DIABETES EDUCATION: EVALUATION

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Principle objective: To bring out favourable changes in the attitudes, behaviour and skills concerning health practices which affect diabetics.

Specific objectives: 1. To provide understanding of basic pathophysiology of diabetes. 2. To suppliment their knowledge with scientific facts regarding management. 3. To teach them about prevention, early detection, and prompt management of emergencies (hypoglycemia and ketoacidosis). 4. To improve their skills like self-injection techniques, monitoring, insulin dosage adjustments etc.

Planning

Course: A formal "Diabetes Education Programme" was organised by the Dept. of Endocrinology Diabetes at AI1MS from the month of January to April 1988. Out of this course, ten classes were selected for the camp diabetes education programme (DEP 001 to 009+DEP 019, DEP 004 excluded, refer to the previous article on Specific Aims and Organisation). These topics cover the basic pathophysiology and over all management of diabetes. The topics dealing with delayed complications of diabetes were excluded in view of starting with a positive approach.

Diabetes education material and teaching aids: The following were compiled to aid the formal scheduled classes at camp : Joslin's Diabetes Teaching Guide, Atonement with diabetes (Prof. MMS Ahuja), Madhumeh (Hindi booklet), brief class handouts for each of the classes in both english and hindi, Diabetes : A book for children—LR Parker (University of Michigan USA), educational posters in English and Hindi, projection slides, videocassettes: self-blood glucose monitoring, hypoglycemia and hyperglycemia.

Pre Camp evaluation: All the campers from A1IMS, were interviewed on a pre-camp staff and campers orientation meeting. A diabetes education checklist proforma was filled for each subject, to identify areas to be individually/ collectively emphasised during the camp. Most of the children were found deficient in the areas of basic pathophysiology of diabetes, sick-day guidelines, and self-adjustment of insulin dosage. Other areas also needed more scientific approach.

Performance

Characteristics of the target group: The main group of diabetics comprised of 28 children and youth of both sexes from the age of 9 to 21 years. The group had representation from different socioeconomic categories ranging from lower, lower to higher middle classes. Their levels of education also varied primarily according to their ages. Parents either participating in the camp as volunteers or coming as visitors also attended the classes. There diabetic staff members (one with juvenile onset IDDM), and 3 diabetic adult day camp visitors (all with IDDM) also participated actively in the education programme.

Scheduled classes: All scheduled classes were presented, though timings of few were changed due to some unanticipated circumstances like delayed meals and outings. The methods of teaching were flexible in view of different characteristics of the target recepient group. On every session, one hour classes were briefly introduced through projection slides (cartoons) of a story of the diabetic baby elephant ("Mannu"), specially for the interest of the younger children. Then a short duration lecture focussing on scientific principles was delivered by predesignated speaker (s). Rest of the 25 to 30 minutes were spent on discussions based on individual experiences of speaker and subjects both. Children were encouraged to clarify their doubts. They were invited to share with their own individual methods to solve problems like hypoglycemia, excuse to avoid sweets offered, problems at schools and social problems etc. Parents also participated in discussions and shared practical and useful ideas. Brief cyclostyled handouts in hindi/english, primarily prepared from Joslin's Diabetes Teaching Guide, were distributed either before or after each class.

Non-scheduled "incidental/on the spot" teaching: The whole group of staff was involved in delivering this type of teaching as the need arrived. This approach is very effective and realistic to teach the different skills to a diabetic. This phenomena started on the pre-camp meeting itself. The subjects were told about the preparation and precautions while traveling with diabetes. Instructions were given to reduce the insulin dosage on the day of travel, according to individual state of diabetes control. Children also learned ways to store their insulin while travelling.

In the camp, their self-injection techniques were supervised. Errors were identified and corrected, scientific explanations were given and rechecks were made. The main errors found were improper rotation of sites, wrong sites (inner thigh), errors in mixing insulins, breaking asepsis. Most of the subjects did not know the correct technique of self injection on the arms. The posture

and technique for the same were demonstrated. The younger children found it difficult but the older ones learnt it and practiced it.

Urine tests for glucose by diastix was taught to all and blood glucose test Using glucometer was taught to few young diabetics.

Children went out for picnics, outdoor games, jogging etc. They wert given instructions regarding prevention, recognition and management of hypoglycemia on such occasions, During last two days, the young diabetics were encouraged to decide their insulin dosage themselves according to their blood/ urine glucose profiles, though the dosages were rechecked by a doctor. Children showed a lot of interest in learning the food exchanges. Dieticians were always available in dining hall to clarify their doubts regarding diet.

On the last day of camp, all subjects were given a set of book/education materials on diabetes education; the set included several items mentioned earlier under "planning". Due to shortage of time several other planned educational programmes could not be presented during the camp period (eg......videocassettes, crossword puzzle and other diabetes games).

Accomplishments

Health education is an important and essential component of management of diabetes, in view of it being a life long debilitating malady with widespread medical and psychological ramifications. The camp education programme always strived towards its specific aims and objectives. The combination of formal scheduled classes and on the spot incidental teaching provided factual, realistic, practical and more stable form of education. On the last camp day, all the subjects were given a short test comprising of multiple choice questions. To some extent, this test reflects the short term achievements of the education programme. The long term changes in behaviour, attitudes and performance skills and their beneficial effect on diabetes control and care need to be followed in diabetes clinics.

Evaluation of test: The test can be divided into three parts: overview management and emergencies. The test evaluation is as follows:

Topic		Marks scored	
Overview	Score %	100	75
	Subjects %	67	33
Management	Score %	100	66-83
	Subjects%	58	38
Emergencies	Score %	75-95	62-68
	Subjects%	38	54

Deficit and recommendations

Though on the whole, the programme was a success, few shortcomings and deficits were identified. The interests of different subjects varied due to difference in their ages and duration of diabetes. The method of teaching should be different for younger and older age groups. In fact, 6-21 years age group comprises of a large difference in ages and educational competence/accomplishment of subjects. So it would be better if instructions are arranged separately for children (6-13 years) and youth (14-21 years). Children were usually tired due to continuous ongoing activity. Many children did not like the idea of attending a regular "class". Therefore it is suggested that all children should attend regular scheduled classes at the hospital itself before the camp, and only informal "discussions" and incidental teaching should be part of camp diabetes education progamme. Besides, children should be mentally prepared to accept "health education" as an important camp activity.

All the formal classes were taken in simple hindi, though some children complained about excessive use of english, especially during morning assemblies and other meetings. Many of the children also expressed their views in english in these meetings. So, few children (with lesser/no knowledge of english) found it difficult to participate fully in such discussions.

It is suggested that children should also be put on education committee. They can be involved in preparing posters, charts and other instructional material. Besides, some senior diabetic youths can be given selected topics to speak on/discuss with.

Lastly, to make education more acceptable and interesting, skits, songs and the like, which deliver some messages rather powerfully, can be prepared. We did have a song competition at the camp, but could not spare time for a skit : .... hopefully in the next camp.