

Efficiency of education based prophylactic program for diabetic patients with high risk of developing diabetic foot & amputation.

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Aim: to evaluate efficiency of the complex prophylactic program for high risk diabetic patients. **Research, Design and Methods:** presented research is a case-control observation study. The inclusion criteria were as follows: risk category ≥ 3 according to The University of Texas Foot Risk Classification System; risk category 2 in a combination with gross sensory deficiency ($NDS \geq 14$); absence of the previous education. Two patient groups were designed; the first group has entered 152 patients who have agreed on education and subsequent observation and the second group has entered 131 patients who have refused education, but agreed to come for control visits. Initially, every patient was examined and individualized prophylactic plan was designed. Structured education program was used. The education included 8 lessons 90-120 minutes each during one month. Training was given by qualified podiatrist. Patients with diagnosed diabetic foot received individual education and were given training materials. All patients visited the clinic 2-3 times within the initial 6 months' period in order to evaluate quality of foot care. Podiatric care was accessible to all patients. All patients were examined at least twice a year then, including full survey with neurologic examination once a year. Patients of both groups were comparable for basic demographic parameters, NDS and risk categories according to The University of Texas Foot Risk Classification System. Follow-up period lasted for 3 years. **Results:** Utilization of the presented preventive model in high risk diabetic patients has led to 3.3 times absolute risk reduction for new ulcers (from 32.9 % down to 9.9 %) and 66 % relative risk reduction. We noted significant reduction of amputation rate from 4.6 % down to 1.3 % and 88.2 % reduction of relative risk in the observation group compared to control group. NNT for single ulcer prevention has decreased from 32.3 to 5.2 and NNT for single amputation prevention has decreased from 33.3 to 10.2. Those findings confirm that presented prophylactic model is cost effective. Also, due to received education, statistically significant reduction of time period between the moment of wound formation till the time when a patient starts seeking special medical care was achieved in observation group (from $86,72 \pm 51,36$ down to $7,93 \pm 3,26$ day). Utilization of structured education program with elements of an individual approach has led to significant (56.5%) reduction of hospitalization rate ($\chi^2 = 10,25$, $p < 0,05$), 75.6% reduction of antibiotics prescriptions ($\chi^2 = 11,86$, $p < 0,05$), 44.4% reduction of surgical intervention ($\chi^2 = 5,714$, $p < 0,05$) and 66.1% reduction of emergency visits ($\chi^2 = 5,571$, $p < 0,05$). Meanwhile, we have not noted statistically significant reduction in frequency of recurrent ulcers, reduction in healing time and decrease of a wound stage according to The University of Texas Wound Classification System at newly developed ulcers in group of observation versus the control. **Conclusions:** Presented preventive model is "social" model; it is cheap and cost effective, it does not demand substantial time input of the medical personnel and can be organized on the basis of any out-patient department.