Egyptian Community Arthroplasty Register

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Acknowledgement

Participating surgeons:
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– Ahmed Bahaa El Din Al Ahwal, FRCS. October 6 University Hospital
– Emad Saweeres, FRCS Orth, MD. El sahel teaching Hospital
– Fouad Zamel, FRCS Orth, MD. Cairo University Hospitals
– Ahmed Wagih, MRCS, MD. National Institute for Neuro Motor System
– Ahmed El Morsy, MRCS, MD. October 6 University Hospital
Why a register in Egypt?

- Who on earth bother?
  - What are y talking about?

- But because of factors related to
  - Patients
  - Implants
  - Hospitals
  - Country
  - Personal

Patients: Are different

- Knee OA > high incidence in Middle East:
  - 60% for age 66 Y
    - Al-Arfaj, SMJ. 2003:291-293
- Different pathology: Varus
- Demands: Squatting, <walk
- Different circumstances (economy, psychology)
- Different solution:
  - Osteotomy?
  - Bilateral simultaneous?
Implants

- Medical device alert: X
  - A hip resurfacing implant recall arrived late
- Unknown and low cost implants
- No stock in hospitals: A company Rep (per case)
- Quality of known implants: Shelf life, sizes, etc
- Economic limitations: Reduced cost
  - Offset towards bad cement

Which implant????

[Image of an X-ray showing hip implants]
Hospitals

- Dedicated arthroplasty theatre (OR): X
- Laminar flow: X
- Space gown: X
- Antibiotics: Excessive
- Health care systems: Efficiency?

Country and region

- No published study or official documentation of outcome of arthroplasty procedures in the Arab countries
  - Egypt: > 80 millions   Arab countries: > 350 millions

- Rough estimate:
  - Rate of TKA is less than 10% of what should be done
  - 1 million patients (accumulative) require TKA in Egypt alone

- Unanswered questions:
  - Hip OA is rare but THA is as common as TKA
Personal reasons

• A study of 400 TKA in 1994 at W Sussex
  — Comparing PROMS to clinical follow up
  — Results: Surgeons high-rated the success of TKA
    • JBJS-Br Supp 2004

• I used British & Canadian registry during my training

• I believe in “Arthroplasty Register”

Materials and methods

• The register started by one surgeon (MAH): 2007

• Then joined by 6 surgeons in 6 different hospitals

• The registry proforma designed in 3 pages; pre-, intra- and post-operative (clinical follow up not PROMS)

• This initial analysis of 503 cases
Pre- and intra-operative form

Procedures

- Primary TKA
- Uni-compartmental
- Revision TKA
- Navigational TKA
- Custom made TKA (PSI)
- Shoulder arthroplasty

Primary THA
Resurfacing hip arthroplasty
Revision THA
Cemented, hybrid, uncemented
Bearing surfaces (poly, metal & Ceramic)
Data collection: Implant data

- **Sticky labels:**
  All components including cement & screws

- **Implant companies:** 8
  J & J, Zimmer, Stryker, Corin, Samo, Implant Cast, Implant Int, Hippocrat

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Results THA

Mean age was 51 years (19-86)
Female to male ratio was 1.15: 1

**Uncemented THA 84.8 %**
Cemented 10.2
Hybrid THA .5%

Primary THA 49 %
**Complex primary 30 %**
Revision 21%
Results: TKA

- A female to male ratio was 3.14: 1
- The main indication was OA in 73 %
- **Severe varus** in 47%
  - Significant bone defect in 15%
- 68.06% primary
- **25.13% complex primary**
- 6.81% revision arthroplasty

Limitations

- Small number
- Initial analysis predominantly related to one surgeon (MAH), not representative of the region
- No PROMS
- Some missing data
- Statistics: No survival analysis yet
Conclusion

• However,
• Some results are not surgeon dependent:
  – Patients’ age for THA,
  – Indications for THA (ped. hip diseases, failed ORIF of # NoF, AVN and trauma rather than OA)
  – The high % of complex THA & TKA due to late presentation and complex pathology

• Results related to implants.....

Conclusion

• Establishing such a register is very difficult due to
  – Lack of funding
  – Low interest in research
  – Private practice

• We reached a stage to handle the registry to a higher authority
  – Egyptian Orthopaedic association or
  – Ministry of Health
Is the registry an **AUDIT** or just a research project

- Blood transfusion reduced to 5% in unilateral knee
- More bilateral TKR and shorter hospital stay
- Implant selection:
  - Low cost implant for less active patients
  - Be careful about cement
- Reassurance about lack of laminar flow, space gowns and dedicated OR
  - Infection rate is less than 2%
- Knee & hip class: Misconception, expectations, fear

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**Arthroplasty Card**

Scorpio Stryker – PS - Fixed
Size: Femur (7) Tibia (5) Poly (10)
Cement: Stryker low molecular weight with antibiotic

5 Month follow up: No complications
Knee society score: 90

**Arthroplasty Register**

- Dob: 1/7/1953
- Diabetic
- Sever OA both Knees
- Bilateral Simultaneous TKA
- Technique: Conventional
- Date of surgery: 5/8/2007

Zayed Specialized Hospital- Cairo.
Combined epidural
Surgeon: Mahmoud Hafez
Future

• Premature baby
  – May survive with support or may vanish

• Operation walk-Egypt
  – A fund from a local Charity to perform 1000 TKA free for needy patients from deprived and poor areas in Egypt
  – Outcome results should be published
  – All will be included in the register

• Electronic data collection

Electronic format
www.egyorth.org
No conflict of interest

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Presentations & publications:

Conferences: EFORT, ISTA, SICOT and ISAR
- 2010: Egyptian Arthroplasty register: Is it possible? In the 3rd International Arthroplasty Conference, Sharm El Sheikh, Egypt
- 2011: A Community Arthroplasty register in Middle East based on individual initiative. In the 12 EFORT Conference, Copenhagen, Denmark
- 2012: Egyptian Arthroplasty Register. In The SICOT, Dubai, UAE & A community arthroplasty register. In ISTA 2012, Sydney, Australia
- 2013: Egyptian community arthroplasty register. In ISAR, Stratford upon Avon, UK

Journals: KSSTA, JBE & AO
- PSI for Bilateral TKA with severe articular deformities. KSSTA. Due 2013
- The application of surgical RP in a developing country. Advances in Orth. Due 2013