“Sandbags” May Not Be What You Think

PA-PSRS, the New Jersey Department of Health and Senior Services, and the Veterans’ Health Administration have received reports of sandbags flying into the MRI core. Fortunately, patients were not injured. Investigation revealed that these sandbags were filled with metal pellets instead of sand. The following PA-PSRS report is a typical example:

A post cardiac catheterization patient with a sandbag placed on the left groin went to Radiology for an MRI. The patient was placed on the table. When the technician began to advance the table, the magnet pulled the sandbag from the patient’s groin to the outer housing of the MRI unit.

Recently, a Pennsylvania facility notified the Hospital and Healthsystem Association of Pennsylvania (HAP) that upon evaluating its sandbags, it discovered over a dozen “sandbags” actually contained metal particles

Healthcare workers may be unaware of this risk. Manufacturer labels may not indicate that a “sandbag” contains metal pellets or whether it is MRI compatible. The “sandbag” may be covered by a towel, blanket, or sheet, concealing its presence from staff. Order forms/catalogs, invoices, or packing slips from the vendor may fail to indicate that the product contains metal rather than sand.

Several patient safety strategies can reduce the potential for serious patient injury from sandbags in the MRI environment:

- Evaluating all “sandbags” to confirm they do not contain metal. Do not use the MRI magnet to do this. Instead, use a powerful hand magnet (>1000G) to test sandbags/other equipment for ferromagnetic properties.

- Purchasing and using only MRI-compatible sandbags that are labeled as such in the MRI environment.

- Confirming that sandbags are non-ferromagnetic before allowing them into the MRI environment, and assuming that items are MRI incompatible until proven otherwise.

- If the facility must use ferromagnetic sandbags outside the MRI environment, clearly labeling them as containing iron and not for use in the MRI area.

- For non-ambulatory patients, ensuring that potentially magnetic objects are not covered by blankets/sheets/towels or stored on the transport equipment. Consider transferring patients to MRI-compatible transport equipment once they enter the MRI area.

- Revising MRI screening checklists to include evaluating the patient for ferromagnetic sandbags prior to entering the MRI environment, and replacing such items with MRI-compatible sandbags.

- Heightening awareness:
  - Of MRI staff about the need to check for ferromagnetic sandbags on patients brought from other departments/facilities.
  - Of all healthcare personnel throughout the facility/transferring facilities of the dangers of ferromagnetic items, such as sandbags, in the MRI environment.

- Prior to MRI, checking patients’ medical records to determine whether a recent procedure/complication may have required the use of a sandbag (such as cardiac catheterization).

- Maintaining/posting a list of MRI-incompatible equipment (such as ferromagnetic sandbags).

- Assigning trained healthcare workers responsibility for physically evaluating the patient and securing the MRI area.

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Notes
5. ECRI. Ferromagnetic sandbags are hazardous in magnetic resonance imaging (MRI) environments [hazard report]. Health Devices 1998 Jul;27(7):266-7.
The Patient Safety Authority is an independent state agency created by Act 13 of 2002, the Medical Care Availability and Reduction of Error ("Mcare") Act. Consistent with Act 13, ECRI, as contractor for the PA-PSRS program, is issuing this newsletter to advise medical facilities of immediate changes that can be instituted to reduce serious events and incidents. For more information about the PA-PSRS program or the Patient Safety Authority, see the Authority’s website at www.psa.state.pa.us.

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