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IMPACT OF PATIENT COUNSELING ON DIABETIC FOOT ULCER PATIENTS

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ABSTRACT

WHO, 1985 Defines diabetic foot ulcer as an Infection, ulceration and/or destruction of deep tissues associated with neurological abnormalities and various degrees of peripheral vascular disease in the lower limb. Aim of the project is to study the impact of counseling on surgical patients to provide information and advice directed at encouraging safe and appropriate use of medication's and to stress on the importance of carrying out life style modifications such as diet and exercise thereby enhancing therapeutic out comes. Present study was done in the Department of surgery, Rajah Muthiah Medical College and Hospital, 1210 bedded multi specialty tertiary care teaching hospital attached to Annamalai University. The impact of patient counseling on diabetic foot ulcer patient were studied and revealed that patients who had diabetic foot ulcer lacked knowledge regarding the pharmacist and their role in educating the patient regarding the disease, prescription, life style modification and adherence to the treatment schedule has been clearly revealed. The study includes regarding literacy, cessation of smoking, providing better life to the poor patients, who are away from health centres. With increased patient load, the physicians find increasingly less time to interact with patients. The patient counseling has been proved to be an important tool to improve patients compliance to the therapy, a much essential requirement to DIABETIC FOOT ULCER TREATMENT; The pharmacists and more specifically clinical pharmacists need to be included in the health care team. So that the patients would derive the benefits of clinical pharmacy services and improve their quality of life.

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INTRODUCTION

Patient counseling is a key competency element of the pharmaceutical care process. The pharmacist is in a highly visible and readily available position to answer patient concerns and enquires about their medications and alternate treatments they may read about or hear from others. "Counseling is the process of telling people what you found, what it means, and what needs to be done, and doing so with sensitivity". Counseling is the process of giving and receiving information in a way that is meaningful, memorable and usable changes behaviour and facilitates a successful rehabilitative outcome [1]. It is our responsibility as professionals in communication disorders to demand of our selves the very best in effective communication. We must overcome the communication disorder to guarantee an effective rehabilitative outcome out in the world [2].

PROTOCOL FOR PATIENT COUNSELING

Barriers to patients counseling and to overcome

In a pharmacy setting there are a number of factors, which can be of benefit, or can detract from, the quality of any counseling. Common barriers which exist can be identified under four main heading [3]:

- The pharmacist
- Patient Factors
- Time
- Environment

Most important risk factors

- Loss of protective sensation.
- Longer duration of diabetes.
- Higher foot pressure.

Management of the diabetic foot

Five corner stone of management of the diabetic foot:

- Regular inspection and examination.
- Identification of the foot at risk.
- Education of patient, family and health care providers.
- Appropriate foot wear.
- Treat meat of non-ulcerative pathology.
- Components of care to achieve reduction in amputation.

Framework for management

- Improve circulation .
- Remove oedema.
- Pain control (analgesic agents; support)
- Treat infection (antibiotics –oral, parenteral; culture; biopsy; x-ray; C T; Bone-scan; MRI)
- Non –weight bearing (protective/therapeutic shoes; insoles/or those; contact casting wheel chair)
- Topical treatment (debridement; dressings; topical agents; skin grafting)
- Foot surgery (incision / drainage; corrective surgery; amputation)
- General condition (cardiovascular treatment, malnutrition, smoking)
- Setting (patient / staff education; compliance; support / follow up; multidisciplinary)

Wound management principles

- Establishing optimum local conditions to allow healing by secondary intention to proceed in a smooth and uninterrupted manner.
- Reduction or control of the local and systemic factors which have caused or predisposed to the development or prolongation of reduced tissue viability.
- Education to the patient or carer to the many ancillary factors that predispose the patient to ongoing ulceration and the ways of avoiding or controlling these.
- Continuous monitoring, regular review and treatment of areas of previous or potential ulceration.

Management of infection

- Describe lesion (cellulites, ulcer, etc) and any drainage.
- Enumerate presence/absence of inflammation.
- Define whether infection is present and attempt to determine probable cause.
- Examine soft tissue for evidence of crepitus, abscess and sinus tracts.
- Investigate any skin breaks with sterile metal probe to see if bone can be reached.
- Measure the wound (length, width, depth)
- Palpate and record pedal pulse, use Doppler if necessary.
- Evaluate neurological status.
- Cleanse and debride wound; remove any foreign material and eschar.
- Culture cleansed wound.
- Order plain radiographs of the infected foot in most cases.
- Antibiotic regimes vary
- Hospitalization for ulceration (if indicated)
- Hyper baric oxygen:
 - ✓ Being used more in non-healing wounds.
 - ✓ Elevates tissue oxygen levels.

Footwear

Objectives of providing foot wear for the diabetic foot.

- To relieve areas of excessive plantar pressure
- To reduce shock.
- To reduce shear.
- To accommodate deformities.
- To stabilize and support deformities.

Surgical management

- Incision and drainage.
- Debridement.
- Amputation.
- Plastic surgery.
- Prophylactic surgery.

METHODOLOGY

Study site:

The study was conducted in the surgery department at RAJAH MUTHIAH MEDICAL COLLEGE AND HOSPITAL. ANNAMALAI UNIVERSITY a multi specialty 1210 bedded tertiary care multi specialty teaching hospital attached to ANNAMALAI UNIVERSITY.

Setting and design [4, 5]:

1. The prospective study was carried out in surgery patients and patient counseling was carried out with operative patients
2. The study was conducted over a period of six months.
3. Totally 50 patients were enrolled and selected for the study.
4. A sum of 25 patients were been taken as control group who were not been given any counseling.
5. Remaining 25 patients were given counseling and grouped as test group.
6. The results calculated and the improvement of the patients of test group was compared with the control group.
7. The results were calculated with help of tables and graphs.

Study procedure

Patients satisfying the study criteria were enrolled after obtaining their informed consent. The patients were provided with medication counseling combined with health education and strategies to strengthen patients self efficacy and adherence towards treatment by the pharmacist along with the usual guidance from the physician and other health care professionals. A patient was considered a drop out provided patient completely failed to attend any of the follow up [6, 7].

't' TEST FOR TEST GROUP

Table 1: Mean of answers among test group

Table 1a: Positive Answers [before education vs after education]

Test Groups	N	Mean	SD	t-value	P- value
Before education	11	10.18	5.96	8.02	0.000
After education	11	23.09	1.64		(0.01)

From the result is clearly evident that there is a significant difference in positive answer's before education and after education in subjects of test group, since $p=0.000$ ($p<0.01$) which is significant at a level of 0.01.

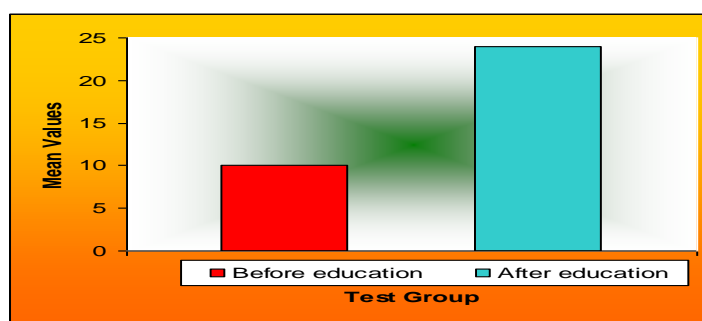


Figure 1a: Positive answer's [before education Vs after education]

Table 1b: Negative answers [before education vs after education]

Test Group	N	Mean	SD	T - value	P- value
Before education	11	14.82	5.96	8.01	0.000
After education	11	1.19	1.64		(0.01)

The result clearly depicts that there is a significant difference in test group taking into consideration the negative answer's, both before and after education since $p=0.000$ ($p<0.01$), which is significant at 0.01 level.

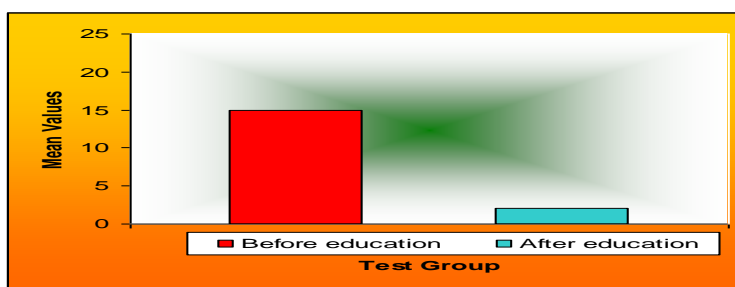


Figure 1b: Negative Answer's [Before Education Vs after Education]

't' TEST FOR CONTROL GROUP

Table 2: Mean of answers among control group
Table 2a: Positive answer's [before education Vs after education]

Control Groups	N	Mean	SD	t- value	P- value
Before education	11	12.00	5.76	1.19	0.085
After education	11	13.82	5.04		(NS)

Since $p=0.085$ ($p<0.01$), which is not in a significant level, depicting no marked differences in the positive answer among subjects in the control group, both before and after education

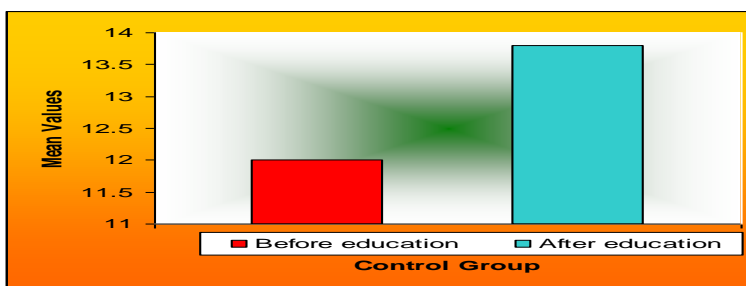


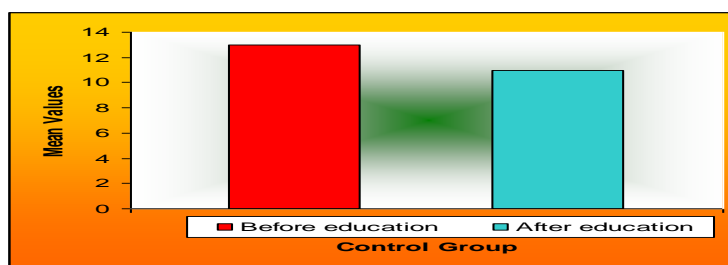
Fig. 2b: positive answer's [before education vs after education]

Table 2b: Negative answer's [before education vs after education]

Control Group	N	Mean	SD	t- value	P-value
Before education	11	13.00	5.76	3.24	0.009
After education	11	10.73	5.18		(0.01)

Since ($p<0.01$) $p=0.000$, clearly depicting a marked difference in control group with regard to negative answer's before education and after education, concluding the difference in knowledge due to hospital policies and other aids from the health care professionals in the hospital

Table 2b: Negative answer's [before education Vs after education]



DISCUSSION

Present study was done in the Department of surgery, Rajah Muthiah Medical College and Hospital, 1210 bedded multi specialty tertiary care teaching hospital attached to Annamalai University. Patient education and counseling are essential components in the management of disease like DIABETIC FOOT ULCER where the basic knowledge about the disease and required life style modification is low among the population; treatment is complex and outcome predominantly depends on adherence to therapy and modification of life style. Additionally, providing education to the patients could have its impact in improving medication adherence and decreasing the hospital stay period of time. This extension in the medication adherence for a longer course of

the disease is very important in management of DIABETIC FOOT ULCER wherein which the therapy lasts for month's with multiple support regimen [8].

The study showed an improved knowledge on prescription, disease and required life style modification. The counseled group of patients showed great improvement with that of the control group. Intensive and effective patient counseling has also shown its impact in improving the outcome of treatment by improving the quality of life in DIABETIC FOOT ULCER PATIENTS. The major concerns in such individuals after diagnosis are social isolation and depression. Counseling is a prime necessity to take into account, which aims to provide psychological support and information on physical well-being. The study even concludes that counseling can make patients aware of the possible adverse effects related to therapy. In short, those predicted at risk of DIABETIC FOOT ULCER are most likely to be males, habits like alcohol, smoking, chewing tobacco add to the intense risk of the disease [9].

In addition patients literacy states along with income is significantly low. These findings allow recommendation to be formulated concerning management of DIABETIC FOOT ULCER through patient counseling to provide better health care to individuals suffering from the disease. The government should establish some possible schemes regarding literacy, cessation of smoking, providing better life to the poor patients, who are away from health centres. With increased patient load, the physicians find increasingly less time to interact with patients. The patient counseling has been proved to be an important tool to improve patients compliance to the therapy, a much essential requirement to DIABETIC FOOT ULCER TREATMENT; The pharmacists and more specifically clinical pharmacists need to be included in the health care team. So that the patients would derive the benefits of clinical pharmacy services and improve their quality of life [10].

This study has highlighted the role of pharmacist in the management of DIABETIC FOOT ULCER. The outcome of the study has shown that counseling provided during the course of the disease can have an impact on improved medication adherence, better quality of life and enhanced knowledge, perception and attitude towards the disease. These parameters can further move on to improve the outcome of DIABETIC FOOT ULCER TREATMENT.

SUMMARY

A total of 50 patients who fulfilled the inclusion criteria, admitted in any one of the surgical unit of RAJAH MUTHIAH MEDICAL COLLEGE HOSPITAL (RMMCH) for a period of 6 months were included for the study. The impact of patient counseling on diabetic foot ulcer patient were studied and revealed that patients who had diabetic foot ulcer lacked knowledge regarding the pharmacist and their role in educating the patient regarding the disease, prescription, life style modification and adherence to the treatment schedule has been clearly revealed. The found result on the impact of patient counseling putforth's the necessity for various discussions to be included in the hospital setup.

CONCLUSION

Patient counseling is an important element in patient care process of surgical patients; the study would act as tool to understand patient counseling and to create awareness among the people regarding the importance of counseling to patients especially surgical patients. The study was useful in educating the patients regarding disease and required life style modification, as a result causes [ERAS] enhanced recovery after surgery and decreases the hospital stay period of time. There by improving the economy of the hospital setup and the country as a whole.

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