Amputation of the Foot in Diabetic Patients

Salmanzadeh Sh¹, Marashi Seyedkamal², Dehghan Bahram.³, Sarami Abdollah⁴, Zahabi Alireza⁵, Salehi Seyed parviz⁶, Rohanimanesh F⁷

1- Associate professor of infectious Diseases 2- Pharmacist 3- psychiatrist 4- Infectious Specialist 5- Occupational Medicine Resident, 6- General Physician, 7- Diabetes clinic Dr.

*Corresponding Author: drsarami@yahoo.com

Abstract: An amputation usually refers to the removal of the whole or part of an arm/hand or a leg/foot. Amputations can occur after an injury (traumatic amputation) or deliberately at surgery. The populations covered by the oil-rich areas (99,062 people) about 5500 diabetic patients were identified. 2 years in 35 cases of amputation due to diabetes was reported that 9 of them did so were excluded. Amputations due to diabetes was 26 of 17 (65%) were related to Ahwaz, and only 12 (70%) of oil have been covered by large hospital diabetes clinic. 6 out of 12 patients (50%) patients had diabetes clinic regularly.

[Salmanzadeh Sh, Marashi Seyedkamal, Dehghan Bahram, Sarami Abdollah, Zahabi Alireza, Salehi Seyed parviz, Rohanimanesh F. **Amputation of the foot in diabetic patients.** Life Science Journal. 2012;9(1):39-41] (ISSN: 1097-8135). http://www.lifesciencesite.com.

Key words: Diabetic foot ulcer-Amputation

1.Introduction

An amputation usually refers to the removal of the whole or part of an arm/hand or a leg/foot. Amputations can occur after an injury (traumatic amputation) or deliberately at surgery. In vascular surgery amputations are only rarely performed on the arms. Vascular surgeons frequently have to perform amputations of toes or legs. It is one of the oldest surgical procedures with artificial limbs identified from over 2000 years ago.

%10of diabetic patients with diabetic foot ulcers are at a stage of life. With the wounds of the leg nerves (neuropathy) and foot care and is associated with nerve pain. Foot ulcers in diabetes type I and II are reported.

In 2000, according to the World Health Organization, at least 171 million people worldwide suffer from diabetes, or 2.8% of the population. Its incidence is increasing rapidly, and it is estimated that by 2030, this number will almost double. Diabetes mellitus occurs throughout the world, but is more common (especially type 2) in the more developed countries. The greatest increase in prevalence is, however, expected to occur in Asia and Africa, where most patients will probably be found by 2030. The increase in incidence of diabetes in developing countries follows the trend of urbanization and lifestyle changes, perhaps most importantly a "Western-style" diet. This has suggested an environmental (i.e., dietary) effect, but there is little understanding of the mechanism(s) at present, though there is much speculation, some of it most compellingly presented.

Diabetes in the world of a million people a year loses their foot. The appearance of the foot or lower leg ulcers in diabetic patients is usually caused by nerves, skin cannot be restored properly. Or high blood sugar fluctuations, and prevents healing foot ulcers in diabetic patients are.

Thus a small injury can be initiated by a foot ulcer. Controlling blood sugar levels regularly is very effective in healing, so if *Hb A1c* blood sugar control, indicating that in the recent quarter, up from 8, the healing of wounds is a problem.

Related diseases such as foot ulcers, infections and gangrene diabetic patients constitute the main causes.

Lower limb ulcers in patients with social and economic life were that affected their ability to reduce the effects of patient function, reduce the overall drop in income and quality of life for the patient.

Lower limb ulcers in diabetic patients are classified into several categories, including neuropathic ulcers due to impaired sensory and motor nerves in the legs to come, or ischemic ulcers due to peripheral artery narrowing and failure to come up. Infectious ulcers usually cause damage to the skin or nails, and create new microbes that are the focus of infection in the legs.

Infections, bone infections, and in some cases, amputation may be involved. Ischemic ulcers or blisters are caused first and gradually the dead tissue (necrotic area) is evident in the following. Infected wounds may be due to germs entering any holes or dimples in the skin, nails and even the corners are created.

If you examine the feet of diabetic patients with decreased sensation, decreased sweating, muscle analysis, deformed feet and toes, calluses and lack of or weak pulse may be at risk for foot ulcers.

Interestingly the most common type of mechanical stress occurs as a result of walking. Involvement of peripheral nerves of patients who have leg numbness and pain do not realize, with every step they walk leading to the destruction and inflammation. Pressure-sensitive areas are constantly walking the big toe and foot bones.

The prevention of diabetic foot problems, educate the patient. In every business meeting, and we need to educate patients about the importance of accurate and adequate blood sugar control and regular foot care and the harmful effects of smoking on the cardiovascular system and to emphasize the importance of covering for the foot numb.

2. Etiology

Because diabetic neuropathy the nerves of the foot is unable to transmit pain to the brain. Thus, ulcers, blisters and cuts cannot be felt by the people and can lead to diabetic ulcers. Narrowing of the arterial blood flow was reduced and delayed healing of wounds.

Threatening risk of ulcers and amputation in some of the people or the long stretch of healing wounds were. Smoking, Lack of exercise, obesity and high blood cholesterol or high blood pressure were increase the risk of diabetic ulcers.

Old diabetic foot ulcer and complications of diabetic foot ulcers are risk-enhancing factors.

The first signs of loss of sensation in the legs are very important to identify and refer patients immediately.

Purpose:

- A. Identify the dangerous consequences resulting from lack of proper and timely treatment of diabetic foot ulcers
- B. Emphasis on care of the feet (foot care) at least once a year

3. Results

The study was conducted, we found that (50%) of 12 patients despite regular diabetes clinic, who had suffered amputation. This causes the following results:

- 1. Some of these people, despite your insistence upon the use of insulin instead of oral blood glucose lowering accept insulin injections were avoided, the need to increase educational and cultural programs.
- 2. A group of diabetic patients using diet as boring as it did not follow.

- 3. In the group of patients a daily examination of the foot into a small wound, a wound was deep and infectious.
- 4. In cases of severe neuropathy was prevented from feeling the burn and the patient's leg and it was not attached to the heater.

4. Solutions

- I. Need to allocate a foot doctor for a professional examination is a necessity. The lower extremity examination is not the case.
- II. %58.3of patients tested in the amputation is above 9 HBAIC and in some cases even above 11, which is indicative of poor control. Why should it be in matters of cultural and educational program search. History of heart problems such as heart surgery, angiography and angioplasty in about 60% of patients are seen.
- III. Record of 20-8 was seen in patients with diabetes.
- IV. %75of patients with kidney problems that range from dialysis continues to be seen.
- V. Approximately 41% of patients with a history of hypertension and 41% and 41% of diabetic foot ulcers and amputation were ocular discomfort.
- VI. Obesity was observed in 50% of patients, but the cholesterol was in normal range.



5. Suggestions

- Educational programs to encourage increased use of insulin and check your feet daily.
- ii. Determined by a physician to perform foot examinations
- iii. High-risk patients who continued to call on the Diabetes Clinic

Acknowledgment

AUTHORS ACKNOWLEDGE THE SUPPORT BY Department of health and great oil hospital Ahvaz, Iran.

Contact us:

Department of health and great oil hospital, Ahwaz, Khuzestan, IRAN

Dr Sarami Abdollah, Telephone: 09161136099

Work Fax: 06114450710 E-mail: <u>drsarami@yahoo.com</u>

Reference

- Diabetes Mellitus (DM): Diabetes Mellitus and Disorders of Carbohydrate Metabolism: Merck Manual Professional". Merck.com. Retrieved 2010-07-30.
- 2- Dorner M, Pinget M, Brogard JM (May 1977). "Essential labile diabetes" (in German). MMW Munch Med Wochenschr 119 (19): 671–4. PMID 406527.
- 3- Dwivedi, Girish & Dwivedi, Shridhar (2007). History of Medicine: Sushruta the Clinician Teacher par Excellence. National Informatics Centre (Government of India).
- 4- Elizabeth D Agabegi; Agabegi, Steven S. (2008). Step-Up to Medicine (Step-Up Series). Hagerstwon, MD: Lippincott Williams & Wilkins. ISBN 0-7817-7153-6.
- 5- Harper, Douglas (2001–2010). "Online Etymology Dictionary. Diabetes." Retrieved 2011-06-10
- 6- Lambert, P. (2002). "What is Type 1 Diabetes?". Medicine 30: 1–5. doi:10.1383/medc.30.1.1.28264. edit
- 7- Moxey PW, Hofman D, Hinchcliffe RJ, Jones K, Thompson MM, Holt PJE. Epidemiological study of lower limb amputation in England between 2003 and 2008. Brit J Surg 2010; 97: 1348-1353.
- 8- Nathan DM, Cleary PA, Backland JY, et al. (December 2005). "Intensive diabetes treatment and cardiovascular disease in patients with type 1 diabetes". The New England Journal of Medicine 353 (25): 2643–53. Doi:10.1056/NEJMoa052187. PMC 2637991. PMID 16371630.
- 9- Narayan KM, Boyle JP, Thompson TJ, Sorensen SW, Williamson DF (October 2003). "Lifetime risk for diabetes mellitus in the United States". JAMA 290 (14): 1884–90. doi:10.1001/jama.290.14.1884. PMID 14532317.
- 10- Rother KI (April 2007). "Diabetes treatment—bridging the divide". The New England Journal of Medicine 356 (15): 1499–501. Doi: 10.1056/NEJMp078030. PMID 17429082.
- 11- Risérus U, Willett WC, Hu FB (January 2009). "Dietary fats and prevention of type 2

- diabetes". Progress in Lipid Research 48 (1): 44–51. doi:10.1016/j.plipres.2008.10.002. PMC 2654180. PMID 19032965.
- 12- Selvin E, Steffes MW, Zhu H et al (2010). "Glycated hemoglobin, diabetes, and cardiovascular risk in nondiabetic adults". N. Engl. J. Med. 362 (9): 800–11. doi:10.1056/NEJMoa0908359. PMC 2872990. PMID 20200384.
- 13- Taylor SM, Kalbaugh CA, Blackhurst DW et al. Preoperative clinical factors predict postoperative functional outcomes after major lower limb amputation: an analysis of 553 consecutive patients. J Vasc Surg 2005; 42: 227-35.
- 14- Wild S, Roglic G, Green A, Sicree R, King H (May 2004). "Global prevalence of diabetes: estimates for 2000 and projections for 2030". Diabetes Care 27 (5): 1047–53. doi:10.2337/diacare.27.5.1047. PMID 15111519.
- 15- Extra link:

http://www.vascular.co.nz/Amputation%20s urgery.htm

http://www.nhs.uk/video

http://www.af.org.nz/

http://www.nzalb.govt.nz/

www.limbless-association.org

http://www.nationalamputation.org/

http://www.rcsed.ac.uk/journal/vol46

http://www.amputee-

coalition.org/index.html

http://www.amputee.com/table.php

http://en.wikipedia.org/wiki/Amputation

http://www.worldwidewounds.com/2006/se

ptember/Harker

http://www.1800wheelchair.ca/

http://science.howstuffworks.com/environm

ental/life/human-biology/amputation.htm

http://www.medicalassistantcertification.co

m/resources/ http://www.amputee.co.nz/

11/22/2011