



QUESTION | I HAVE A QUESTION REGARDING THE RECENT INCREASE IN THE NUMBER OF STORIES COMING OUT IN THE MEDIA ABOUT THE FAILURES AND INCREASE IN COBALT AND CHROMIUM LEVELS IN PATIENTS WHO HAVE UNDERGONE METAL-ON-METAL HIP REPLACEMENTS. WHAT ARE SOME POSSIBLE CONCERNS FOR PATIENTS WHO HAVE UNDERGONE THESE TYPES OF OPERATIONS AND WHAT ARE THE SIGNS/SYMPTOMS PATIENTS SHOULD BE LOOKING OUT FOR?

ANSWER |

Metal on Metal Hip Replacements

Total hip replacement is one of the most successful operations, alleviating pain and restoring function. In 2011 about 35,000 hip replacements will be performed in Australia using a variety of materials, including metal, ceramic and polyethylene. Cemented and uncemented implants seem to be functioning very well.

Metal-on-Metal (MoM) implants are not new and show better wear rates than the traditional Metal-on-Polyethylene hips. There has been an increased use of these devices in the past 10 years and most MoM hips continue to perform well and do not represent problems for patients.

Over the last year there has been much publicity surrounding one particular MoM hip system, the ASR; manufactured by DePuy. The National Joint Replacement Registry of the Australian Orthopaedic Association reported a higher than expected revision rate. This has not been a problem in our practice since none of our surgeons have chosen to use this prosthesis. The risk for revision was highest with ASR head sizes below 50 mm in diameter and among female patients.

It has since become evident that the ASR hips, which are made of a Chrome-Cobalt alloy, have been causing some pain and swelling around the implants and some high serum Chrome and Cobalt levels. Many have had to be revised.

Our serum normally contains a low level of both Chromium and Cobalt, but excessive levels may be harmful. Prolonged high serum levels of these metals may cause neuro-toxicity and cardiac disturbances but the actual 'toxic' levels of these metals are not actually known. Asymptomatic patients with high serum levels of Chrome and Cobalt have been advised to have their hips revised because we don't know what the long term affects will be. At present there is not enough scientific data to determine safe or dangerous levels of these ions.

If patients do need revision surgery, the femoral stem can be left in situ. Both the ball and socket (femoral head and acetabulum) need to be removed and replaced, usually with a titanium shell and a ceramic head and liner.

In Australia alone some 5000 ASR hips were implanted. It is estimated that 20% will need revision, but these figures are at present most uncertain. MOM toxicity can occasionally occur with other MOM hips, but seems to be particularly prevalent with the ASR.

It is important to realise that not all MoM prostheses are bad and MOM hips are still used today. In men under 50 to 55 years MoM resurfacing has one of the best results in terms of survivorship and low revision rates.

If your patient has had an ASR hip replacement it is worth while taking a careful history from them looking for any problems with their affected joint.

- Continuing hip, groin, leg, or low-back pain;
- Audible clicking, clacking, or crunching sounds coming from the ASR device;
- The sensation that one's hip is not "in place," especially when starting a movement, such as standing up or starting to walk;
- Marked declines in ability to do physical activities; and
- Increased metabolic activity near the location of the implanted device, as shown on a bone scan.

Unfortunately a definitive diagnosis of ASR acetabular cup failure can often only be made at the time of revision surgery. There are multiple websites from lawyers touting for business from people who have undergone an ASR hip replacement and Depuy also has a site for both patients and physicians:

<http://www.depuy.com/asr-hip-replacement-recall>

Despite the problems with this particular implant, hip replacement surgery remains one of the most cost effective and appreciated operations in the world.

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