Clinical Management Guidelines for Friedreich Ataxia

Chapter 17. End-of-life care in Friedreich ataxia

Contents

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17. End-of-life care in Friedreich ataxia

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This chapter addresses important issues related to end-of-life care for individuals with Friedreich ataxia, including advance care planning, palliative care and the option of hospice care in the final stages of life. Although relevant to end-of-life care, palliative care can also be useful at earlier stages in a person's life and advance car planning should be discussed early on so that an individual with Friedreich ataxia can retain control over their treatment and management. In making recommendations for management of end-of-life care, the authors were tasked with answering the following questions:

For individuals with Friedreich ataxia what is the best management for advance care planning? (see 17.1)

For individuals with Friedreich ataxia what is the best management for palliative care? (see 17.2)

For individuals with Friedreich ataxia what is the best management for end-of-life (hospice) care? (see 17.3)

17.1 Advance care planning

17.1.1 Background

Friedreich ataxia (FRDA) is a progressive neurological condition where the person loses their ability to care for themselves and may often be unable to communicate their wishes about their care when the disease is at an advanced stage. Advance care planning (ACP) can help the person with FRDA to be in control of their care by expressing their values and preferences surrounding health care decisions. There is no published literature on ACP in FRDA. However, there is evidence from other progressive and life-threatening illnesses that ACP increases compliance with patients' end-of-life wishes, decreases the use of life-sustaining treatment, increases hospice and palliative care and reduces hospitalizations (1). However, health care professionals in general may not be familiar with the communication skills needed to discuss ACP (2).

17.1.2 Benefits of ACP

ACP allows a person with FRDA to retain control over their future treatment and management and improve the likelihood of receiving care which matches their own goals. People react in different ways to discussing ACP. A small study of people with advanced multiple sclerosis showed that some were able to make clear decisions, some undertake planning without a clear advance directive and some are still 'hoping for a cure' and do not wish to look ahead (3). The European guideline on palliative care for people with progressive multiple sclerosis (4) suggests that:

- early discussion of the future with ACP should be offered to people with severe disease
- regular communication about the future progression of the disease is undertaken with patients and families/caregivers.

These good practice statements could be adopted for those with FRDA in conjunction with discussing with the individual the rationale and benefits of ACP, while avoiding coercing them into a conversation they are not ready to have.

Over the last 20 years, many organizations have helped people with ACP. In the USA, one common form of advance directive is “Five Wishes” (https://fivewishes.org). It is marketed (at very low cost) as an easy to complete form to let a person's wishes be known. In addition, it has a version appropriate for teenagers and another version for children. Information about ACP in Australia can be found at www.advancecareplanning.org.au. In Ireland, one advance directive is “Think Ahead” and it can be accessed from the Irish Hospice website (https://hospicefoundation.ie/i-need-help/i-want-to-plan-ahead/think-ahead/).“Let me decide” (http://www.letmedecide.org) is another option for ACP resources.

Best practice statement

Given the advances in medical technology that can prolong life in the setting of advanced disease, all adults with Friedreich ataxia should consider appointing a designated healthcare representative. This person may be a trusted family member, close friend or independent advocate who will act on the authority of the person with Friedreich ataxia. It is important that the representative understands the care the person with Friedreich ataxia would like or not wish to have.

Treatment preferences can be set out in an advance care plan in case the person with Friedreich ataxia becomes disabled or unable to communicate their own wishes.

Recommendation

Grading for strength of recommendation and level of evidence

For the rating of the **strength** of the recommendation, in addition to evidence from studies in FRDA, evidence from like conditions, clinical experience and expert consensus are taken into account when published evidence is not available.

The **level of evidence** is based on published evidence from studies in FRDA. If there is no published evidence in FRDA, evidence from other like conditions or clinical expertise may have been used to make the recommendation – this is graded as ‘very low’ or in some cases ‘low’ level evidence. See the table below for an explanation of the symbols used to grade recommendations.

Strength of recommendation	Symbol	Level of evidence	Symbol
Strong for intervention	↑↑	High	⊕⊕⊕⊕
Conditional for intervention	↑	Moderate	⊕⊕⊕◯
Neither intervention nor comparison	—	Low	⊕⊕◯◯
Conditional against intervention	↓	Very low	⊕◯◯◯

Strong against intervention	↓↓		

Should advance care planning versus no advance care planning be used for individuals who have developed major complications such as diagnosis with heart failure, difficulty ambulating, dysphagia, or barriers to communication with Friedreich ataxia?	Strength	Level of evidence*
We conditionally recommend advance care planning (ACP) for individuals with Friedreich ataxia who have reached adulthood, have major complications such as heart failure, have experienced a significant change in their mobility, have dysphagia or have barriers to communication, bearing in mind that the published literature on ACP is in heart failure. ACP should also address the "future loss of dignity" by putting in place a safeguard that a person's own values and wishes be respected in their care. This would help to implement a degree of control over a disease which is often out of the control of the person with Friedreich ataxia.	↑	⊕⊕◯◯
Justification: The Friedreich's ataxia clinical management guideline patient and parent advisory panel felt this was a serious topic that needed to be addressed, and depending on the person's circumstances, could be urgent. It has not been studied in those with Friedreich ataxia to date. Studies have demonstrated that an ACP program can be effective in facilitating end-of-life care consistent with patient preferences (1).		
Subgroup considerations: Advance care planning is more important in adults with Friedreich ataxia, particularly since the life expectancy is between 40 and 50 years of age. For children and teenagers, if there is any evidence of life-altering or life-limiting illness, ACP should be discussed with them. The parent often makes several decisions for those under the age of consent, but children can often be included in a sensitive way and assent to healthcare decisions, and teenagers can often take a more active role in decision making.		

Lay summary

Lay summary of clinical recommendations for advance care planning in Friedreich ataxia

Friedreich ataxia is a progressive condition, which often leaves the individual dependent on others for care and can also impact one's ability to communicate with the medical team and loved ones. It is therefore important that a person with Friedreich ataxia lets the carers know in advance about the treatments they want, as well as those they wish to avoid should they become unable to communicate their wishes.

The advance care plan (ACP) may take the form of a discussion or a written record. Ideally, it should be reviewed on an annual basis, as well as with any significant deterioration in health.

Why this recommendation?

It is suggested that advance care planning be considered for patients who have:

- reached adulthood
- developed major complications such as a diagnosis of heart failure

- had a significant change in their mobility
- developed difficulty swallowing, which often results in pneumonia
- early signs of communication difficulty.

Having a discussion about what is most important in life, including preferences to receive or avoid future interventions, improves the likelihood that care is delivered in a manner that matches an individual's goals. Providing care individualized to a person's values can be challenging when no care plan is in place and the person is no longer able to communicate their wishes or when an illness arises unexpectedly.

What does this mean for you as a person living with Friedreich ataxia or caring for someone living with Friedreich ataxia?

For those who are caring for someone with Friedreich ataxia, it is important to understand the wishes of the individual affected by Friedreich ataxia with respect to their medical care. While the person may not want to discuss precise details, it is important for the carer to have a general idea of their wishes, including:

- whether they want to remain at home, go to a nursing home or be admitted to an acute hospital should they become dangerously ill
- whether they wish for a feeding tube to be inserted into their stomach should they have considerable difficulty swallowing
- whether they want to receive cardiopulmonary resuscitation in the setting of cardiorespiratory arrest or instead to be allowed a natural death.

Who is this recommendation specifically for?

This recommendation is for all individuals with Friedreich ataxia, but particularly for those whose health is deteriorating or those with communication impairments that may affect their ability to communicate their wishes to carers and healthcare professionals.

17.2 Palliative care

17.2.1 Background

Palliative care seeks to promote high quality care for individuals with life-altering and/or life-limiting medical illness by addressing physical, emotional, psychological, and spiritual sources of suffering (5). In contrast to hospice support at end of life, involvement of palliative care specialists can begin as early as the time of diagnosis or in reaction to a complication of illness that impairs one's ability to live well.

Individuals with FRDA face a challenging prognosis of progressive disease that often results in significant disability and a shortened lifespan (6); this knowledge alone can have psychological, emotional, and spiritual impacts even before the onset of physical symptoms. Individuals with FRDA are eligible for and can benefit from palliative care from early in their course through to end of life by proactively promoting quality of life in any phase of the illness.

17.2.2 Benefits of palliative care

Recognizing that individuals with FRDA often are under the care of multiple medical subspecialists, the addition of a palliative care team can help to maintain a holistic view of the individual's quality of life while also promoting goals that emphasize living well in the context of serious medical illness.

Functions of a palliative care team can include helping with care coordination, providing additional pain and symptom management, facilitating shared decision making for medical treatments, and advocating for whole-person care in the midst of medical management. Palliative care teams are available in both hospital and clinic settings, depending on the institution.

17.2.3 Management of palliative care

Palliative care is generally added on top of usual care as an extra layer of support for individuals facing serious medical illness. Palliative care specialists generally set out to understand the goals and values of the individual, apart from their medical illness, and then help the patient and family create a treatment plan that aligns with those goals and values. Physical symptoms such as pain, fatigue, and disability can challenge the way that individuals with FRDA are able to live their life and palliative care teams are well-suited to provide interdisciplinary care that aims to relieve the suffering of patients and families.

Palliative care teams can provide consultation in the hospital during times of acute need, as well as in the clinic setting to address chronic concerns, although availability varies widely in different parts of the world.

Best practice statement

All patients with Friedreich ataxia should be offered palliative care at specific time-points, such as with their transition to adult care, as well as when clinical milestones occur (e.g., loss of ambulation, onset of dysphagia, and with development of symptomatic heart failure) so that quality of life and future care preferences can be discussed.

Recommendation

Should specialty palliative care versus usual care be used for adults with heart failure with Friedreich ataxia?	Strength	Level of evidence*
We suggest that a palliative care consultation should be considered for individuals with Friedreich ataxia complicated by heart failure, particularly when there is a large burden of symptoms, poor perceived quality of life, or an upcoming medical decision to be made about which there is uncertainty of benefit or a significant impact on quality of life.	↑	⊕⊕◯◯

Justification: While there is no direct evidence in the Friedreich ataxia population, we can extrapolate to some degree from the heart failure population and expert consensus on the subject. The effect size doesn't appear to be large in many of the studies on palliative care, but well-designed studies often show improvement in symptom measures or quality of life measures (7-11). Many of these studies involve a home care or telehealth component, and where available these more patient-centered approaches to palliative care contact are likely to be beneficial compared to interventions limited to the hospital or office (9, 11-14). In situations such as during the COVID-19 pandemic, a telehealth component would be appropriate and appreciated.
Subgroup considerations: This recommendation is for individuals with Friedreich ataxia with heart failure.

Lay summary

Lay summary of clinical recommendations for palliative care in Friedreich ataxia

Palliative care seeks to promote high-quality care for individuals with life-altering and/or life-limiting medical illness by addressing physical, emotional, psychological, and spiritual sources of suffering. Involvement of palliative care specialists can begin as early as the time of diagnosis or in reaction to a complication of illness that affects one's ability to live well.

Palliative care is generally added to usual care as an extra layer of support for individuals facing serious medical illness. Palliative care specialists generally set out to understand the goals and values of the individual, apart from their medical illness. They also help the patient and family create a treatment plan that aligns with those goals and values, which can include a formal advance care plan.

Why this recommendation?

No studies have looked at palliative care specifically in Friedreich ataxia, but there are many studies of how palliative care helps people with heart disease as well as for people with progressive neurological conditions. For those with heart failure, palliative care benefits include improvements in quality of life, better symptom management, and reduced anxiety and depression. For carers of people with heart failure, inclusion of palliative care can help prevent 'burnout' and leads to better satisfaction with care.

We encourage all individuals with Friedreich ataxia to consider engaging with palliative care specialists to promote whole-person care at all stages of illness. Early introduction of palliative care allows an individual and their family to build long-term support that can be engaged readily during periods of medical strain.

Alternatively, many people are referred for palliative care when their condition places more limitations on the way they wish to live, such that discussions of quality of life become focused on interventions that one may or may not wish to undergo. In all phases of illness, the goal of palliative care remains the same: to help individuals with serious illness live as well as possible for as long as possible.

What does this mean for you as a person living with Friedreich ataxia or caring for someone living with Friedreich ataxia?

Engaging with palliative care specialists at all stages of illness can promote whole-person care for you and your family or carers, and help to build long-term support that can be engaged readily during periods of medical strain.

Alternatively, you may be referred for palliative care when your condition places more limitations on the way you wish to live. At this stage, discussions of quality of life become focused on interventions that you may or may not wish to undergo.

Who is this recommendation specifically for?

This recommendation applies to all individuals with Friedreich ataxia, but is particularly relevant for those who have already experienced limitations on their quality of life related to their disease. Examples of such limitations include loss of ambulation, swallowing problems or need for a feeding tube, and activity restrictions related to heart disease. In addition, palliative care is particularly important for those individuals who would like to discuss what a comfort-focused approach to medical care could look like in the context of their specific circumstances.

17.3 End-of-life care

17.3.1 Background

FRDA leads to a progressive multisystem decline with loss of ambulation after an average of 15 years and a shortened survival. In one study, mean age at death was 39 years (15), while in an earlier study, individuals with FRDA survived an average of 36 years after onset of the disease (16). By the time individuals with FRDA reach the end of life they have often accumulated significant neurological symptoms including wheelchair dependence, dysphagia, dysarthria, hearing and visual impairments, and cardiac complications such as heart failure and arrhythmias. Their increased risk of arrhythmias can lead to sudden death. Thus, end-of-life care for individuals with FRDA is generally quite complex, with high degrees of disability and dependence as well as the potential for high symptom burden.

17.3.2 Considerations for end-of-life care

Recognizing that dependence and symptom burden may be high in the final phase of life for individuals with FRDA, it is important to consider how and where care will be delivered. Some individuals may have to rely significantly on family and friends for care, while others may have the ability to engage professional help. Hospice care at the end of life can be helpful in providing patient and family-centered care, and while hospice care can be provided in many locations of care, it most often occurs in the home setting. This type of care is particularly well suited for individuals who value avoiding burdensome treatments and hospitalizations in favor of maximizing quality of life and comfort, and studies support this with a finding that individuals enrolled with hospice are much less likely to be readmitted to the hospital (17, 18).

17.3.3 Management of end-of-life care

It is challenging to be definitive about the prognosis for an individual with FRDA, but uncertainty should not be a barrier to discussing goals of care. For those seeking a comfort-focused approach, we recommend early discussion of when and how hospice care can be beneficial. For patients who are interested, this can initiate dialogue with a hospice agency and collaboration with the treating physician to determine when is the appropriate time to enroll.

It is important to note that the timing of hospice care may vary significantly between countries given the differences in eligibility requirements. For example, in the United States the Center for Medicare & Medicaid Services (CMS) lists an expected prognosis of less than 6 months as a criterion for enrolment.

Best practice statement

Individuals with Friedreich ataxia should receive end-of-life care tailored to their individual healthcare-related values, with a focus on alleviating burdensome symptoms and promoting their opportunity to choose the location of care if such a preference exists.

Recommendation

Should hospice support versus usual care be used for people with advanced heart failure with Friedreich ataxia?	Strength	Level of evidence*
We suggest that people with Friedreich ataxia with advanced heart failure would benefit from hospice support when their goals align with a comfort-focused approach and the individual's prognosis meets eligibility criteria – usually a life expectancy of 6 months or less if the disease runs its natural course.	↑	⊕◯◯◯
Justification: While there is little evidence directly pertaining to this question, studies indicate that the readmission rate to the hospital is lower in patients with heart failure enrolled in hospice, and for those valuing low burden treatments in a familiar environment this is an important outcome. In addition, our clinical experience is that hospice care can greatly improve quality of life by providing expert symptom management and providing care in the patient's home environment.		
Subgroup considerations: This recommendation is for individuals with Friedreich ataxia with advanced heart failure. Hospice enrolment criteria vary by country; however, it is worth noting that certain populations may be eligible to continue life prolonging treatments and re-hospitalization while still receiving hospice benefits. In the United States these populations include military veterans and children.		

Lay summary

Lay summary of clinical recommendations for end-of-life care in Friedreich ataxia

Friedreich ataxia is a progressive multisystem condition that leads to a shortened life-span, especially for those who have heart complications (such as irregular heart rhythm and/or heart failure). For those without heart complications, as the end-of-life approaches, individuals are often dependent on people to help them with all activities of daily living. They can also have difficulty with mobility, hearing, speaking, seeing and swallowing food.

Hospice care at the end of life can be helpful in providing patient and family-centered care. This type of care is particularly well suited to individuals who value avoiding burdensome treatments and hospitalizations in favor of maximizing quality of life and comfort. However, availability of hospice care may vary between and within countries.

Why this recommendation?

There is no specific research looking at the optimal end-of-life care for individuals with Friedreich ataxia, although anecdotal information from families confirms the value of the hospice ethos, which encourages the person with Friedreich ataxia to have significant input into their end-of-life care. Since 4 in 5 deaths in Friedreich ataxia may be attributed to heart disease, we looked at end-of-life and hospice care for people with heart failure. The limited research infers that there may be benefits to hospice care in the Friedreich ataxia population. Consequently, this recommendation is based on best practice principles in helping patients receive medical care at the end of life that aligns with their expressed goals and values, and maximizes their access to resources which may improve their quality of life, such as receiving comfort-focused care at home through hospice support for patients who wish for this type of care.

What does this mean for you as a person living with Friedreich ataxia or caring for someone living with Friedreich ataxia?

We encourage people with Friedreich ataxia and their families to engage in open dialogue with their healthcare providers about their end-of-life care preferences, particularly as the disease progresses to advanced stages. Part of this discussion may include identification of local support resources for comfort-focused care, which could occur through partnership with a hospice agency. Understanding the available resources, eligibility guidelines, and the benefits versus burdens of enrolment in hospice can be helpful for individuals with Friedreich ataxia who wish to pursue the highest degree of comfort-focused support at the end of their life.

Who is this recommendation specifically for?

This recommendation is most applicable for individuals with Friedreich ataxia and advanced disease including heart failure, particularly for those with a life expectancy of 6 to 12 months if their disease follows its natural course.

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References

1. Brinkman-Stoppelenburg A, Rietjens JA, van der Heide A. The effects of advance care planning on end-of-life care: a systematic review. Palliat Med. 2014;28(8):1000-25.
2. Walter HAW, Seeber AA, Willems DL, de Visser M. The role of palliative care in chronic progressive neurological diseases - a survey amongst neurologists in the Netherlands. Front Neurol. 2018;9:1157.
3. Chen H, Habermann B. Ready or not: planning for health declines in couples with advanced multiple sclerosis. J Neurosci Nurs. 2013;45(1):38-43.
4. Solari A, Oliver D, Force EANGT. Palliative care in multiple sclerosis: European guideline. Mult Scler. 2020;26(9):1009-11.
5. National Institute on Aging: National Institues of Health. Palliative Care: NIH; 2020 [Available from: https://www.nia.nih.gov/health/topics/palliative-care.
6. Cook A, Giunti P. Friedreich's ataxia: clinical features, pathogenesis and management. Br Med Bull. 2017;124(1):19-30.
7. Rogers JG, Patel CB, Mentz RJ, Granger BB, Steinhauser KE, Fiuzat M, et al. Palliative Care in Heart Failure: The PAL-HF Randomized, Controlled Clinical Trial. J Am Coll Cardiol. 2017;70(3):331-41.
8. Sidebottom AC, Jorgenson A, Richards H, Kirven J, Sillah A. Inpatient palliative care for patients with acute heart failure: outcomes from a randomized trial. J Palliat Med. 2015;18(2):134-42.
9. Brannstrom M, Boman K. Effects of person-centred and integrated chronic heart failure and palliative home care. PREFER: a randomized controlled study. Eur J Heart Fail. 2014;16(10):1142-51.
10. Wong FK, Ng AY, Lee PH, Lam PT, Ng JS, Ng NH, et al. Effects of a transitional palliative care model on patients with end-stage heart failure: a randomised controlled trial. Heart. 2016;102(14):1100-8.
11. Bakitas MA, Dionne-Odom JN, Ejem DB, Wells R, Azuero A, Stockdill ML, et al. Effect of an early palliative care telehealth intervention vs usual care on patients with heart failure: the ENABLE CHF-PC randomized clinical trial. JAMA Intern Med. 2020;180(9):1203-13.
12. Sahlen KG, Boman K, Brannstrom M. A cost-effectiveness study of person-centered integrated heart failure and palliative home care: Based on a randomized controlled trial. Palliat Med. 2016;30(3):296-302.
13. Dionne-Odom JN, Ejem DB, Wells R, Azuero A, Stockdill ML, Keebler K, et al. Effects of a telehealth early palliative care intervention for family caregivers of persons with advanced heart failure: The ENABLE CHF-PC randomized clinical trial. JAMA Netw Open. 2020;3(4):e202583.
14. Ng AYM, Wong FKY. Effects of a home-based palliative heart failure program on quality of life, symptom burden, satisfaction and caregiver burden: a randomized controlled trial. J Pain Symptom Manage. 2018;55(1):1-11.

15. Pousset F, Legrand L, Monin ML, Ewenczyk C, Charles P, Komajda M, et al. A 22-year follow-up study of long-term cardiac outcome and predictors of survival in Friedreich ataxia. JAMA Neurol. 2015;72(11):1334-41.
16. De Michele G, Perrone F, Filla A, Mirante E, Giordano M, De Placido S, et al. Age of onset, sex, and cardiomyopathy as predictors of disability and survival in Friedreich's disease: a retrospective study on 119 patients. Neurology. 1996;47(5):1260-4.
17. Lah S, Wilson EL, Beesley S, Sagy I, Orme J, Novack V, et al. Association of hospice utilization and publicly reported outcomes following hospitalization for pneumonia or heart failure: a retrospective cohort study. BMC Health Serv Res. 2018;18(1):12.
18. Yim CK, Barron Y, Moore S, Murtaugh C, Lala A, Aldridge M, et al. Hospice enrollment in patients with advanced heart failure decreases acute medical service utilization. Circ Heart Fail. 2017;10(3):e003335.