

Invasive and Non-Invasive Post Mortems

During our lives, there comes a point where we have to grieve and accept the death of a loved one. There is no hiding from this. To enable us to deal with this situation and to enable us to come to terms with this, we should all prepare and have in place effective and efficient pathways to lay to rest our loved one. Of course, with the highly bureaucratic and scientific world we find ourselves in today, this time can often be made more difficult if the cause of death is unknown. The coroners are often involved and more often than not a post mortem is required, delaying the plans of the funeral.

A post mortem, or autopsy, examination is a very invasive technique of determining the cause of death of an individual for either medical or legal reasons. Many individuals, whether it be for religious or cultural reasons, wish for their loved ones not to undergo such an invasive procedure after death. For this reason the Jewish community in Manchester, by arrangement with HM coroner, set up an innovative non-invasive technique of determining the cause of death via the use of Magnetic Resonance Imaging (MRI), which has been operational for over 10 years now.

This technique was deemed necessary as in many cases an autopsy was carried out in non-suspicious deaths, simply because of referral to the coroner from the general practitioner, as the patient had not been seen by the general practitioner for several weeks, even though the patient may have had a proven history of disease¹. In these cases the families of the deceased may feel that an unnecessary invasive procedure can potentially be avoided by the use of the MRI facility available.

Using the MRI scan the radiologist, a doctor trained to read and interpret the images, is able to, in many of the cases with a clinical history, give a cause of death with very high certainty. Cases which have been examined by both MRI and autopsy suggested that the MRI scan is at least as accurate as doctors' certification and hence acceptable for non-suspicious deaths¹. Many studies have shown that the use of MRI scan's as an adjunct to post-mortem examination is a very efficient technique of determining the cause of death, and in some areas it has become common practice².

It would be very unfair, and truly wrong, for us to say that the MRI scan was a guaranteed route to preventing a post-mortem examination. This technique is still relatively new and even though the MRI technology is advancing rapidly, there are cases where the MRI will fail to show the cause of death, and a post mortem will be required. However, in some cases the MRI scan may show an abnormality which may only require a very limited post mortem. Furthermore, tissue samples are often required and as MRI is a non-invasive procedure, a MRI guided fine-needle biopsy is possibly the most efficient technique³.

There is no doubt that after the death of a loved one we should do all we can to lay them to rest with as much dignity as possible and the MRI PM is a technique which will become more popular as the awareness of its potential use in mainstream clinical practice increases.

Saad may have left us unexpectedly but his soul will live on in the Saad Foundation, bringing families comfort and support at times of need.

References

1 – Bisset R A L, Thomas N B, Turnbull I W, Lee S. Postmortem examinations using magnetic resonance imaging: four year review of a working service. British Medical Journal, Volume 324 15th June 2002.

2 – Ezawa H et al. Introduction of autopsy imaging redefines the concept of autopsy: 37 cases of clinical experience. Pathology International 2003; 53; 865.

3 – Whitby EH et al. Postmortem MR imaging of the fetus: An adjunct or a replacement for conventional autopsy? Seminars in Fetal & Neonatal Medicine 2005; 10; 475.

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