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SECONDARY TRANSMISSION OF VARIANT CJD: RECOMMENDATIONS FOR FURTHER HEALTH PRECAUTIONS

These recommendations outline the implications for a small number of blood donors where blood transfusion cannot be excluded as the means of transmission of vCJD.

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KEY TOPLINE MESSAGES

As an extension to the current precautionary measures to reduce the risk of vCJD transmission by blood transfusion and other healthcare interventions, blood donors whose blood has been transfused to a person who subsequently developed vCJD are being contacted and advised not to donate blood, tissues or organs.

A small number of people who received blood from these donors went on to develop vCJD. Expert advice is that we do not know whether the source of vCJD in these cases could be related to the blood that they received. We are therefore taking precautionary steps to inform and support the individual blood donors concerned and to safeguard public health.

Around 100 blood donors will be contacted by the UK Blood Services. These donors are considered to be potentially at risk of vCJD for public health purposes, and are being asked to inform their doctors/ dentists/ nurses of this when they are going to have surgery or other invasive procedures.

FOR THE GENERAL POPULATION

- The action being implemented from 20th July 2005 is a further precautionary measure to reduce the risk of vCJD being transmitted through blood transfusions and other healthcare procedures.

- The risk that someone might contract vCJD from a blood transfusion is difficult to determine. Whilst it is now widely accepted that an infected blood transfusion *can* cause vCJD in a recipient, the probability that an infected donor *would* infect a recipient is uncertain. We are continuing to implement precautionary measures to reduce this risk as far as we reasonably can.

- We are committed to further research to help us better understand the possible risk of transmission of vCJD but until a reliable blood screening test becomes available, it is sensible that we take precautionary measures to protect the population.

- The likelihood of a person who may be infected with vCJD going on to develop symptoms of the disease is uncertain, and may depend upon individual susceptibility. It is possible that infected individuals may never develop symptoms.

- Over 2 million blood donations are collected each year by the NBS and the Welsh Blood Service collect over 100,000 donations each year. Of the 156 cases of vCJD that have occurred in the UK to date, there are only four cases where blood transfusions may be associated with the subsequent development of vCJD. In one of these four cases an infected donor has already been identified. In the other three cases, no donors are known to have developed vCJD. For these cases, transfusion remains a possible source of the recipient's infection.

FOR AFFECTED DONORS

- The chances that any donor who has donated blood to someone who later developed vCJD might themselves be carrying the agent for vCJD will vary depending on a number of factors, including the number of donors whose blood had gone to the infected individual.

- In cases where blood donors cannot be excluded as a possible source of the vCJD infection in transfusion recipients, these donors will be informed from July 2005 onwards and be given the opportunity to discuss their individual situation. Where the estimated risk of a donor being the source of a recipient's infection is not clearly below 1% the donor will be considered 'potentially at-risk of vCJD for public health purposes' This currently affects around 100 blood donors.

- The implications of being considered 'at-risk' of vCJD are: you should not donate blood, tissues or organs; you should tell your healthcare providers (including dentists) so they can take any necessary precautions with the instruments used in your healthcare. Your care should not be compromised in any way. Normal social contact and household activities do not spread the infection. Your family and friends are not at risk from you and you do not need to take any special precautions in your normal life.
- These donors will be supported by the UK Blood Services (UKBS) and their GPs as appropriate and they will be offered all available information about their own individual risk.

- We cannot be sure how likely these donors are to be infected with vCJD. However, the information linking them with affected recipients suggests that they may be at higher risk than the general population.

- Even if any of these donors are carrying the vCJD agent, it is not known whether they will ever develop clinical symptoms. However, they are being asked to take precautions in order to protect other people because they might be carrying the agent that causes vCJD. At present, there is no reliable blood test to show this.

- There will be a staged approach to contacting these donors and priority will be given to current donors who are being notified today.

- If a recipient of a blood transfusion develops vCJD, we have to consider the possibility that the infection was passed on by the donation. This in turn implies that the donor may have a greater chance of being infected, as compared with the general population.

FOR DONORS GENERALLY

- It is not possible for anyone to contract vCJD by giving blood.

- The reason these donors are being contacted now is because their blood was given to someone who went on to develop vCJD and the possibility that the donated blood was the source of infection cannot be ruled out.

- Blood donors are highly committed to helping other people, and we greatly value their contribution. The NHS depends upon their continued commitment to donation in order to be able to save lives.

- If you are a donor now, and are not contacted shortly, you can be assured that you are not involved in this new safety measure and need take no action. If you have been a donor in the past and are concerned, you can contact the National Blood Service Helpline (0845 7711 711).

FOR TRANSFUSION RECIPIENTS

- We have already implemented several measures to reduce the risk of vCJD being transmitted through the blood supply. These new precautions will provide additional protection for those patients who may require a blood transfusion.

- Blood transfusion can be a life-saving treatment. Although no medical treatment is completely free from risk, a wide range of measures is used by the blood services and hospitals to reduce the risks from transfusion.

- This new announcement concerns around a 100 blood donors.

- If you have *received* a blood transfusion and are concerned, you can call NHS Direct 0845 46 47.

- Further public health precautions may need to be considered for the other recipients of blood from the currently identified group of around 100 donors (estimated to be up to 3,000 individuals). At present, these people are already excluded from blood donation themselves by the measures implemented in April 2004. Additional expert advice is being sought on the notification of these individuals and further action will be taken if necessary.

SUPPORTING INFORMATION

KEY MESSAGES IN THE RISK ASSESSMENT

- If someone has developed vCJD after receiving blood, the possibility that vCJD was passed on from an infected donor has to be considered. However the estimated chance of a donor being infected varies greatly, depending on the specific situation.

- In particular, the chance of vCJD having come from any specific donor will depend on two main factors:
    - The probability that blood from an infected donor would infect the recipient
    - The number of donors whose blood had gone to the infected individual.

- It is now widely accepted that an infected blood transfusion can pass on vCJD, but that the probability of this happening is not known. If we consider the worst possible case, blood from an infected donor would definitely infect a recipient. Suppose also that the recipient and the donors all have an equal chance of having been infected via BSE in food. Then the recipient's infection is equally likely to have come directly from food, or via each of the donors through blood transfusion.

- This means that the more donations given to the infected recipient, the higher the overall chance of the infection having come from a blood transfusion, but the lower the probability of an individual donor being the source of infection

- At one extreme, if the recipient has only received one blood transfusion, there is an equal chance having been infected via that donor or directly from food.

- At the other extreme, a recipient may have had hundreds of transfusions from different donors. Therefore, the infection would be equally likely to have come from any one of these donors, or directly from food. Consequently, the chance of any one donor being the source of infection would be quite small (unless other recipients of his or her blood also developed vCJD, which has not happened in any of the incidents seen so far).

- However, these are simplified illustrations. At least three other factors have to be considered:
    - It is not certain that that blood from an infected donor would definitely infect the recipient, so the chance of a donor being the source of infection may be less than "the worst case" scenario.
    - Any transfusion that took place only shortly before the recipient developed symptoms of vCJD can be discounted as a possible

source of infection, as it takes several years for the disease to develop.

- In addition, donors and recipients may not have an equal chance of having been infected via food (eg if not all had been resident in the UK during the BSE outbreak), or they may have been exposed to another possible infection source (e.g. by having undergone "high risk" surgery).

Whatever the chance of infection, the likelihood of an infected person going on to develop vCJD symptoms is uncertain and may depend on individual susceptibility. An infected individual may never develop symptoms. Further information is available from: http://www.dh.gov.uk/cjd

BLOOD SAFETY AND SUPPLY

Issue

This further action will again raise questions about the general safety of blood used in transfusions in the NHS and action taken to minimise the risk of vCJD being passed through blood and whether these are adequate.

Lines to take

- The safety of blood and blood products used in the NHS is of paramount importance. Every reasonable step is taken to minimise any risks during blood transfusion.
- It is important to recognise that no medical procedure is entirely free from risk. However, there is no risk of infection from donating blood.
- Patients can have confidence in the safety of blood used in the UK. The current high levels of safety are achieved by screening all donors and then testing every unit of donated blood for the presence of HIV, hepatitis C, hepatitis B and Syphilis before it is released to hospitals.
- Appropriate use of blood and tissues and alternatives throughout the NHS is being promoted.

PRECAUTIONARY MEASURES

Previous measures taken to improve the safety of blood in relation to vCJD include the following:

- From December 1997, blood components, plasma products or tissues obtained from any individual who later develops vCJD, have been withdrawn/recalled.
- In July 1998, we announced that plasma for the manufacture of blood products, such as clotting factors, would be obtained from non-UK sources
- From November 1999, white blood cells (which may carry a significant risk of transmitting vCJD) have been removed from all blood used for transfusion.
- In August 2002 we announced that fresh frozen plasma for treating babies and young children born on or after 1 January 1996 would be obtained from the USA.
- The report of the first possible case of transmission of vCJD by blood transfusion was in December 2003. Following this, we announced in April 2004 that individuals had themselves received a transfusion of whole blood components since January 1980, would be excluded from donating blood. (In July 2004, the second possible case of transmission of vCJD by blood transfusion was reported.)
- In July 2004, the exclusion criteria for blood donation were extended to include two new groups, who had received transfusions of whole blood components since 1980:
    - Previously transfused platelet donors
    - Donors who were unsure if they had previously had a blood transfusion.

This means that for blood donation the full exclusion criteria are:

- Recipients of dura mater grafts.
- Recipients of corneal or scleral grafts.
- Recipients of human pituitary derived extracts such as growth hormone or gonadotrophins.
- Individuals at familial risk of prion-associated diseases. This includes individuals who have had two or more blood relatives develop a prion associated disease and individuals who have been informed they are at risk following genetic counselling.
- Individuals who had themselves received a transfusion of whole blood. components since January 1980 are excluded from donating blood.
- Individuals identified as 'at risk' by CJD Incidents Panel.
- Previously transfused platelet donors.
- Donors who were unsure if they had previously had a blood transfusion.

- In September 2004, the Department of Health announced further precautionary measures for patients who had received certain batches of plasma products.
- In July 2005 the use of USA sourced fresh frozen plasma (FFP) was extended to all children up to the age of 16.

BETTER USE OF BLOOD

Issue

This announcement (20 July 2005) may cause some donors to stop giving blood. This underlines the need to give more emphasis to initiatives to improve the appropriate use of blood in the NHS which will reduce risks associated with blood and make more effective use of our blood supplies

Lines to take

- There have been several attempts to improve the appropriate use of blood in the NHS. It is estimated that improving practice in the appropriate use of blood could reduce the requirement for blood by around 18%.
- The CMOs established a Better Blood Transfusion initiative and have issued recommendations in the form of two Welsh Health Service Circulars with the aim of improving the safety and effectiveness of transfusion practice in hospitals.
- The Department of Health is working with the Blood Service to produce a toolkit for practitioners which gives guidance on managing better blood transfusion, safe practice, appropriate use, education and training, audit, monitoring and traceability. The toolkit is being developed in three phases over the course of 2005.
- There are a variety of techniques designed to reduce the chances of patients requiring blood transfusion from a blood donor, including autologous pre-deposit (patients own blood donated prior to surgery) and cell salvage (own blood is "washed," filtered and infused back into the patient during sugery). As red blood cells cannot be stored for very long, pre-operative depositing is not a possibility in cases of emergency surgery. Cell salvage is a possibility in some cases of elective and emergency surgery.

RISK OF vCJD TRANSMISSION VIA BONE, TISSUES AND ORGANS

Issue

In light of the first possible case of vCJD transmission through blood transfusion reported in December 2003, the expert Committee on the Microbiological Safety of Blood, Tissues and Organs for Transplantation is considering the vCJD risk from bone products and risks associated with tissues and organs used for transplantation.

Lines to take

- This is a legitimate concern, though there is no known instance of vCJD having been passed on in this way. Sporadic CJD is thought to have been transmitted via corneal grafts.
- MSBTO is considering the risks in more detail and is currently examining a number of vCJD transmission risk reduction strategies for tissue, bone and organ donations.
- Some risk reduction steps have already been taken, for example, living donors of femoral heads are now also excluded if they have previously received blood transfusions. This is in line with the similar policy applied to blood donors.
- Many uses of donated tissue (and essentially all organ transplants) are carried out in the context of life-saving (or greatly life-enhancing) procedures. Any possible risk of vCJD infection needs to be seen in this context. Many tissues and organs are already in short supply, and any move that would worsen this situation is to be avoided.
- The potential risks of transmission from an infected donor are difficult to quantify. Most donations involve tissues that have not been found experimentally to carry vCJD. However, these tests have limited sensitivity. Therefore, we have to take a precautionary view that if a donor were to be infected with vCJD, there would be some risk of transmission.

THE FIRST CASE OF POSSIBLE VCJD TRANSMISSION VIA BLOOD TRANSFUSION

Issue

In December 2003 the Minister for Health and Social Services with the other UK Health Ministers announced the first possible case of vCJD in a patient who had received a blood transfusion from a donor who later developed vCJD.

Lines to take

- 16th March 2004 further measures designed to reduce the possible risk of vCJD transfusion transmission from donor to patient was announced.
- These three cases are in addition to the first case of possible transfusion associated transmission of vCJD announced by in December 2003.

vCJD AND BLOOD DONATION: INFORMING RECIPIENTS OF THEIR RISK OF VCJD (DONCASTER CASE)

Issue

Following expert advice, guidance to the NHS (1998) not to inform recipients, who received blood from donors who later developed vCJD, that they could possibly be affected. This decision has been publicly criticized by a family near Doncaster whose son was a blood donor and who later died of vCJD in the late 1990's. The most recent article was in the Mail on Sunday on 15 May 2005.

Lines to take

- Until Autumn 2003, there was no evidence worldwide that CJD had been transmitted via blood or blood products, although that possibility could not be ruled out.
- In September 1997, the first case of vCJD in a blood donor was identified. DH advice to the NHS in 1998 was not to inform patients that they may have been exposed to vCJD through blood components or blood products as the risk of transmission was unknown and there was no test or treatment. In addition, the disease has a long incubation period and this would impose a long period of uncertainty and anxiety. It was considered at that time, that it would be unethical to impose such knowledge on patients.
- The CJD Incidents Panel later advised, based on emerging evidence, that recipients should be informed and that support mechanisms were needed for such patients and their GPs. The Chief Medical Officer's in the UK asked the Health Protection Agency to establish those support mechanisms. This was being done when the first case of possible blood transfusion-associated transmission of vCJD was notified in Autumn 2003.
- Following the announcement at the end of 2003 of the first case of possible vCJD transmission via blood transfusion, donors who have received a blood transfusion since1980 are now excluded from donating blood as a further precautionary measure to reduce the risk of transmission through blood transfusion.
- Of the 156 cases of vCJD that have occurred in the UK to date, there are only four cases where blood transfusions may be associated with the subsequent development of vCJD. In one of these four cases, an infected donor has already been identified. In the other three cases, no donors are known to have developed vCJD and transfusion remains a possible source of the recipient's infection.

vCJD: DIAGNOSIS AND TREATMENT

Issue

There are likely to be questions on whether there is any way of telling how many people may be incubating vCJD or detecting whether blood is infected. There will also be interest in what treatments are available.

Lines to take

Diagnostic Test

- There is currently no validated diagnostic test that can be used before the onset of clinical symptoms to diagnose whether someone has contracted vCJD.
- As there is no blood test, there is therefore no test to screen potential blood donors or blood donations.
- Research to support development of diagnostic and screening tests is a priority.
- Several international groups of research workers are working to try to develop a blood test, but it is currently unclear how soon we shall have an effective test. The National Blood Service is working on a Test Assessment Facility for when a test becomes available.

Until there is a rapid simple test we are not going to be able to know how many people may be incubating vCJD and who may be at risk of transmitting the disease to others.

Treatment

- There is currently no treatment for CJD or related prion diseases. However, a small number of patients have been experimentally treated with quinacrine (a drug licensed for use against malaria). DH is funding the MRC to run a clinical trial of quinacrine which started in Autumn 2004. DH have the lead for commissioning such research on behalf of the UK, however, Wales does have observer status on the group overseeing the MRC programme.
- A small group of symptomatic patients are being treated with pentosan polysulphate, administered directly into the brain.

In addition to the above, several agents have been shown experimentally to inhibit the accumulation or conformational change of prion protein *in vitro*. Whilst providing a valuable experimental insight into prion chemistry these are, however, a long way from being considered as potential therapeutic agents.

RISK OF TRANSMISSION VIA SURGICAL INSTRUMENTS

Issue

There has been concern about the risk of transmission of vCJD via surgical instruments. Guidance issued in January 2001 recommending the use of single-use instruments for tonsillectomies was amended in Wales in December 2001 because adverse events were being reported and attributed to the use of single-use instruments and an extensive research programme developed to address the safety issues

Lines to take

- The Health Departments are committed to minimising risk of transmission of vCJD via surgical procedures by:
    - developing scientifically robust risk assessment.
    - encouraging use of single-use instruments, where practicable and safe.
    - upgrading NHS conventional decontamination facilities/practices.
- Wales invested £8m in improving decontamination standards. All hospital sterilisation and decontamination units in Wales achieved EU accreditation earlier this year.Welsh ENT surgeons, with funding from WAG, have developed a prospective audit of all tonsillectomies in Wales and have demonstrated that single use, specified instruments are as safe as re-usable instruments.
- The National Institute for Clinical Excellence (NICE) are reviewing the safety and cost-effectiveness of single-use instruments. (http://www.nice.org.uk/page.aspx?o=240192)
- DH analysts completed an initial risk assessment based on the best available scientific knowledge in early 2001, and this was published on the DH website. An updated analysis has recently been posted (May 2005). This underpins continuing efforts to improve the effectiveness of instrument decontamination
- Details of DH funded research on vCJD (decontamination of surgical instruments) can be found at: http://www.doh.gov.uk/research/index.htm

INSURANCE AND COMPENSATION

Issue
The effect this action will have on the insurance of the small group of donors affected.

The government established a Trust fund in April 2001 to compensate all patients who develop vCJD and their families. It may be suggested that patients who are told that they may have been exposed to vCJD through a healthcare procedure, or individuals who are told that they may be at increased risk should also receive compensation because of the distress this involves.

Lines to take

We sympathise with all those who have been told that they may have received implicated blood or blood products and recognise that this may be very distressing.

Insurance

- The Association of British Insurers have informed the CJDIP that their members do not refuse insurance just because someone is categorised as 'potentially at-risk for public health purposes'. Nor will being 'at-risk' affect existing insurance policies.

Compensation

- Individuals who develop probable or confirmed variant CJD and their families are entitled to compensation under the variant CJD Compensation Scheme. The Scheme is run by independent trustees.
- No plans for general compensation of patients who may have received implicated blood or blood products. The existing variant CJD Compensation Scheme could not be used for this purpose.