcers, xerostomia and dental abscess were designed for community pharmacists when responding to oral symptoms.

Three corresponding case studies were also created to evaluate the pharmacists' compliance with the protocols. The case studies were kept concise and open-ended questions were used so that the pharmacist would not be automatically guided to follow

the protocols. Referral was included as an option only in the recurrent aphthous ulcers and xerostomia case studies, as cases of dental abscess require initial and immediate referral to a dentist since their management require specialized treatment by a qualified healthcare professional.

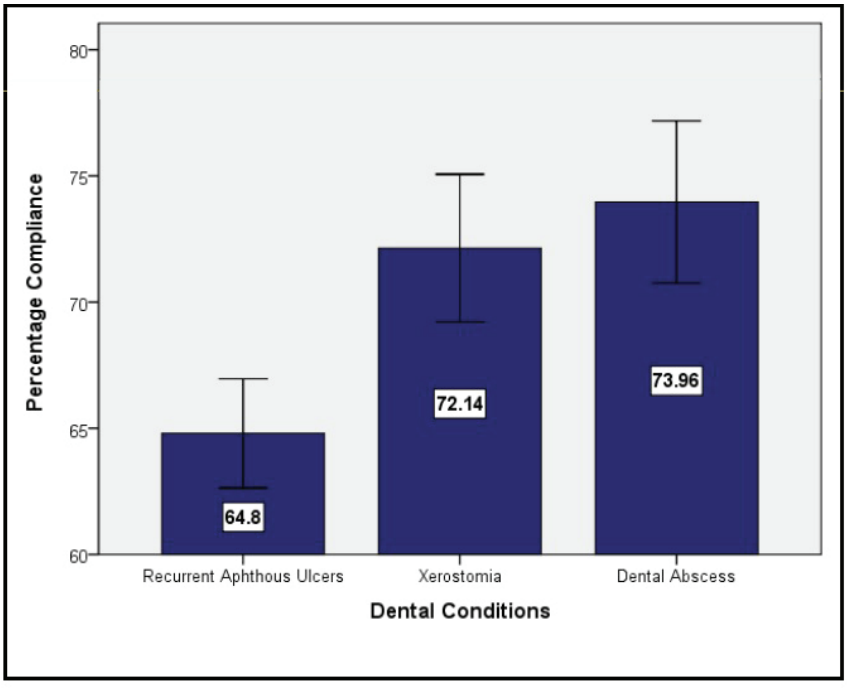
Both the protocols and the case studies underwent validation by a panel of six experts in the medical and dental field. Subsequently, the protocols were modified according to suggestions made during the validation process.

The validated protocols were then formulated into an A5 booklet, which along with the explanatory text and case studies were distributed by hand to 213 local community pharmacies. Ten pharmacies out of the total declined to take part in the fieldwork and thus the pharmacy population was taken as 203.

A scoring system was adapted from Aquilina, 2004[8] whereby a score of '1' was awarded for every step followed which complied with the protocol, and a score of '0' was awarded for steps which were not followed or which were omitted. Steps omitted as required by the protocol were awarded no score and thus were not considered during statistical analysis.

Data collected was analysed using Microsoft® Office Excel 2007 and Statistical Package for the Social Sciences (SPSS®) software version 17. Compliance with the individual protocols was calculated as percentage compliance.

Figure 2: Comparison of compliance, at the 95% Confidence interval, if all pharmacies (n=203) had to participate in the study



Results

The validated booklet consists of 40 pages and it was divided into 4 different sections. The first section titled 'Introduction' starts off with a list of the abbreviations found throughout the whole booklet, a glossary and a table which explains the interpretation of shapes. The second section, 'Treatment Protocols', includes the three treatment protocols in a flowchart format (Figure 1), along with an introductory protocol. The introductory protocol mainly deals with patients who present in the pharmacy with a prescription, highlighting the intervention of pharmacists in dispensing medication. For example, it highlights the need for pharmacists to check for any cautions, contraindications and drug-drug interactions, and to offer advice on the prescribed medication at the end of the pharmacist-patient interraction. This protocol consists of 20 steps, the Recurrent Aphthous ulcers protocol consists of 43 steps, the Xerostomia

protocol has 40 steps while the Dental Abscess protocol is 20 steps. The next section entitled 'Appendix' contains relevant information that complements the protocol flowcharts, such as the predisposing factors of recurrent aphthous ulcers, along with management of cases which warrant referral, a list in table format of the most common drugs that cause dry mouth, and an emphasis on how to maintain good oral hygiene. Finally, the last section 'References' contains a list of references that were used to compile the content of the booklet.

A total of 203 case studies were distributed, and a total of 125 were collected, giving an average response rate of 62%. An average compliance of 73% was obtained. It was highest for dental abscess (77%), followed by xerostomia (74%), and recurrent aphthous ulcers (68%) (Figure 2).

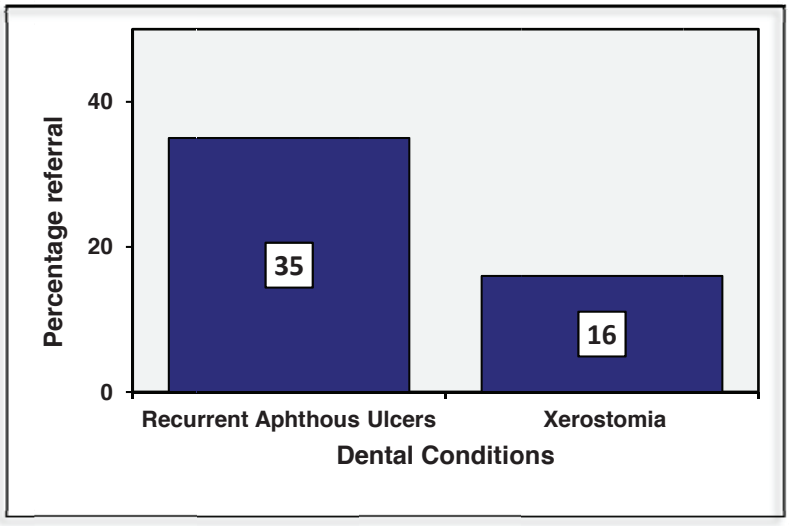
Limitations

The main limitation was the time period allocated for data collection. If the study was conducted over a longer time period, it may have given the opportunity of the collaboration of more pharmacists. Other limitations were the increased workload on pharmacists created by the Pharmacy of Your Choice scheme, giving them less time to evaluate the protocols and participate in the study. Another limitation to the study could be that pharmacists replying to the questionnaire referred to the adjoining protocol before filling in the case study leading to a higher number of correct answers.

Discussion

The overall percentage compliance obtained (73%) indicates that pharmacists found the protocols of value when presented with such conditions. The higher compliance obtained with the dental abscess protocol (77%) shows that pharmacists tend to be more cautious when dealing with more severe conditions, which usually require referral. The lower compliance obtained with the recurrent aphthous ulcers protocol (68%) reflects referral, mostly when it was unnecessary (Figure 3).

Figure 3: Pharmacists referral for recurrent aphthous ulcers and xerostomia



There was a misconception perpetuated by several pharmacists in the recurrent aphthous ulcers case study. The case study specified that the patient was suffering from painful recurrent bouts of mouth ulcers, lasting up to a few days. The majority of pharmacists that took part in the study would refer such a patient since the ulcers were recurrent and painful, to establish an appropriate diagnosis, however, literature explains that the presence of pain is a good sign, since it excludes more serious underlying diagnoses. Furthermore, step 23 of the recurrent aphthous ulcers protocol indicates that in the absence of pain or discomfort, the patient should be referred immediately, but essentially this step was either ignored or not considered to be of significant importance.

Implementation of the use of protocols and guidelines in the community and clinical scenario may be hindered by several factors. Simple and easy-to-use protocols are preferred, and may enhance their utilization. Healthcare professionals may be unfamiliar with the contents, and both environmental and patient characteristics may affect the implementation of their use. Predominant environmental characteristics include time and lack of staff, while the most common patient characteristic is the presence of comorbidities, where most protocols and guidelines are not customized for such patients.[9] The developed treatment protocols aimed to overcome these barriers, by taking into consideration possible comorbidities.

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