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Research Article

**KNOWLEDGE AND METHOD ON ISULIN INJECTION
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Abstract:

Objective: The objective of this study is to evaluate the awareness and method of injecting insulin prevailing in the nurses.

Methodology: Two hundred and seventy-two nurses performing their duties in 3 separate hospitals of Lahore were the part of this research work. Their evaluation about the meals timings, awareness about the exact place of insulin injection, tissue and injecting technique, carried out. A Performa was in use to record the observations and the analysis of the collected information carried out.

Results: Out of total nurses, only forty nurses were aware about the all steps of the technique of injecting the insulin. Total 57.40% nurses were aware about the fact that the insulin injection should be carry out before half an hour of meal. 66.20 nurses were available with the information of insulin injection in the subcutaneous tissue. About 64.0% nurses were aware about the insulin injection in upper arm, 75.0% nurses were aware the right place on upper thigh and 89.70% nurses found with the knowledge that abdomen is the right site. The method of skin pinching was correct in case of 64.0% nurses and 56.60% nurses knew that there is no requirement of skin cleaning with the help of spirit. While evaluating the injecting method, 72.80% nurses injected it rightly at an angle of 90 degrees.

Conclusion: Nurses are the main part of the health care institutes but most of the female nurses are not available with well training to manage the injections of insulin in the countries which are under development as Pakistan. So, there is a requirement of improvement in their training in the general field and particularly in the field of diabetes. The health authorities which are accountable for the training of nursing staff should be aware of these realities & they should take necessary actions to tackle such issues.

Key Words: Injection, Angle, Diabetes, Awareness, Spirit, Pinching, Insulin, Abdomen.

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INTRODUCTION:

DM (diabetes mellitus) is a serious health issue of the world. This health issue is increasing day by day in the whole world. In accordance with the data of World Health Organization, the country of Pakistan will be the fourth largest country with the population of the diabetic patients in year of 2025. The good administration of diabetes is very difficult task. The management of diabetes mellitus revolves around the person who is suffering from this disease. DSME (diabetic self-management education) is the foundation and basic part for all patients suffering from diabetes for better outcome of healthcare [1].

The participation of the professional staff is very necessary in the diabetic self-management education. The involvement of one dietician & one professional nurse is very necessary in that professional staff [2]. This professional team can also include other specialist as behaviorist, physiotherapist & optometrist. The most essential part of this team in the application of diabetic self-management education are nurses [3-5]. Various organizations in the whole world are working very efficiently for the improvement of the life quality of diabetic patients and these organizations are also initiating the programs of self-care in this disease.

There is a deficiency of such organizations in our country Pakistan. The diabetic organizations from Lahore & Karachi are initiating programs time to time for the education of the diabetic patients for self-care. Additionally, ethnic upbringing, the level of formal qualification, ability of reading and restrictions to take part in the education are the import variables of demography which can increase the effectualness of the management in self-care [6]. The trained nurses are the most essential part in the healthcare team. In accordance with the social setup of our society, the education level of our peoples & lack of the organizations are damaging the good quality of health care. So, the role of the trained nurses in providing the services of health care, becomes more important since nurses spend much of their duty time in the care of the admitted patients and they are the vital information source for persons who are getting treatment and their close attendants. There is a deficiency of the data about the evaluation of the status of the health care services provided by the medical staff in our country Pakistan.

METHODOLOGY:

A Performa was in use for the collection of information about the insulin injection from the nurses. All the nurses gave their verbal consent to take part in this research work. Nurses from three different hospital of Lahore were the part of this research work. All the nurses answered the following questions:

1. Their training conditions
2. The time of injection of insulin with diet
3. Site of the tissue for injection
4. Area of the injecting the insulin

All the nurses mimic the method of the injecting insulin to a volunteer with the utilization of the uncovered syringe of insulin, then following points were under consideration;

1. Improper skin pinching
2. Cleaning of the skin before injecting insulin
3. Angle of injecting the insulin

All the information gathered on Performa and analysis of collected results carried out with the help of SPSS V.10.

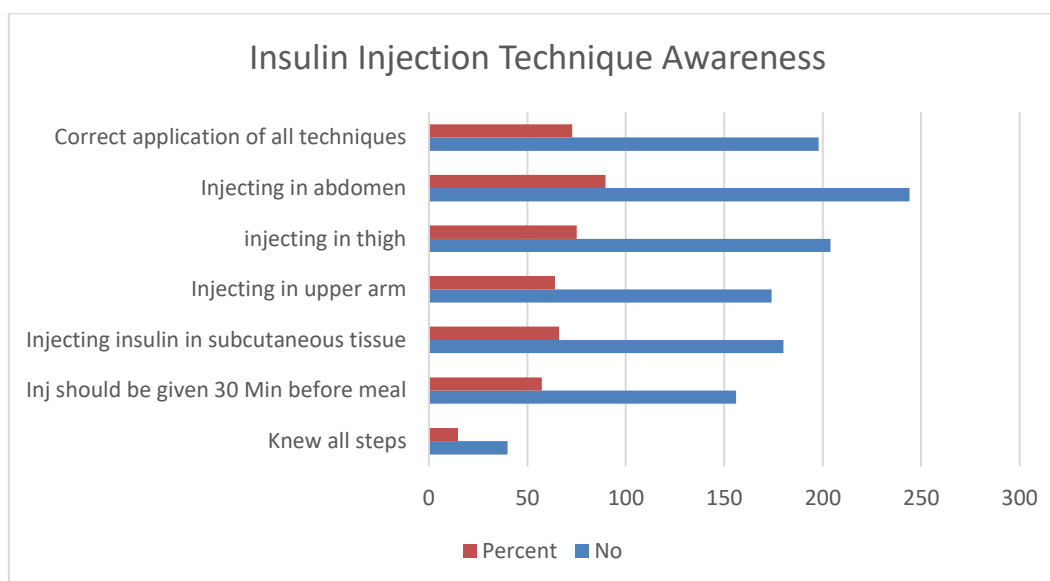
RESULTS:

Two hundred and seventy-two nurses were the part of this research work. There were 62.50% (n: 170) registered nurses, 10.30% were the students of fourth year, 11.0% were the students of third year and 16.20% were the students of second year. Total 40 nurses followed the all 8 steps of insulin injection, among these twenty-eight were the registered nurses. The amount of the student nurses was less aware about all 8 steps. The results analysis revealed amazing information. Total 57.40% females were aware from the fact that insulin injection should be comply before half an hour of meal. The view of the other nurses was different about the timing of injecting the insulin.

A sum of 66.20% (n: 180) nurses were aware about the correct area of the subcutaneous tissue for injection. Total 64.0% (n: 174) nurses were aware about the insulin injection in the upper arm, 75.0% (n: 204) were aware about the right place of thigh and 89.70% (n: 244) nurses were aware about the right site of insulin injection in the abdomen. During the observation of the injecting method, 64.0% (n: 174) nurses were pinching the skin in proper way, 56.60% (n: 154) nurses had not cleaned the skin from spirit and 72.80% (n: 198) were injecting the insulin from eight angle of 90 degrees. (Table-1)

Table 1: Awareness of Nurses about Insulin Injection Techniques (n=272)

| Technique Awareness | No | Percent |
|--|-----|---------|
| Knew all steps | 40 | 14.706 |
| Inj should be given 30 Min before meal | 156 | 57.353 |
| Injecting insulin in subcutaneous tissue | 180 | 66.176 |
| Injecting in upper arm | 174 | 63.971 |
| injecting in thigh | 204 | 75.000 |
| Injecting in abdomen | 244 | 89.706 |
| Correct application of all techniques | 198 | 72.794 |

**DISCUSSION:**

In the year of 1920 the insulin treatment started [7] and from that time, we are observing improvements and innovations in its techniques. Partanen & Rissanen concluded that the method of insulin injection is very important for better glycemic control as kind of insulin dose [8]. The control of the glucose of blood fluctuates with the utilization of the method of injecting the insulin. Optimal insulin schedules for good control of the sugar of blood was the target of many research works on a large scale but there was a little attention for the method of injecting the insulin in a proper way for the better control of the sugar of blood & prevention from different complications.

The part of the nurses in the administration of the insulin among diabetic patients is very crucial [7]. Search from internet [8], ADA's (American Diabetics Association) approvals & recommendation of RCN (Royal College of Nurses) [7], this is the approved

way for the injection of insulin. The injection of insulin should be in abdomen's subcutaneous tissues, arm's upper back part & buttock's subcutaneous tissue & thigh. Pinching fold of skin is necessary for proper injecting with the help of two fingers. The right angle of the injection is 90 degrees prior to half hour of meal. Only 40 nurses were aware about the proper procedure of injecting the insulin in this research work. Partanen & Rissanen checked the method of injection on patients [7]. They found that 15.0% patients were not pinching their skin which in this study, 36.0% were performing the same mistake. Total 50% patients injected from 90-degree angle whereas 72.80% nurses performed this in this research work. In another research work [11], 70.0% patients were using proper method of pinching at the time of injecting insulin and in this research work, 64.0% nurses were pinching the skin in proper way. The rate of nurses with proper knowledge of insulin injection is very low in the countries which are under

development. Nurses are the main source of teaching the methods of self-care to the patients. So, it is very important to organize proper training for them to improve the quality of health care.

CONCLUSION:

In the countries which are under development as Pakistan, the quality of health care services is not up to the mark. Proper training of nursing staff is very important to for better look after of patients. The establishment of the special institute and organizations of nursing training is very necessary which can provide the nurses with the knowledge of nursing the diabetes patients and it will improve the quality of the health care services.

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