

# The Nurse's Role in a Patient with Phantom Sensation- Phantom Pain

## Fantom Hissi - Fantom Ağrısı Tanımlayan Hastada Hemşirenin Rolü

Hamdiye Banu KATRAN<sup>1</sup>   
Nuray AKYÜZ<sup>2</sup> 

<sup>1</sup>Şişli Hamidiye Etfal Training and Research Hospital, Support and Quality Services Directorate, İstanbul, Turkey

<sup>2</sup>İstanbul University-Cerrahpaşa Florence Nightingale Faculty of Nursing, Department of Surgical Nursing, İstanbul, Turkey

### ABSTRACT

The aim of this compilation is to review the role of the nurse in the patient who describes phantom sensation and phantom pain in the light of the literature. The problems that occur in individuals following operations such as amputation and mastectomy, which require removal of an organ / limb from the body, lead to disability in daily life activities in different dimensions, causing individuals to become fully or semi-dependent physically, economically and socially. The pain in the extremity, which is removed from the body after amputation, is called phantom pain and its mechanism is not fully understood yet. It is known that both peripheral and central nervous system play a role in phantom pain. Phantom Sensation (PS), which is defined as feeling that the limb or organ is still in place, and Phantom Pain (PP), seen as pain in the non-organ / limb, are common chronic problems in the postoperative period. These symptoms, which prolong the healing process in patients undergoing surgery, can only be identified by a comprehensive / complex assessment, and therefore the role of the nurse in management is large. In this compilation, we aimed to review the role of nurses in the treatment and care of patients with phantom sensation and phantom pain.

**Keywords:** Phantom sensation, phantom pain, the nurse's role

### ÖZ

Bu derlemenin amacı, fantom hissi ve fantom ağrısı tanımlayan hastaların tedavi ve bakım süreçlerinde hemşirenin rolünü literatür ışığında gözden geçirmektir. Ampütasyon ve mastektomi gibi vücuttan bir organ/uzvun kesilerek çıkarılmasını gerektiren ameliyatları takiben bireylerde gelişen problemler günlük yaşam aktivitelerinde farklı boyutlarda yetersizliğe yol açarak kişilerin fiziksel, ekonomik ve sosyal açıdan tam ya da yarı bağımlı hale gelmesine neden olmaktadır. Ampütasyon sonrası vücuttan kesilerek uzaklaştırılan ekstremitede oluşan ağrı, fantom ağrısı olarak adlandırılır ve mekanizması henüz tam olarak anlaşılamamıştır. Fantom ağrısında, hem periferik hem santral sinir sisteminin rol oynadığı bilinmektedir. Uzun ya da organın halen yerindeymiş gibi hissedilmesi olarak tanımlanan Fantom Hissi (FH) ve olmayan organ/uzuvda ağrı şeklinde görülen Fantom Ağrısı (FA) ameliyat sonrası dönemde sıkça rastlanan kronik sorunlardır. Cerrahi geçiren hastalarda iyileşme sürecini uzatan bu belirtiler ancak kapsamlı / karmaşık bir değerlendirme ile belirlenebilir ve bu nedenle yönetiminde hemşirenin rolü büyüktür.

**Anahtar Kelimeler:** Fantom hissi, fantom ağrısı, hemşirenin rolü

### INTRODUCTION

In Latin; pain, which derives from the word "poena" in terms of punishment, torture and revenge, is a very difficult concept to define due to individual specificity. Different definitions of pain, which is a subjective perception, have been made.<sup>1</sup> According to the International Association for the Study of Pain (IASP); "Ache; it is a sensory, unpleasant, emotional sensation, a behavioral form of a person's subjective, primitive, protective experiences that have been acquired in the past, which may or may not be due to a strong tissue damage resulting from a particular part of the body".<sup>1-5</sup>

The concept of pain has been an important area of interest in the science of nursing as well as in the medical sciences. Nurses should be knowledgeable and competent about accurate pain assessment because of their long-term relationship with other healthcare professionals, their primary role in comforting and relieving pain. In order to evaluate pain correctly, pain which is a subjective definition, should be examined in detail and effective coping methods should be known.<sup>1,6,7</sup> Because pain is always unique to the individual, its perception may vary from person to person. In addition to objective stimuli, individual characteristics, current situation and past experiences also play an important role in the individual's response to pain. The pain experience is dynamic and the nurse has an important role in determining this.<sup>8</sup> The aim of effective pain management is; not only to reduce physical discomfort, but also to get the patient up as soon as possible and reduce the duration of hospital stay in the individual to return to social functions and health care costs to minimize.<sup>6,9</sup>

\*Presented at (poster presentation) \*3<sup>rd</sup> International 11<sup>th</sup> National Congress of Turkish Surgical and Operating Room Nurses\*. 3-6 October 2019, Ilıca Hotel SPA & Thermal Resort Çeşme/Izmir, Turkey

\*This review was produced from the doctoral thesis.

Received/Geliş Tarihi: 20.12.2019

Accepted/Kabul Tarihi: 29.11.2021

Corresponding Author/Sorumlu Yazar:  
Hamdiye Banu KATRAN  
E-mail: banu-katran@hotmail.com

Cite this article: Katran HB, Akyüz N. The Nurse's Role in a Patient with Phantom Sensation-Phantom Pain. *J Nursology*. 2022;25(1):60-62.



Copyright@Author(s) - Available online at nursing-ataunipress.org.  
Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

### Phantom Sensation and Phantom Pain

Problems that occur in individuals following operations requiring amputation and removal of an organ / limb from the body such as mastectomy cause individuals to become fully or semi-dependent physically, economically and socially by causing inadequacies in daily living activities.<sup>10</sup>

Phantom Sensation (PS) and phantom pain (PP), which is defined as the feeling of the limb or organ removed from the body as if it is still in place, are common chronic problems in the postoperative period.<sup>11,12</sup> This type of neuropathic pain, often described in the literature as phantom limb sensation and phantom limb pain after amputation, can be seen after loss of breast, tongue, teeth, rectum, bladder and reproductive organs and even after the loss of many organs or body parts such as ulcer pain after gastrectomy. Phantom breast pain after mastectomy is the same as phantom pain after removal of an extremity. Patients feel their breasts still present; they even define pain at the tip and inside the breast.<sup>13</sup>

Phantom sensations, on the other hand, are all sensations other than pain that are felt in the non-existent limb. Feeling that the limb is still present, burning, itching, contraction, paresthesia, numbness, hyperalgesia and telescope may be among these feelings.<sup>11,14,15</sup>

Phantom pain may be neuropathic or nociceptive. This pain can be stinging, sharp, similar to electrification, or the individual may feel cramping, numbness and compression. It can be felt in all or a certain part of the lost limb. It typically occurs within the first 6 months postoperatively.<sup>12,15</sup> In the literature review of Aygin and Şen; Mastectomy was performed in 627 patients, 49 (7.8%) had phantom breast syndrome, 413 (65.8%) had phantom breast sensation and 42 (6.7%) had phantom breast pain.<sup>16</sup> It has been reported in many studies that the incidence of phantom extremity pain is 60-80%.<sup>12,17,18</sup>

Limb amputations applied for medical reasons can often be related to vascular disease, diabetes-induced neuropathies, trauma (traffic accidents, firearm injuries etc.), infection and abnormal tissue growth. The incidence of phantom limb pain is also related to the preoperative pain level of the patient. Risk factors for the development of phantom limb pain include severe pain before and after surgery, inability to use appropriate methods of coping with pain (negative emotion to pain) and advanced age. In addition, air changes, emotional stress, fatigue and pressure on the remaining tissue after amputation triggers phantom pain.<sup>12,17-20</sup>

Pain perception, diagnosis and reactions to pain vary from person to person. Therefore, the patient's pain assessment should be made using detailed anamnesis, continuous close monitoring and appropriate measurement tools. Pain is a difficult phenomenon to be evaluated and managed due to its subjective nature and McCaffery pointed out that pain is an individual-specific and living phenomenon by saying "Pain is what he/she says and where he/she says it is".<sup>21</sup> For this reason, nurses have the opportunity to observe and evaluate the painful patient especially as the patient and the health care team are together for a longer period. Therefore, the role of the nurse in the management of painful patients is extremely important.

### The Role of Nurse in Pain Management

In order for the nurse to perform this role, it is important to be knowledgeable about phantom limb pain, to have the ability to communicate and to have empathy, to plan effective nursing care to relieve the pain. The nurse who makes accurate and effective

pain diagnosis and evaluation should plan nursing care in the light of this information.<sup>2,22</sup> The determination of emotional feelings such as the anxiety of not meeting the individual's post-amputation care needs, loss of occupation and relationship, change in body image, and factors such as physical dysfunction should be taken into consideration at the stage of nursing care plan.<sup>19-21,23</sup> Nurses who care for the patient with phantom limb pain should pay attention to the following points:

- The patient should be evaluated with a holistic approach and holistic care should be given.
- Pain should be defined with an appropriate pain assessment scale and nursing care plan should be shaped according to this assessment.
- The extent to which the patient's pain restricts activities of daily living and the level of dependence should be identified.
- The fears he / she has experienced especially regarding limb / organ loss should be identified and initiatives to get rid of the fear should be planned.
- The misconceptions about pain of health personnel and patient's relatives should be determined and corrected.
- The patient's lack of knowledge should be identified and training should be planned.
- The source of the pain should be tried to be found and appropriate measures should be taken for treatment.
- Plans should be made to identify the problems that cause the pain to be increased.
- The patient should be asked what helped relieve pain before.
- The plan should be made with the patient and the patient and his / her relatives should be included in the care.
- Should be known the routes of administration and mechanism of action of pharmacological agents also should be evaluated for adverse effects and recorded.
- Nursing interventions should be planned to evaluate and eliminate common side effects of analgesics such as nausea-vomiting, constipation, diarrhea, etc.
- Non-pharmacological methods should be determined and used for the patient.
- The nurse should select and apply the appropriate methods with the patient in order to relieve and minimize the patient's pain.
- The nurse should prepare the patient about the methods to be used to relieve the pain of the patient, evaluate the effect of the method on pain relief and explain how to apply it.
- All procedures should be recorded and continuity in patient care should be ensured.<sup>2,22,24,25</sup>

In addition to these steps applied for patients who define pain, for patients who define phantom pain, these steps should be considered:

- Before surgery, the patient should be informed that phantom pain is a possible complication of amputation / limb removal,
- The frequency of phantom pain after amputation / surgery should be mentioned,
- Encourage the patient to express when they experience phantom sensation or pain,
- The patient's ability to cope with pain should be evaluated before surgical intervention,
- The factors that increase and decrease the phantom pain management after amputation / surgery should be described,
- The methods that can be effective in eliminating phantom pain should be explained (such as mirror therapy),

- Information should be given about all invasive and non-invasive methods such as analgesics, Transcutaneous Electrical Nerve Stimulation (TENS), Eye Movement Desentization and Reprocessing (EMDR), mirror therapy, massage, cold application and surgery used in the treatment of phantom pain,
- Patients should be informed about drug interactions and expected side effects in drug use,
- Patients should be encouraged to share their questions and concerns at every stage of pain management.<sup>2,11,12,22,25-27</sup>

## CONCLUSION

The nurse, who takes appropriate approaches especially in the care of the individual who experiencing a complicated pain such as phantom pain, should also fulfill the roles of education, care, treatment, research, counseling and rehabilitation. Nurses should take a detailed history to evaluate phantom pain, diagnose pain with an appropriate pain scale, and choose the most appropriate invasive and non-invasive methods for pain relief. Nurses should make the necessary effort to follow new developments, especially regarding phantom pain.

**Hakem Değerlendirmesi:** Dış bağımsız.

**Yazar Katkıları:** Fikir – H.B.K., N.A.; Tasarım – H.B.K.; Denetleme – N.A.; Kaynaklar – H.B.K., N.A.; Veri Toplanması ve/veya İşlemesi – H.B.K.; Analiz ve/veya Yorum – H.B.K., N.A.; Literatür Taraması – H.B.K., N.A.; Yazıyı Yazan – H.B.K.; Eleştirel İnceleme – N.A.

**Çıkar Çatışması:** Yazarlar çıkar çatışması bildirmemişlerdir.

**Finansal Destek:** Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept – H.B.K., N.A.; Design – H.B.K.; Supervision – N.A.; Resources – H.B.K., N.A.; Data Collection and/or Processing – H.B.K.; Analysis and/or Interpretation – H.B.K., N.A.; Literature Search – H.B.K., N.A.; Writing Manuscript – H.B.K.; Critical Review – N.A.;

**Declaration of Interests:** The authors have no conflicts of interest to declare.

**Funding:** The authors declared that this study has received no financial support.

## REFERENCES

1. Erdine S, ed. Ağrının Tarihçesi. *Ağrı*. 1. Baskı, İstanbul: Alemdar Ofset; 2000. s. 3-11.
2. Çavdar İ, Akyüz N. Ameliyat Sonrası Ağrı ve Yönetimi. İçinde: Aksoy G, Kanan N ve Akyolcu N, eds. *Cerrahi Hemşireliği - I*. 2. Baskı. İstanbul: Nobel Tıp Kitabevleri; 2017. s. 367-88.
3. Sloman R, Rosen G, Rom M, Shir Y. Nurses' assessment of pain in surgical patients. *J Adv Nurs*. 2005;52(2):125-132. [\[Crossref\]](#)
4. Özyuvacı E, Altan A, Yücel A. Postoperatif ağrı tedavisi. *Sendrom*. 2003;15(8):83-92.
5. International Association for The Study of Pain, Pain Control: The New 'Whys' and 'Hows'. Erişim Tarihi: 15.10.2021. www.lasp-pain.org
6. Yücel A. Ağrı kontrolünde hemşirenin rolü. İçinde: Erdine S. ed. *Ağrı*. I. Basım, İstanbul: Alemdar Ofset, 2000. s. 695-8.
7. Eti Aslan F, Badir A. Ağrı kontrol gerçeği: Hemşirelerin ağrının doğası, değerlendirilmesi ve geçirilmesine ilişkin bilgi ve inançları. *Ağrı*. 2005;17(2):41-42.
8. Eti Aslan F. Ağrı değerlendirme yöntemleri. *C.Ü. Hemşirelik Yükseköğretim Dergisi*. 2002;6(1):9-16.
9. Türk Anesteziyoloji ve Reanimasyon Derneği (TARD), Anestezi Uygulama Kılavuzları. *Postoperatif Ağrı Tedavisi*, Mart 2006. s. 3-6.
10. Şener G, Erbahçeci F. Protezler. Ankara: H.Ü. Fizik Tedavi ve Rehabilitasyon YO Yayınları, 2001. s. 179-85.
11. Yıldırım M. Fantom Ekstremitte Ağrısının Yönetiminde Ayna Terapisinin Etkisi. Doktora Tezi. İstanbul Üniversitesi Sağlık Bilimleri Enstitüsü, İstanbul; 2014.
12. Taştan S. Fantom Ağrısı. İçinde: Eti Aslan F. ed. *Ağrı Doğası ve Kontrolü*. 2. Baskı. İstanbul: Akademisyen Tıp Kitabevi, 2014. s. 283-92.
13. Akkaş Gürsoy A, Erdil F, Bayraktar N. Mastektomi Uygulanan Hastalar için Geliştirilen Evde Bakım Programının Etkinliğinin Değerlendirilmesi. *HUHEMFAD*. 2008;15(2):1-15.
14. Jackson MA, Simpson KH. Pain After Amputation. *Contin Educ Anaesth Crit Care Pain*. 2004;4(1):20-23. [\[Crossref\]](#)
15. Saka E. Alt Ekstremitte Ampütasyonu Sonrası Kronik Ağrı İnsidansı ve Perioperatif Analjezi Yöntemiyle İlişkisi. Tıpta Uzmanlık Tezi. İstanbul Üniversitesi, İstanbul Tıp Fakültesi, Anesteziyoloji ve Reanimasyon Anabilim Dalı, İstanbul, 2016.
16. Aygün D, Şen S. Fantom Meme Sendromunun Görülme Sıklığı ve Klinik Özellikleri: Literatür Taraması. *J Contemp Med*. 2017;7(1):97-106.
17. Anaforoğlu B, Erbahçeci F. Ampütelerde Fantom Ağrısı. *Ankara Sağlık Hizmetleri Dergisi*. 2012;11(1):25-31. [\[Crossref\]](#)
18. Sesli E, Karaaslan AA, Öztürk AM. Ampütasyon nedenleri. *Türkiye Klinikleri J Orthop & Traumatol-Special Topics*. 2011;4(4):8-14.
19. Başal Ö, Korkmaz S, Türk B. Ampütasyonlar. Ankara: Derman Tıbbi Yayıncılık. 2015. s. 856-68.
20. Ulaş K. Farklı Alt Ekstremitte Ampütasyon Seviyelerinde Fiziksel Aktivite Düzeyinin İncelenmesi, Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü, Protez-Ortez ve Biyomekani Programı Doktora Tezi, Ankara, 2019.
21. Herr K, Coyne PJ, Key T, Manworren R, McCaffery M, Merkel S. et al. Pain Assessment in the Nonverbal Patient: Position Statement with Clinical Practice Recommendations. *Pain Management Nursing*. 2006;7(2):44-52. [\[Crossref\]](#)
22. Eti Aslan F, Çavdar İ. Cerrahi Ağrı. İçinde: Eti Aslan F. ed. *Ağrı Doğası ve Kontrolü*. 2. Baskı. İstanbul: Akademisyen Tıp Kitabevi, 2014. s. 211.
23. Yavuz Van Giersbergen M. Kas iskelet sistemi hastalıkları (ampütasyon). İçinde: Karadakovan A, Eti Aslan F. Eds. *Dâhili ve Cerrahi Hastalıklarda Bakım*. 2.baskı. Adana: Nobel Tıp Kitabevi, 2011. s. 1373-1378.
24. Çoban N, Gezginci E, Gökaş S. Amputasyon Bakımında Abdellah'ın Modelinin Kullanımı: Olgu Sunumu. *Sağlık Bilimleri Üniversitesi Hemşirelik Dergisi*. 2019;1(3):249-56.
25. Velioglu P. Hemşirelikte kavram ve kuramlar. İstanbul: Esen Ofset; 2012. s. 364-389.
26. Virani A, Werunga J, Ewashen C, Green T. Caring for patients with limb amputation. *Nursing Standard*. 2015;30(6):51-58. [\[Crossref\]](#)
27. Sinici E. Fantom Ağrıların Tedavisinde EMDR Terapi Etkinliğinin Değerlendirilmesi/Evaluation of EMDR therapy efficacy in treatment of phantom limb pain. *Düşünen Adam*. 2016;29(4):349-358. [\[Crossref\]](#)