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Acceptability of low molecular weight heparin thromboprophylaxis for inpatients receiving palliative care: qualitative study

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Abstract

Objective To find out what inpatients with advanced cancer who are receiving palliative care think about the effect of thromboprophylaxis on overall quality of life.

Design Qualitative study using audiotaping of semistructured interviews.

Setting Regional cancer centre in Wales.

Participants 28 inpatients with advanced metastatic cancer receiving palliative care and low molecular weight heparin.

Main outcome measures Recurring themes on the effect of thromboprophylaxis on overall quality of life.

Results Major emerging themes showed that patients knew about the risks of venous thromboembolism and the purpose of treatment with heparin. Media coverage had raised awareness about venous thromboembolism, and many had previous experience of thromboprophylaxis. All found low molecular weight heparin an acceptable intervention, and many said that it improved their quality of life by giving them a feeling of safety and reassurance. Antiembolic stockings were considered uncomfortable and had a negative impact on quality of life. Patients were concerned that because they had advanced disease they might not be eligible for thromboprophylaxis.

Conclusion Low molecular weight heparin is acceptable to inpatients with advanced cancer receiving palliative care and has a positive impact on overall quality of life. Antiembolic stockings are an unacceptable intervention in this patient group. Guidelines on thromboprophylaxis are urgently needed for palliative care inpatient units and hospices.

Introduction

Up to 52% of patients in specialist palliative care units may have venous thromboembolism,¹ and one in seven inpatients with cancer dies of pulmonary embolism.² A consensus statement by the American College of Chest Physicians recommends that hospitalised patients with cancer receive low molecular weight heparin.³ However, there are no national thromboprophylaxis guidelines within the United Kingdom,⁴ and less than 10% of palliative care units have guidelines. There are concerns that daily injections of low molecular weight heparin may cause unnecessary distress.⁵ We surveyed inpatients who were receiving palliative care to find out their views on thromboprophylaxis and whether low molecular weight heparin was an acceptable intervention.

Methods

Sample selection

We recruited patients from the specialist palliative care unit within the regional cancer centre, which had established thromboprophylaxis guidelines. Inclusion criteria were: metastatic cancer or primary brain tumour with no curative treatment available; evidence within medical notes that the incurable nature of the disease has been discussed with the patient; the patient had received low molecular weight heparin thromboprophylaxis for at least five consecutive days.



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Data collection

We audiotaped and then transcribed the semistructured interviews, which covered the following topics: cancer treatments received; insight into prognosis; what was understood about treatment with low molecular weight heparin and thromboprophylaxis; the impact of thromboprophylaxis on overall quality of life; negative aspects of being on heparin treatment.

Analytical framework and data analysis

We carried out a thematic analysis, using an inductive approach to obtain categories emerging from the data that showed how the participants viewed thromboprophylaxis in this context of care.

We identified two distinct groups of patient. One group comprised patients receiving rehabilitation after cord compression who previously had good performance status but had suddenly deteriorated. The other group comprised patients admitted for symptom control who had been unwell for some time, with a gradual deterioration of performance status. Theoretical saturation (when no further recurring themes emerged from analysis) was achieved at 14 patients per group. We extracted the emerging themes from the data and constantly refined and validated them from repeated and comparative reading of the transcripts. We identified four major themes and three minor themes.

We selected excerpts of interview text on the basis of two criteria: firstly that they illustrate the issue being discussed, and secondly that they represent a range of participants thus reducing bias. Patients are identified by an interview number in brackets and by whether they had been admitted primarily for symptom control (S) or following spinal cord compression (C).

Results

Sample characteristics

We invited 28 patients to participate and all agreed. The box summarises the characteristics of the patients. All patients were totally confined to a bed or chair at the time of interview.

Major themes

Insight into prognosis

Most patients showed clear insight into the nature of their condition, describing it as “incurable” or “terminal.” These words had a similar meaning to each patient, and they were aware that the aim of treatment was the control of symptoms and not cure:

“What do I mean by terminal? Well there’s no cure. The cancer will eventually get the better of me.” (11C)

“Oh it’s incurable. They said they can’t get it better. They tried some chemotherapy but it didn’t work so now they are controlling the symptoms.” (14S)

Patients admitted for symptom control viewed their inpatient stay as “just another admission” because they experienced a slow and steady decline. Even though worsening symptoms may suggest a change in prognosis to doctors, this was not the case for patients. Most patients admitted with spinal cord compression had a good performance status before admission. The decline was faster than in the symptom control group and in many cases necessitated fresh discussions about disease progression:

“You live with cancer for so long that you forget that it is eventually going to do you in. I was driving a car two weeks ago ... This has been a wake-up call.” (13C)

Knowledge and understanding

All patients understood the purpose of treatment with heparin, and many were also aware of why they may be at risk of venous thromboembolism, identifying immobility and surgery as risk factors:

“Well I understood that because I was in bed and I wasn’t moving about, mobility wise, like I usually do, they were for this deep vein thrombosis. You know well it sort of prevents it then. Much like the planes and the long trips on the planes, that’s my understanding of it.” (1S)

All patients knew that thromboembolism was undesirable. When asked about its unwanted features, all focused on the most serious potential consequence—death. No patients were aware of common symptoms of deep vein thrombosis, such as painful swollen legs, or of pulmonary embolism, such as dyspnoea:

“Well it could kill you couldn’t it. It can go to the heart or the brain. Very serious I think, a blood clot, isn’t it?” (1S)

It was clear that most patients based their knowledge of venous thromboembolism on media coverage of its association with long haul flights, with little understanding of the specific association with cancer.

Characteristics of patients receiving palliative care for cancer who were interviewed about their views on thromboprophylaxis

Patients admitted after spinal cord compression

Age range: 55-74

Male to female ratio: 1:1

Diagnoses: breast cancer 5; prostate cancer 3; lung cancer 2; unknown 2; ovarian cancer 1; colon cancer 1

Treatment: chemotherapy and radiotherapy 5; surgery, chemotherapy, and radiotherapy 4; radiotherapy 2; surgery and radiotherapy 2; surgery and chemotherapy 1

Preadmission Eastern Cooperative Oncology Group scores 0-2: ambulatory (see bmj.com for grades)

Previous thromboprophylaxis: none 8; low molecular weight heparin 1; low molecular weight heparin and antiembolic stockings 3; antiembolic stockings 3

Patients admitted primarily for symptom control

Age range: 53-76

Male to female ratio: 5:9

Diagnoses: pancreatic cancer 3; ovarian cancer 2; colon cancer 3; breast cancer 2; lung cancer 1; unknown 1; brain cancer 1; uterine cancer 1

Treatment: none 1; chemotherapy and radiotherapy 1; surgery and radiotherapy 2; surgery and chemotherapy 2; chemotherapy 2; surgery, chemotherapy, and radiotherapy 3; radiotherapy 3

Preadmission Eastern Cooperative Oncology Group scores 1-3: ambulatory or limited self-care (see bmj.com for grades)

Previous thromboprophylaxis: none 9; low molecular weight heparin 2; antiembolic stockings 2; low molecular weight heparin and antiembolic stockings 1

Acceptability

All patients found thromboprophylaxis with low molecular weight heparin acceptable, and many could not understand why it would be considered unacceptable. Acceptability fell into three categories.

Recognition that thromboprophylaxis with heparin was part of usual practice:

"It's sort of reassuring knowing that people are still doing something for me. People keep talking to me about controlling my symptoms. It seems just as important to me to prevent anything that may cause bad symptoms." (6S)

Consideration that treatment with heparin was neither pleasant nor unpleasant:

"The injection is of no significance and I am a terrible coward and it really doesn't hurt at all." (3C)

Balance of benefits against side effects:

"I think it is very important to receive them, they are there for you and it's prevented it, it will be silly not to have them and I think it's just the idea of it in your stomach but most of the time there's nothing to it, you don't feel it, and you've got to have 'nasties' to have 'nices' haven't you?" (1S)

Reassurance and optimism

Patients spoke openly about their understanding that their disease was incurable and that they were going to die. They expressed a desire to optimise quality of life not only by treating symptoms but also by taking measures to prevent other symptoms:

"Obviously I am very keen not to have deep vein thrombosis amongst all my other problems." (10C)

Thromboprophylaxis with heparin reassured most patients that something was being done to prevent other problems and that the medical team had not given up on them. For many, the inevitability of physical deterioration overshadowed their anxieties more than the prospect of death. They expressed a desire to stay alive long enough to achieve certain goals or witness important events. The possibility that thromboprophylaxis could help them achieve this was viewed positively:

"I'm not ready to give up yet though. I want to last long enough to be able to give my daughter away next month." (8C)

Minor themes

Bruising

The only negative experiences reported about quality of life were of bruising:

"... a sequence of little bruises on my tummy. I must admit that when I looked down and saw these little blue blobs I thought 'Oh that is interesting.' But no, there are no negative aspects at all." (9S)

Most patients had experienced two or more treatments for cancer. In comparison, a daily injection of heparin was considered trivial.

Impact of thromboembolic disease stockings

Several patients had worn antiembolic stockings during previous hospital admissions. All had found them uncomfortable:

"They are so uncomfortable to wear. You get hot in them and they feel so tight." (7C)

Patients thought that low molecular weight heparin was preferable:

"Well those stockings are so uncomfortable. They're itchy. They're sweaty. They're horrible. Give me heparin any time." (5S)

Anger at paternalistic views towards terminally ill patients

All patients expressed their need to be involved in decision making, particularly with respect to the withdrawal or non-administration of treatment. Some patients had experienced what they viewed as nihilistic paternalism and were angry that major decisions were made about their lives without their involvement:

"Just because I know I'm going to die, doesn't mean I'm happy about it. I plan to hang on as long as I can. These injections are nothing. I honestly don't know what the fuss is about." (13S)

Some patients said that heparin injections were not unpleasant, whereas they had experienced some interventions that were:

"How can you say that the injection is too invasive when you are checking my blood sugars daily? Now a catheter, that's invasive. But no, the heparin is fine. No problem." (8C)

"How can someone else tell me what I should feel about a treatment? I bet they haven't even tried it. The thought of an injection may sound bad but there is nothing to it. It's much better than having to wear those stockings." (5S)

Discussion

The reluctance to use thromboprophylaxis with heparin in people receiving palliative care seems to be motivated by the ethical principle of non-maleficence, as some palliative care doctors believe that this treatment adversely affects patients' quality of life. Our study shows that this is not so.

What is already known on this topic

Venous thromboembolism occurs in up to 52% of palliative care inpatients with cancer and kills one in seven cancer patients

Low molecular weight heparin is recommended for thromboprophylaxis in non-ambulant inpatients with cancer

Concerns that injections of low molecular weight heparin adversely affect quality of life are reflected in the reluctance to use this treatment in specialist palliative care units

What this study adds

Low molecular weight heparin is an acceptable intervention in palliative care inpatients with cancer

Antiembolic stockings have a negative impact on overall quality of life

Patients in palliative care units wish to be involved in making decisions about thromboprophylaxis

Antiemetic stockings have been used in preference to heparin in specialist palliative care units. Our study shows that low molecular weight heparin is an acceptable intervention and preferable to these stockings.

The problems of venous thromboembolism are widely reported in the media and palliative care inpatients are knowledgeable on the subject. Patients viewed thromboprophylaxis positively because they thought it helped them live longer by preventing fatal complications of cancer. However, the acceptability of this treatment was not based purely on a "benefit versus harm" evaluation, but on the feeling that the injection was a trivial intervention with little or no impact on quality of life. Only patients receiving low molecular weight heparin treatment were interviewed. This may have led to a positive bias. They received heparin for a relatively short time, but previous work found that long term treatment is acceptable.⁶

Implications

Our findings highlight the importance of involving patients in decisions related to their care, and they reiterate the need for evidence based guidelines for

preventing venous thromboembolism in selected palliative care inpatients.

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Does IQ explain socioeconomic inequalities in health? Evidence from a population based cohort study in the west of Scotland

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Abstract

Objective To test the hypothesis that IQ is a fundamental cause of socioeconomic inequalities in health.

Design Cross sectional and prospective cohort study, in which indicators of IQ were assessed by written test and socioeconomic position by self report.

Setting West of Scotland.

Participants 1347 people (739 women) aged 56 in 1987.

Main outcome measures Total mortality and coronary heart disease mortality (ascertained between 1987 and 2004); respiratory function, self reported minor psychiatric morbidity, long term illness, and self perceived health (all assessed in 1988).


Results In sex adjusted analyses, indices of socioeconomic position (childhood and current social class, education, income, and area deprivation) were significantly associated with each health outcome. Thus the greatest risk of ill health and mortality was evident in the most socioeconomically disadvantaged groups, as expected. After adjustment for IQ, a marked attenuation in risk occurred for poor mental health (range of attenuation in risk ratio across the five socioeconomic indicators: 15-58%), long term illness (25-53%), poor self perceived health (41-56%), respiratory function (44-66%), coronary heart disease

mortality (31-111%), and total mortality (45-131%). Despite the clear reduction in the magnitude of these effects after controlling for IQ, in half of the associations examined the risk of ill health in socioeconomically disadvantaged people was still at least twice that of advantaged people. Statistical significance was lost for only 5/25 separate socioeconomic health gradients that showed significant relations in sex adjusted analyses.

Conclusions Scores from the IQ test used here did not completely explain the socioeconomic gradients in health. However, controlling for IQ did lead to a marked reduction in the magnitude of these gradients. Further exploration of the currently scant information about IQ, socioeconomic position, and health is needed.

Introduction

Explanations for socioeconomic gradients in health have traditionally focused on access to resources, physical exposures in the living and working environment, and health related behaviours.^{1 2}

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