When Technology Fails Patients: perspectives of people with faulty metal-on-metal hip replacements

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In this talk...

- background to metal-on-metal hips
  - Recent failures and their exposure
- patient views on ‘the system’
- impact on patients’ lives
- concerns with metal-on-metal hips
- conclusions

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Development of hip replacements

- John Charnley, UK, 1950s →
- now 1 million replacement hips implanted, per year, worldwide

The operation of the century: total hip replacement

Ian D Learmonth, Claire Young, Cecil Rorabeck

Lancet 2007; 370: 1508–19
Published Online March 29, 2007
DOI:10.1016/S0140-6736(07)60457-7

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In the 1960s, total hip replacement revolutionised management of elderly patients crippled with arthritis, with very good long-term results. Today, young patients present for hip-replacement surgery hoping to restore their quality of life, which typically includes physically demanding activities. Advances in bioengineering technology have driven development of hip prostheses. Both cemented and uncemented hips can provide durable fixation. Better materials and design have allowed use of large-bore bearings, which provide an increased range of motion with enhanced stability and very low wear. Minimally invasive surgery limits soft-tissue damage and facilitates accelerated discharge and rehabilitation. Short-term objectives must not compromise long-term performance. Computer-assisted surgery will contribute to reproducible and accurate placement of implants. Universal economic constraints in healthcare services dictate that further developments in total hip replacement will be governed by their cost-effectiveness.

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Success changes expectations

- overall success builds credibility
- popular imagination - concomitant appeal with patients
- increased trust
- demand increases and *spreads*
- drives desire to innovate

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Success changes expectations

- younger, active patients
- revision (further replacements) less successful
- societal expectations for health

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Resurfacing

- cobalt/chrome alloy, metal-on-metal
- DePuy ASR
- world total, 93,000

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Emergence of problems with ASR

- Australian Joint Registry 2007, 2008 and 2009
- National Joint Registry UK 2009 & 2010 – failure rates of 12% at 5 years

  <1% per year = tolerable
- media coverage
- Dec 2009 withdrawn in Australia
- Aug 2010 withdrawn worldwide

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Health indications

- metallosis (around joint)
  - pain
  - pseudotumor (cells filled with fluid)
  - necrosis (tissue death)
- effects of metal ions in bloodstream
  - hearing loss, dizziness, decline in cognitive function, ‘symptoms consistent with a stroke’, cardiomyopathy, organ failure, possible cancers

  (Tower, JBJS, 2010; Mao et al, Aus J Med, 2011)

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When technology fails patients

- focus groups, survey, interviews
- 36 people, 3 groups
- metal hip patients and family/friends

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Focus Groups Questions

- Who do you think is responsible for ‘what has happened’ with metal-on-metal hips?
- Who should be responsible for making sure the issues you have just discussed don’t happen again?
- Tell us how this has affected your trust in medicine?

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Focus Group Results

- (lack of) response to problems more of an issue than the failure itself
  - as patients feel incapacitated and deliberately ignored
  - as individuals feel deserted and disenfranchised
  - Who is responsible for evaluating and responding to evidence?
  - manufacturers' hold on surgeons
  - old boys' club

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Focus Group Results II

- NHS, profession of surgeons, and medical care
  - overlong waiting times and tests not carried out
  - dependency – people in need (pain) rely on offered expertise and help from surgeons
  - challenge to medical expertise as sufficient in itself
    - lack of caution, sound objective judgement to the technology they use

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Focus Group Results III

- collaboration, communication, transparency
  - regulatory, notifying, and professional bodies and academia and patients
- justice and responsibility
  - if we don't have somebody responsible to deal with such failures then something is very wrong – ethically and morally
  - no clear responsibility

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Survey

- 112 responses so far – still open
- 11 countries, 77% UK
- 66% women, 34% men
- representative quotes
  - What are the most significant impacts the metal-on-metal hip implant has had on your life?
  - Do you have concerns about your metal-on-metal hip replacement(s)?

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Impacts on Life

"spoilt my valueable retirement time, after working hard since 15 yrs old, and just finished my working life at the age of 65, 50 yrs none stop. ...made me feel very old, and worst of all dependent for the first time in my life on other people, i also worry ,even after revision surgery , about possible future problems"

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Impacts on Life

"I was never able to walk again, I lost my work, independence, my confidence, my ability to leave my home I was in more pain than pre op my mobility was significally decreased"

"Some worrying symptoms i.e. tinnitus painful toes, cold feet, headaches – no way of knowing if they indicate issues with hip implant"

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Concerns

"I worry about how the metals ions have reacted with my body and the effects we may not yet see. My first hip replacement I saw as something I needed to nurture and protect as this had a lot of years to help me with and that has been robbed. What will I do in years to come, has this stolen my best shot?"

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Concerns

"I am now on medication for anxiety, nobody can give me information of what can be done in the future the only information is what we can pick up on the internet,my worry is that all patients should be monitored but I have never met a gp yet who has even heard of problems with metal on metal. I feel like my surgeon plays down the symptoms felt very isolated"

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Basic Conclusions

- patients fulfil Parsons
- iatrogenic illness (Illich)
  - Protection, non-maleficence, fiduciary duty have not been paramount

- systemic failure
- regulation is a whole other presentation

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Contacts

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