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Electroconvulsive (ECT) Therapy Information Leaflet

A fact sheet for you and your family

(Based on information from the Royal College of Psychiatrists' Special Committee on ECT, NICE Guidance and latest research)

Introduction

This leaflet is for anyone who wants to know more about ECT (Electro-convulsive therapy). It looks at how ECT works, why it is used, its effects and side-effects, and alternative treatments.

Although a safe and effective treatment, ECT remains controversial and we have included some of the different views about it.

Where there are areas of uncertainty, we have listed other sources of information that you can use. Important concerns are the effectiveness and side-effects of ECT and how it compares with other treatments. At the time of writing, these references are available free and in full on the Internet.

What is ECT?

ECT is a treatment for a small number of severe mental illnesses. It was developed in the 1930s and was used widely during the 1950s and 1960s for a variety of conditions. It is now only used for fewer, more serious conditions.

An electrical current is passed through the brain to produce an epileptic fit – hence the name, electro-convulsive. On the face of it, this sounds odd. The idea developed in the days before effective medication. Doctors noticed that some people with depression or schizophrenia, who also had epilepsy, seemed to feel better after having a fit.

More recent research suggests that the effect is due to the fit rather than the electrical current.

Q How often is it used?

It is now used less often. Between 1985 and 2002, its use in England more than halved, possibly because of better psychological and drug treatments for depression.

Q How does ECT work?

No-one is certain how ECT works. We do know that it can change patterns of blood flow through the brain and change the metabolism of areas of the brain which may be affected by depression. There is evidence that severe depression is caused by problems with certain brain chemicals. It is thought that ECT causes the release of these chemicals and, probably more importantly, makes the chemicals more likely to work and so help recovery.

Recent research has also suggested that ECT can help the growth of new cells and nerve pathways in certain areas of the brain.

Q Does ECT really work?

It has been suggested that ECT works not because of the fit, but because of all the other things – like the extra attention, support and the anaesthetic – that happen to someone who has it.

Several studies have compared standard ECT with "sham" or placebo ECT. In placebo ECT, the patient has exactly the same things done to them – including going to the ECT rooms and having the anaesthetic and muscle relaxant – but no electrical current is passed and there is no fit. In these studies, the patients who had standard ECT were much more likely to recover, and did so more quickly than those who had the placebo treatment. Those who didn't have adequate fits did less well than those who did. Some of the patients who had "sham" treatment recovered too, even though they were very unwell; it's clear that the extra support does help. However, ECT has been shown to have an extra effect in severe depression – it seems, in the short term, to be more helpful than medication.

Pros & Cons of ECT

Q Who is ECT likely to help?

Someone who has severe depression, resistant mania or catatonia. ECT should be considered for the rapid treatment of severe depression that is life-threatening, or when other treatments have failed.

It should not be used routinely in moderate depression, although it can be helpful for someone with moderate depression if they have not responded to several different drug treatments and psychological treatment.

There is research to suggest that ECT may help some patients with Parkinson's disease or with the side-effects of some psychiatric medications.

Q Who is ECT unlikely to help?

ECT is unlikely to help someone with mild to moderate depression or most other psychiatric conditions. It is not routinely used in the treatment of schizophrenia, though some patients with very resistant illnesses may be helped by it, alongside medication for their condition.

Q Why is it given when there are other treatments available?

ECT has been shown to be the most effective treatment for severe depression. It would normally be offered if:

- several different medications have been tried, but have not helped
- the side-effects of antidepressants are too severe
- you have found ECT helpful in the past
- your life is in danger because you are not eating or drinking enough
- you are seriously considering suicide.

Q What are the side-effects of ECT?

ECT involves several treatments spread over a few weeks. As with any treatment, ECT can cause a number of side-effects. Some of these are mild and some are more severe.

- **Short-term**

Immediately after ECT, many people have a headache and some aching in their muscles. They may feel muzzy-headed and generally out of sorts, or even a bit sick. Some become distressed after the treatment and may be tearful or frightened during recovery. For most people, however, these effects settle within a few hours, particularly with help and support from nursing staff, simple pain killers and some light refreshment.

There may be some temporary loss of memory for the time immediately before and after the ECT.

An older person may be confused for two or three hours after a treatment. This can be reduced by changing the way the ECT is given (such as passing the current over only one side of the brain rather than across the whole brain).

ECT causes contraction of the jaw muscles. Although the ECT Team will do all they can to minimise the risks, there remains a small chance of damage to the tongue, teeth and lips. There are particular risks where the teeth are less strong: for example if you have crowns, veneers, or implants, also bridges and partial dentures. Please let the team know have had cosmetic dental work or piercings undertaken.

There is a small physical risk from having a general anaesthetic – death or serious injury occurs in about 1 in 80,000 treatments, about the same as if you have an anaesthetic for dental treatment. However, as ECT is given in a course of treatments, the risk per course of treatment will be around 1 in 10 000.

- **Long-term**

Memory problems can be a longer-term side effect. Surveys conducted by doctors and clinical staff usually find a low level of severe side-effects, maybe around 1 in 10. Patient-led surveys have found much more, maybe in half of those having ECT. Some surveys conducted by those strongly against ECT say there are severe side-effects in everyone.

Some memory problems are probably present in everyone receiving ECT. Most people feel better after the course of ECT has finished and a few weeks have passed. However, some people do complain that their memory has been permanently affected, that their memories never come back. It is not clear how much of this is due to the ECT, and how much is due to the depressive illness or other factors.

Some people have complained of more distressing experiences, such as feeling that their personalities have changed, that they have lost skills or that they are no longer the person they were before ECT. They say that they have never got over the experience and feel permanently harmed.

What seems to be generally agreed is that the more ECT someone is given, the more it is likely to affect their memory.

Q What if ECT is not given?

- You may take longer to recover.
- If you are very depressed and are not eating or drinking enough, you may become physically ill or die.
- There is an increased risk of suicide if your depression is severe and has not been helped by other treatments.

Q What about driving?

Most people who are ill enough to require to ECT will be unfit to drive. After a course of ECT you should discuss with your doctor when you are well enough to resume driving. Sometimes disorientation and impaired visual functioning may go on for several months after ECT.

Q What are the alternatives?

- If someone with severe depression refuses ECT, the doctors can try a different medication, or combination of medications
- Offer intensive psychotherapy, although this will usually have already have been tried.

Given time, some episodes of severe depression will get better on their own, although being severely depressed carries a real risk of death by suicide.

Deciding to have (or not to have) ECT

Q Giving consent to having ECT

Like any significant treatment in medicine or surgery, you will be asked to give consent, or permission for the ECT to be done.

The doctor should explain (in a way that you can understand) their reasons for suggesting ECT, the possible benefits and any side-effects. If you decide to go ahead, you then sign a consent form. It is a record that ECT has been explained to

you, that you understand what is going to happen, and that you give your consent to it. However, you can withdraw your consent at any point, even before the first treatment.

Q What if I really don't want ECT?

If you have very strong feelings about ECT, you should tell the doctors and nurses caring for you, but also friends, family or an advocate who can speak for you.

Doctors must consider your views when deciding what to do.

If you have made it clear that you do not want to have ECT, then you should not be given it, except in special circumstances (see below). You could write an 'advance statement' to refuse ECT if you become unwell again. Alternatively, you could appoint someone to be your Health and Welfare Attorney to make decisions on your behalf when you are not able to decide for yourself.

Q Can ECT be given to me without my permission?

Most ECT treatments are given to people who have agreed to it. This means that they have had:

- a full discussion of what ECT involves
- why it is being considered in their case
- the advantages and disadvantages
- a discussion of side-effects.

You cannot usually be given ECT against your wishes, even if you are sectioned under the Mental Health Act. It is the responsibility of the doctors and nurses involved to make sure that they have discussed this with you – and to document it.

Sometimes, you can become so unwell that you can't understand the information about ECT – if you are very withdrawn or have ideas that stop you from understanding your position (e.g you believe that your depression is a punishment you deserve).

In this situation, it may be impossible to give proper agreement or consent. When this happens, it is still possible to give ECT. The legal provisions for this differ from country to country, even within the United Kingdom.

Mental Health Act

In England and Wales, ECT can be given under the Mental Health Act. This means that two doctors and another professional, who is usually a social worker, need to agree that ECT should be given.

There must then be a second opinion from an independent specialist who is not directly involved in the person's care. The clinical team should also speak to family and other carers, to find out what they think about ECT, but also to find out if the patient had any opinion about it.

Mental Capacity Act

Sometimes - if a person doesn't have the capacity to give an informed consent - the team may decide the ECT can be given under the Mental Capacity Act. This is unusual, as in most cases, the Mental Health Act provides the best protection for a patient's rights. The Mental Capacity Act can only be used if the patient lacks capacity and a "decision maker" (usually the consultant in charge of their care) decides that ECT is in the patient's "best interests".

It is expected the decision maker will ask other people to try to find out what the person's views would have been. This would usually include family members and other people close to them. The decision maker should also make "all reasonable attempts" to help the patient to regain capacity to consent (if this is possible). An independent specialist is not needed, though the clinical team may request a second opinion from another consultant.

Whether ECT is given under the Mental Health Act or the Mental Capacity Act, the team must make regular assessments of the patient's ability to understand their treatment. Once the patient is able to give consent, the treatment can only continue if they do consent and must stop if they refuse.

In Scotland, the principles above are the same, although the laws involved are the Mental Heath (Care and Treatment) (Scotland) Act 2003 and the Adults With Incapacity Act (Scotland) 2000.

Where is ECT given?

ECT is always given in hospital. As it is generally used in severe depression, you would usually need to stay in hospital. Some people do have ECT as a day patient, but you may need to check if your local service can do this.

How is ECT given?

The seizure is brought on by passing an electrical current across the brain in a carefully controlled way from a special ECT machine.

- an anaesthetic and muscle relaxant are given so that you are not conscious when the ECT is given.
- the muscle spasms that would normally be part of a fit – and which could produce serious injuries - are reduced to small, rhythmic movements in the arms, legs and body.

By adjusting the dose of electricity, the ECT team will try to produce a seizure lasting between 20 and 50 seconds.

Q Is there any preparation?

In the days before you start a course of ECT, your doctor will arrange for you to have some tests to make sure it is safe for you to have a general anaesthetic. These may include:

- a chest X-ray
- a tracing of your heart working (ECG)
- blood tests.

You will be asked not to have anything to eat or drink for 6 hours before the ECT. This is so that the anaesthetic can be given safely.

Q Where is ECT done?

ECT should always be done in a special set of rooms that are not used for any other purpose, usually called the "ECT suite". This should be a separate area where you wait, have your treatment, wake up fully from the anaesthetic and then recover properly before leaving.

There should be enough qualified staff to look after you while you are there so that they can help you through any confusion or distress.

Q What happens during ECT?

- You should arrive at the ECT suite with an experienced nurse who you know and who is able to explain what is happening. Many ECT suites are happy for family members to be there - you may want to check with your local team that this is possible. You should be met by a member of the ECT staff who will do routine physical checks, if they have not already been done. They will check that you are still willing to have ECT and if you have any further questions.
- When you are ready you will be accompanied into the treatment area and be helped onto a trolley.
- The ECT team will connect monitoring equipment to check your heart rate, blood pressure, oxygen levels, ECG and EEG during the fit.
- The anaesthetist will give you the anaesthetic through a needle in your hand. Once you are asleep, they will give a muscle relaxant through the same needle. While you are going off to sleep, the anaesthetist will also give you oxygen to breathe.
- Once you are asleep and fully relaxed, a doctor will give the ECT treatment. Your fit will last between around 20 to 50 seconds. The muscle relaxant wears off quickly (within a couple of minutes) and, as soon as the anaesthetist is happy that you are waking up, you will be taken through to the recovery area where an experienced nurse will monitor you until you are fully awake.
- When you wake up, you will be in the recovery room with a nurse. He or she will take your blood pressure and ask you simple questions to check on how awake you are. There will be a small monitor on your finger to measure the oxygen in your blood, and you may wake up with an oxygen mask. You will probably take a while to wake up and may not know quite where you are at first. You may feel a bit sick. After half an hour or so, these effects should have worn off.
- Most ECT units have a "recovery" area for rest and light refreshments. You can leave when the staff are happy that your physical state is stable and you feel ready to do so. It usually takes around half an hour, from start to finish.

Q. What are bilateral and unilateral ECT?

In bilateral ECT, the electrical current is passed across the whole brain

In unilateral ECT, the current is just passed across one side. Both of them cause a seizure in the whole of the brain.

Bilateral ECT seems to work more quickly and effectively and it's probably the most widely used in Britain; however, there has been concern that it may cause more side-effects.

Unilateral ECT is now used less. It had been thought to cause less memory loss, but recent research has shown that it is necessary to use larger doses of electricity to make it as effective as bilateral ECT. If the dose of electricity is increased to make it equally effective, the risks of memory loss are as great as with bilateral ECT.

Sometimes ECT clinics will start a course of treatment with bilateral ECT and switch to unilateral if the patient experiences side-effects. Alternatively, they may start with unilateral and switch to bilateral if the person isn't getting better.

You may wish to speak to the doctor who is suggesting ECT for you to decide whether unilateral or bilateral ECT is best for you.

Q How often and many times is ECT given?

Most units give ECT twice per week, often on a Monday and Thursday, or Tuesday and Friday. It is impossible to predict how many treatments someone will need. However, in general, it will take 2 or 3 treatments before you see any difference, and 4 to 5 treatments for noticeable improvement.

A course will on average be 6 to 8 treatments, although as many as 12 may be needed, particularly if you have been depressed for a long time. If, after 12 treatments, you feel no better, it is unlikely that ECT is going to help and the course would usually stop. A member of the mental health team should check after each treatment to see how your are responding, and to check that you are not getting troublesome side-effects. Your consultant should see you after every two treatments. ECT should be stopped as soon as you have made a recovery, or if you say you don't want to have it any more.

Q What happens after a course of ECT?

Even when someone finds it effective, ECT is only a part of recovering from depression. Like antidepressants, it can help to ease problems so you are able to look at why you became unwell. Hopefully you can then take steps to continue your recovery, and perhaps find ways to make sure the situation doesn't happen again. Psychotherapy and counselling can help and many people find their own ways to help themselves. Certainly people who have ECT, and then do not have other forms of help, are likely to quickly become unwell again.

The ECT Controversy

There are many areas in which people disagree over ECT, including whether it should even be done at all. People tend to have very strong feelings about ECT, often based on their own experiences. The main areas of disagreement are over whether it works, how it works and what the side-effects are.

Q Why is ECT still being given?

ECT is now used much less and is mostly a treatment for severe depression. This is almost certainly because modern treatments for depression are much more effective than they were in the past. These include psychotherapy (talking treatments), antidepressants and other psychological and social supports.

Even so, depression can for some people still be very severe and even life-threatening. The person may be barely able to talk, reluctant (or unable) to eat, drink or look after themselves. Occasionally a person may also develop strange ideas (delusions) about themselves or others. If other treatments have not have worked, it may be worth considering ECT. It is a safe and effective treatment for severe depression.

Q What do patients think of ECT?

In 2003 researchers analysed all the work which had been done on patients' experiences of ECT. They found that the proportion of people who had had ECT and found it helpful ranged from 30% to 80%. The researchers commented that studies reporting lower satisfaction tended to have been conducted by patients, and those reporting higher satisfaction were carried out by doctors. Between 30% and 50% of patients complained of difficulties with memory after ECT.

Q What do those in favour of ECT say?

Many doctors and nurses will say that they have seen ECT relieve very severe depressive illnesses when other treatments have failed. Bearing in mind that 15% of people with severe depression will kill themselves, they feel that ECT has saved patients' lives, and therefore the overall benefits are greater than the risks. Some people who have had ECT will agree, and may even ask for it if they find themselves becoming depressed again.

Q What do those against ECT say?

There are different views and reasons why people object to ECT. Some see ECT as a treatment that belongs to the past. They say that the side-effects are severe and that psychiatrists have, either accidentally or deliberately, ignored how severe they can be. They say that ECT permanently damages both the brain and the mind, and if it does work at all, does so in a way that is ultimately harmful for the patient. Some would want to see it banned.

Q What happens in other countries?

At the moment, ECT is part of standard psychiatric practice in Britain and the majority of countries worldwide. Some countries (and some states in America also) have restricted its use more than in the UK, though only a few have prohibited its use.

Q How do I know if ECT is done properly locally?

The Royal College of Psychiatrists has set up the ECT Accreditation Service (ECTAS) to provide an independent assessment of the quality of ECT services. ECTAS sets very high standards for ECT, and visits all the ECT units who have registered with it. The visiting team involves psychiatrists, anaesthetists, and nurses. It publishes the results of its findings and also provides a forum for sharing best clinical practice. Membership of ECTAS is not compulsory, but every ECT unit should be able to tell you:

- if they have signed up to ECTAS;
- the result of their most recent report;
- who to speak to if you are concerned that your local unit has not been assessed.

A list of accredited site is available on the **Royal College of Psychiatrists' website**.

Q Where can I get more information?

Many ECT suites provide their own information packs. They should be able to give written information to you or your family/carers.

Further Information

National Institute for Health and Clinical Excellence (NICE)

- Electroconvulsive therapy (ECT): the clinical effectiveness and cost effectiveness of electroconvulsive therapy (ECT) for depressive illness, schizophrenia, catatonia and mania. (TA59 2003)
- Depression: the treatment and management of depression in adults (CG 90 2009)

Scottish ECT Accreditation Network (SEAN): A site designed to complement the work of SEAN, by enabling communication of the latest information on ECT in Scotland.

Electroconvulsive Therapy Accreditation Services (ECTAS): Launched in May 2003, ECTAS aims to assure and improve the quality of the administration of ECT; awards an accreditation rating to clinics that meet essential standard.

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