

Using a group education approach to initiate pump therapy

Gill Morrison, Barbara Burgess, Niall Furlong, Philip Weston

ARTICLE POINTS

1 Education is the key to successful initiation of pump therapy.

2 Pump initiation requires the skills of a multidisciplinary team.

3 Peer support helps people who are initiating pump therapy to learn from and support each other thus preventing isolation.

4 Analysis of group sessions showed benefits to patients and effective use of resources.

KEY WORDS

- Pump therapy
- Group education
- On-going education
- Support group

Gill Morrison is a DSN at the Royal Liverpool University Hospital; Barbara Burgess is a Diabetes Specialist Dietitian at the Royal Liverpool University Hospital; Niall Furlong is a Specialist Registrar at the Royal Liverpool University Hospital; and Philip Weston is a Consultant Diabetologist and Endocrinologist at the Royal Liverpool University Hospital.

Introduction

The popularity of continuous subcutaneous insulin infusion (CSII) or pump therapy as a treatment option for diabetes has increased in recent years. Transition from a conventional subcutaneous insulin regimen to CSII requires the person with diabetes to develop and apply a new spectrum of theoretical knowledge and practical skills. If CSII is to succeed it is essential that an appropriate educational package is provided which fully addresses the individual's needs (Everett and Kerr, 2000; NICE, 2003a). This article describes and explores the option of a group approach in the initiation and training for CSII.

Individuals referred for subcutaneous insulin infusion (CSII) often have a diversity of understanding in relation to pump therapy and its demands on daily life. Some individuals have had diabetes for many years. All have longstanding erratic glycaemic control which presents in the form of swings from hypoglycaemia to hyperglycaemia with no obvious predisposing factors. People often display a wide variation in knowledge and skills in relation to the management of their diabetes and some may have negative attitudes regarding the prospect of changing their diabetes treatment.

The importance and associated benefits of using a multidisciplinary team approach to diabetes management is a well established concept (Flavin and White, 1989). Before selection for CSII therapy, centres undertake a vigorous process of assessment by the multidisciplinary team (Marcus and Fernandez, 1996). Liverpool mirrors this approach ensuring that candidates for pump therapy are fully informed.

Educational needs are revisited and inappropriate self-care management strategies are identified and addressed. This procedure also gives the individual an opportunity to optimise their conventional insulin treatment. Conversion to CSII can then be viewed as an informed choice.

Suitable candidates demonstrate skills, such as being able to reflect on their current diabetes management, working in

partnership with the healthcare team and devising and agreeing suitable changes. In addition, they can provide evidence of accurate and appropriate home blood glucose monitoring. Over time they maintain regular contact with healthcare services, are able to prioritise problems, and have the ability to interpret and adapt guidance within set parameters of their individualised action plans.

The traditional approach

On successful completion of the screening process, conversion to CSII has been traditionally achieved on a one to one basis by multidisciplinary team members. Critics of this method would highlight the risks of patient isolation, educational overload and the potential of a 'prescriptive' method of programme delivery (Sumner et al, 2001). In addition, a one to one package of education can be very demanding on professional time. As the request for CSII conversion increased so unfortunately did our waiting times.

A move towards group education

Although there is no conclusive evidence regarding the benefits of group education over an individual approach, group education in diabetes is well established and evaluated (Watson and Parker, 1999) and NICE recommend it as the preferred option (NICE, 2003b). After positive experiences using a group approach for general education for people with diabetes,

the multidisciplinary team at the Royal Liverpool University Hospital involved in pump therapy felt that a group programme for CSII conversion could be successfully applied. It was anticipated that participants would learn from and support each other, thus preventing isolation. In addition, group education would improve service provision by allowing people the option of either one to one initiation of pump treatment or a group approach, reducing waiting times for CSII conversion and being an effective use of resources.

General principles

In keeping with the experience of other centres we found that initiation of CSII is best delivered in an outpatient setting, over at least three sessions with adequate 24h professional support (Farkas-Hirsch and Hirsch, 1994). At present, we have not found that any of the newly assessed candidates are unsuitable for group work. Group sessions usually consist of two to four individuals and their relatives. Interaction from all members of the group is encouraged throughout. The planned curriculum covers all aspects of managing CSII and diabetes, as well as ensuring that the patients' perspective is considered without compromising essential clinical and safety issues.

Review by the dietitian

For pump therapy to be successful, it is essential that candidates have fully mastered the art of carbohydrate counting and understand the effects of other nutrients on insulin requirements before commencement (Bolderman 2002). This process requires assessment and instruction from a dietitian who is experienced in pump therapy (NICE, 2003a). As people with diabetes can initially display variable skills in relation to carbohydrate counting and the nutritional management of diabetes, the first contact with the dietitian is on a one to one basis. Participants' knowledge base in relation to understanding food intake and insulin dosage is reviewed again before starting pump therapy. Further dietitian input is incorporated into the group sessions.

Structure of the group sessions

During the first session, basic pump programming and operation skills are taught and practised. The group facilitator (a DSN) confirms details about the conversion process and discusses other issues such as how to wear the pump. We found that participants tend to self-direct the session in order to cover particular lifestyle and pump management issues that are important to them. The participant takes the pump home so that they may practise operating it and experiment with different ways of securing the pump to their body or clothes.

In the second session, participants commence CSII. Under supervision the participant will programme in the basal rate, prime the pump and insert the cannula. The patients then have lunch with the dietitian, which provides an excellent opportunity for the practical application of calculating insulin doses for various food choices. The group facilitator oversees the correct delivery of the bolus dose of insulin required to cover the carbohydrate content of their meal.

Key education issues include the practice of pump programming and operation. Further discussion will take place on dietary, lifestyle and management issues. Once glycaemic control is satisfactory the participant will go home. Emergency contact numbers are supplied to the participant and there is phone contact with the group facilitator in the evening to ensure the conversion process is running smoothly.

The day after initiation of CSII the group meet again. If necessary basal rate adjustments are made, knowledge gaps are revisited and any anxieties or worries are discussed within the group setting.

Subsequent follow-up

Participants will be seen once more during the week of initiation for review of glycaemic control and pump management. This usually takes place in a group setting although the option of an individual consultation is given. Subsequent follow-up is arranged according to specific needs until glycaemic control is optimised. Key factors include: confidence; pump handling

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skills; and the ability to make decisions in relation to glycaemic trends.

Once CSII is established, the participant is reviewed on a 3 monthly basis at a pump clinic. In keeping with NICE recommendations the participants are provided with ongoing education and support from the multidisciplinary team (NICE, 2003a).

Participant evaluation of group initiation of pump therapy

In order to review the strengths and weaknesses of the training process, sessions are evaluated via a questionnaire and interview with the group facilitator. All participants were very positive about the group programme and felt that the number of sessions and time intervals between them met their learning needs and provided adequate support. They all highlighted the fact that being with other people in the same position was helpful and supportive (Table 1). Two participants opted for continuation of joint consultations after the initial training period and other group members continued to keep in touch by phone and email.

Discussion

Education is an essential aspect of planned care for people with diabetes. As suggested by Rankin and Stallings (1996) the design of any education programme should aim to maintain or improve health by changing the individual's knowledge base, attitudes and skills. In our experience, using a group approach successfully achieved these outcomes.

The concept of learning has been identified as more effective if individuals recognise their own training needs and define their own goals (Knowles, 1980; Rodgers 1983). Although some skills must be taught, we have found that an informal relaxed approach to the education package encourages participants to direct sessions as appropriate, and talk through their experiences and anxieties within the group with professional support.

Since this service started, people are given the choice between one to one education and a group approach to CSII initiation. To date they have all opted for the latter. However, it is not possible to

Table 1. Participants' comments regarding a group approach to CSII initiation

- 'I would have been prepared to wait longer to start the pump rather than do this on my own'
- 'Talking to the others was really useful'
- 'Being with other people in the same position really helped'
- 'I have never really talked to anyone with diabetes before'
- 'Discussing things together made things easier to understand'
- 'It was reassuring to know that the others felt the same as me'

compare the merits of these two methods other than anecdotally.

Participants found the contact with other people in the same position reassuring. Any potential concerns about issues of confidentiality have not materialised. In order to address the continued desire for the participants to stay in contact with each other we are in the process of formulating a support group.

When pump therapy is commenced on a one to one basis we estimate that approximately 10h of professional time is required for the initiation process (including dietitian input). Group participation allows for effective use of professional time which can save approximately 10–27 h, depending on the number of individuals in the group. This represents effective time management, thus allowing increased opportunity for additional patient contact.

Conclusion

Using a group approach allows the development of peer support, strengthens the learning process and avoids isolation. In practice we have found that the patient and professional agenda formed a proactive partnership.

Service provision has improved as participants have a choice of either individual or group initiation of pump therapy. All have chosen collective initiation due to their perception of the benefits that can be gained from peer support. As a direct consequence of efficient time management, waiting times for conversion onto CSII have been eliminated.

In summary, group initiation of CSII is successful and feasible for both patients and professionals. ■

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