

**PATIENT EDUCATION IN THE FOOT CARE WITH ONYCHOCRYPTOSIS -  
AN IMPORTANT CONDITION FOR CARE AND PREVENTION**

**Binnaz Asanova**

Medical University, Medical College - Sofia, Bulgaria

b.asanova\_mk.sofia@abv.bg

**Katya Savova**

Medical University, Medical College - Sofia, Bulgaria

**Abstract:** Patient education is an essential process of the whole concept of effective health care. The involvement of a patient as an active participant in his/her own health management is one of the major tasks of the World Health Organization. The idea is to ensure prevention and health safeguarding of society, and improve its welfare. The creation and use of materials for the education of patients aims to increase information, knowledge, and culture levels of health awareness behaviour, and their active involvement in the curative process for the personal health preservation. Similar other health conditions and diseases, and in people suffering from onychocryptosis, it is necessary to build habits for implementing the appropriate personal health care to assist the healing process and prevention. The education of patients/consumers with onychocryptosis can be addressed in several aspects: *prevention* - it includes information and training as to how to apply the appropriate hygienic and cosmetic care to the foot and toe-nails; *home care, during the healing process* - according to the individual condition and the treatment process, clear and specific guidelines need to be provided for the necessary care, that the patient should apply at home; *partner involvement* - in the cases, when the patient/customer is unable to personally implement the relevant instructions is necessary to train their relatives, they who are to participate in the healing process. The main objective of this report is to present a protocol for patients/consumers training, which is related to the prevention and reduction of the risk of complications of onychocryptosis. There are different methods of caring for these health conditions. But, we are discussing the way, in which the patient can be trained to take care of themselves. This protocol includes theoretical and practical training methods. The concept is based on good practices in the development of educational materials for patients/consumers, so that their participation in the care of their own health to be more effective and useful. Patient education materials offer a lot of benefits both to patients/customers and healthcare providers (physicians, healthcare professionals, medical and non-medical staff, etc), and also cost covering institutions (health funds, health insurance companies, personal sources, etc). Thus, patients are changing from passive customers of healthcare services in to active participants in their own health management. Such appropriately created materials and their proper use can significantly improve the ability of patients/customers to manage their own health status.

**Keywords:** patient education, onychocryptosis, health care, hygienic-cosmetic care

**Introduction**

Patient education is an essential process of the whole concept of effective health care. An important role in their education is the availability of materials for the education. The creation and use of materials for the education of patients aims to increase information, knowledge, and culture levels of health awareness behaviour, and their active involvement in the curative process for the personal health preservation. According to the good practices, these are most often information materials /brochures, videos, books, etc/. They have entirely educational character - to give clear information about a health condition or disease, brief guidelines for prevention or recommendations. In the last years, other educational approaches have also emerged - training programs for patients through the formation of groups with common needs, aimed a mutual assistance between patients. Even less, the practical training approach also applies. In it, patients/customers receive not only theoretical information but also have the opportunity to train specific practical actions. This is especially useful in the cases, when the patient/customer should self-perform activities related to the care of his/her health condition.

Similar other health conditions and diseases, and in people suffering from onychocryptosis, it is necessary to build habits for implementing the appropriate personal health care to assist the healing process and prevention. Extremely suitable for this purpose are the practical training protocols for patients, which protocols are the idea of our discussion.






**Materials and methods:** For the purpose of this report, a documentary method and materials for patient education based on international good practices were used. Pedagogical methods are also presented through a protocol for practical training of patients/customers.

**Purpose**

The main objective of this report is to present protocol for practical training of patients/consumers concerning the application of self-care to prevent and reduce the risk of onychocryptosis complications.

**Discussion**

Onychocryptosis (ingrown toenails) results from a painful conflict between the nail plate and the surrounding soft tissues. [1,p.35] Depending on the degree of complication, the symptoms may be: erythema, infection, swelling, oozing, hypertrophy of the lateral fold, granulation tissue and pain. [1,p.54] According to Al Kline, DPM, staging the severity of onychocryptosis has its advantages. This visual classification of identifying infection and staging the toe infection helps in the documentation process where a simple algorithm can be formulated to best treat the condition. [2] ( Table 1).

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
				
<ul style="list-style-type: none"> <li>• Local irritation</li> <li>• No infection, pus or granulation tissue.</li> </ul>	<ul style="list-style-type: none"> <li>• Infection without a history of onychocryptosis.</li> <li>• Pus and/or Granulation tissue</li> </ul>	<ul style="list-style-type: none"> <li>• Infection with history of more than one episode of onychocryptosis.</li> <li>Pus/Granulation</li> </ul>	<ul style="list-style-type: none"> <li>• Infective onychocryptosis with partial onycholysis of a single nail border.</li> </ul>	<ul style="list-style-type: none"> <li>• Infective onychocryptosis with partial onycholysis of both nail borders.</li> </ul>

**Table 1.** Stages of Onychocryptosis, adapted by Al Kline, The Foot & Ankle Journal 1 (5):6, 2008

The most common causes of the condition are:

- conflict between the nail plate and the surrounding soft tissues ( there is a genetic predisposition)
- improper nail cutting (hygienic-cosmetic habits)
- repetitive trauma from buffeting of the toes against the tip of the shoe
- trauma (sports)
- hyperhidrosis (often by adolescents and athletes) [1,pp.35-44]

Certain nail conditions are often associated with ingrown toenails. For example, if there was a toenail fungal infection or for example, if there are lost a nail through trauma, there are at greater risk for developing an ingrown toenail. [3]

In people suffering from onychocryptosis it is necessary to build habits to apply the correct personal care to help the healing process and prevention. This can be achieved by creating educational materials and purposeful practical training for those in need.

The education of patients/consumers with onychocryptosis can be addressed in several aspects:

- *prevention* - it includes information and training as to how to apply the appropriate hygienic and cosmetic care to the foot and toe-nails;
- *home care, during the healing process* - according to the individual condition and the treatment process, clear and specific guidelines need to be provided for the necessary care, that the patient should apply at home;
- *partner involvement* - in the cases, when the patient/customer is unable to personally implement the relevant instructions is necessary to train their relatives, they who are to participate in the healing process.

*Practical Training Protocol*

In the international practice have been developed materials for patient education, primarily for educational purposes - how to recognize the symptoms of onychocryptosis; what to do as a preventive measure or to whom to ask for help. The idea, that we are dealing with is the practical training of patients to build proper habits and self-care skills to adhere to at home.

The protocol we present includes a practical training for a patient with an onychocryptosis onset (Stage 1, Table 1) for the application of a home treatment method and the attendant hygienic care. After a professional procedure (podiatry procedure) was made, it was chosen a conservative method of treatment- cotton, attached via decompressing fixation of the tissue with an adhesive tape. (Table 2) The use of cotton is a simple method, in which the material is inserted between the nail plate corner and the nail fold. [1,p. 67] This approach was chosen because of the degree of interference in the particular case and its easy implementation at home. In this case, the procedure requires it to be applied on a daily in the long term, which is another prerequisite for the need of the patient training.

**Steps of the method of treatment on onychocryptosis (Stage 1)**

			
<b>Stage 1</b> on onychocryptosis	<b>Step 1</b> placing a cotton	<b>Step 2</b> applying an adhesive tape	<b>Final view</b>

**Table 2.** Steps of the method of treatment on onychocryptosis (Stage 1), archive of the professional experience,2017

During the patient screening, an improvement in the condition was observed. The client reported that the method was easy to apply at home and that two days after application of the method had felt pain reduction.

For educational purposes were applied pedagogical approaches such as demonstration, exercise, and discussion.

1. *Discussion* - in this part of the patient's training, information was provided on what is onychocryptosis, what are the reasons for its occurrence, and what complications it may cause in cases of unacceptable measures.
2. *Demonstration* - the patient's training continued with instructions about the materials and products necessary to carry out the procedure / ordering of the materials in sequence of use and their quantity. Then, through demonstration was shown in patient step by step how to practically apply the method of treatment.
3. *Exercise* - practical implementation of the method by the patient himself, under supervision, guidance and corrections by the therapist-trainer.
4. *Final part* - provision of an informational brochure. It contains information about the method of treatment; hygiene care and precautions that the patient should perform. Each text paragraph in the brochure is accompanied by a visual element (pictures and schemes).

The structure of the patient information brochure is borrowed from professional protocols for the application of hygienic-cosmetic care. It includes a preparatory, an actual and a final parts, in which are written and visualized step by step the materials and actions that the patient should continue to use independently at home. A mandatory part of the information is what the patient should not do, by explaining the complications and consequences of the wrong actions.

**Results**

Patient education materials offer many benefits for patients, providers, and payeras healthcare becomes more patient centered, with patients moving from mere consumers of health services to active participants in their own care. To

fully participate, patients must be better informed, and patient education materials play a central role. The right materials can significantly improve patients' abilities to manage their own health. [4,pp2-6]

The education of building proper habits through practical action has a number of advantages:

- ✓ *Activity* – engaging the patient with implementing specific actions in the care of his own health allows him to pass from passive to an active participant in the healing process.
- ✓ *Confidence* - often after oral information / instructions / the patient remains with the impression of understanding what to do. However, with the passing to the practical implementation of the instructions, a person is often confused himself because of the unsettled habits. Concerns arise as to whether he/she is doing well and whether he/she correctly applies the guidelines. This moment of unpreparedness can be eliminated by providing practical training that will lead to a sense of confidence.
- ✓ *Dexterity* - not everyone is skilled enough. When the trainer develops the minimum skills required for the action, the probability of a person doing well is much greater.
- ✓ *Responsibility* - practical training is a prerequisite for creating habits, with that the patient is getting used to living. This training, with its achieved results engages the patients in an unconscious and unloading responsibility to maintain their own health.
- ✓ *Self-confidence* – people, who are trained to care for themselves have a better self-confidence that indirectly reflects positively on their health.
- ✓ *Self-sufficiency* - practical training allows the patient to feel self-sufficient and independent, to be free to take care of themselves and manage their own time for it.

In our case, the improvement in the patient's condition was largely due to the applicable self-care at home. For us, this is an important indicator of the importance of the practical training and the involvement of the patient in the treatment process as an active participant.

### **Conclusion**

Patient education materials are no longer “extras” appended to a visit to the doctor, pharmacy, or hospital. Instead, they have become an integral part of how patient care is delivered. When prepared and used properly, patient education materials can improve healthcare and outcomes, help prevent disease, instill healthy behavior, and reduce costs. The practical protocols are a part of the educational materials. They include brief information on the status and guidelines step by step for each action that the patient/consumer should be applied at home. Their usefulness is increased many times more if they are accompanied by practical training. The giving of information materials is not a guarantee of complete patient/consumer activity in the healing process. The personal engagement, through specific actions and appropriate training are the basis for patient involvement in team-work for a storage, preservation and improvement of his/her own health.

### **LITERATURE**

- [1] Richert, B., Nilton Di Chiacchio, Marie Caucanas, Nilton Gioia Di Chiacchio (2016), Management of Ingrowing Nails Treatment Scenarios and Practical Tips - ISBN 978-3-319-30555-4, Springer International Publishing Switzerland, pp. 35-67
- [2] Kline, A., (2008), Onychocryptosis: A Simple Classification System, The Foot & Ankle Journal 1 (5):6
- [3] INGROWN TOENAIL, American College of Foot and Ankle Surgeons, (2005), [www.FootPhysicians.com](http://www.FootPhysicians.com) (by 05.11.2017)
- [4] WHITE PAPER: How to Develop and Use Effective Patient/Consumer Education, Elsevier Clinical Solutions (2015),