EVOLUTION OF BURN INJURY MANAGEMENT IN KATH, KUMASI-GHANA, 1954 – 2017

KATH BURNS MANAGEMENT EVOLUTION
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PABS Vice-President .... Professor Pius Agbenorku
Introduction

• Burns management; a holistic approach
• Burn prevention policies
• Infrastructure
• Effective standardized treatment
Introduction

• Burns, a disease burden in Low to Middle Income Countries (LMICs)

• WHO: strengthening burn care

• Ghana; Komfo Anokye Teaching Hospital (KATH) and the Korle-Bu Teaching Hospital

• KATH, the only tertiary hospital in the middle belt of Ghana is of key interest
Introduction

• Since KATH inception, burn teams have developed the best approaches toward effective burn management:
  putting up state of the art burns center

• Staff training

• Developing effective burn protocols, among others
Aim

• Report on the evolution of burn injury management at the Komfo Anokye Teaching Hospital (KATH), since the hospital’s commissioning in 1954 till present

• Future projection
Method

Phase 1
- Proposal for BICU
- Nothing

Phase 2
- Revolutionary phase

Phase 3
- New BICU (A&E)

Phase 4
- Phase 5

Phase 5
- Projections
Phase 1

• Inception of KATH (1954) to 1993
• Burns patients in “all-in-one” surgical ward
• Lack of adept staff
• No effective record keeping

Nothing special
Phase 1

Such degree of burns could not be managed well
Suspected results
Phase 2

• From 1993-2001

• First Plastic surgeon employed (1993)
  Dr. Pius Agbenorku

• Burns team was formed

• Minor and advanced surgeries begun
Meshed Split-thickness Skin Graft
Phase 2

• Inception of record keeping

• Decreased mortality and burn contractures
However,

- ‘All-in-one ward’
- Cross infection
- Septicemia
Phase 2

• Separate Burns ICU
Phase 3 (Revolutionary Phase)

• From February 2001 - May 2009

• Space made available and refurbished into BICU: Ward D2C (February 2001), now Old BICU Ward D2C

• First ever BICU in Ghana
Old Burns Ward D2C
Phase 3

- 3 Surgeons and 6 specially trained Nurses
- Anaesthetic machine
Patients on admission at Burns Ward D2C
Patients on admission at Burns Ward D2C
Such burns and worse could now be treated well.
Advantage of the Ward D2C


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* Significant value (P < 0.05).
Rotary International

- Dundee and Kumasi Rotary clubs provided
- Grant for:
  - Surgical equipment
  - Training and re-training staff in UK
  - Patients assistance fund
Plaque at Ward D2C

Rotary International
and
District 1010 : Scotland-North
is proud to have been associated through
Mr. ARTHUR MORRIS, O.B.E., F.R.C.S.,
a Member of
CLAVERHOUSE ROTARY CLUB, DUNDEE,
with the training of Medical and
Nursing Staff and the supply
of surgical equipment for this
Burns Intensive Care Unit

“Service Before Self”
Prof. A. M. Morris

• Consultant Plastic Surgeon and President of ReSurge Africa
Phase 3 summary
Phase 4

• Ultra-modern Accident and Emergency (A&E) Centre

• Commissioned: May 2009 till date (2017)
Phase 4

• The biggest A&E Centre in West Africa at the time (April 2009)

• Houses:

  • New Burns Intensive Care Unit (NBICU)

• Plastic Surgery

• Neurosurgery

• Orthopaedics

• Trauma Surgery and Emergency Medicine
New BICU

• On the first floor of the A&E Centre
• 6 room suites for patients
New BICU Reception
Front desk of NBICU
Room suite for each patient
Each Unit is fully equipped with:

◆ Single bed
◆ Life support system for each bed, including acute care physiological monitoring system and pulse oximeters
Patients on admission under close monitoring
Phase 4

- Four operating rooms on the First floor of the A&E
- Theatre 1 with 2 operating beds is dedicated for both burns and plastics surgery
- NBICU is managed by highly skilled professional medical doctors and nurses with the requisite expertise in burn management
- Currently, 5 plastic surgeons, 4 senior residents, several junior residents doing 3 months rotations and 14 trained burn nursing staff
Phase 4

• Advanced burn care management for patients with varying degrees of burn injuries requiring specialized treatment and usually patients in critical condition requiring close monitoring

• Standard BICU protocol
Advantages of the NBICU


- Convenience in moving patients from the NBICU to the Operating Theatre; both the Operating Theatre and the NBICU are on the same floor. This was one of the biggest challenges faced in Phases 1, 2 and 3
Advantages of the NBICU

• The old BICU: Ward D2C, now serves as a general burns ward which receives patients with improved burn conditions from the NBICU
• Research activities still continue with better records keeping
Prevailing Challenges at NBICU

• Absence of theatre space solely for burns injury management

• Funding for Burns Treatment

• Lack of Occupational therapy, Physiotherapy and Rehabilitation Centre

• Funds for research
Phase 4

- These notwithstanding, burns management has improved remarkably since the establishment of the A&E BICU.
- If the challenges in Phase 4 are met, KATH Burns Centre will be a world class burns centre, providing complete burn care to burn victims in and around the country.
Phase 5 (Projection)

• Plastic Surgery and Burns Centre with:

• Burns dedicated Operating theatres

• Physiotherapy, Occupational therapy and Rehabilitation centers all housed in one unit

• Ultra-modern pediatric burns ward and recuperating center

• Hopefully, these will be housed in the proposed 16-floor storey building including other departments (Plastic Surgery, Transplant Surgery, Cardiothoracic & Vascular Surgery and Neurosurgical divisions)
KATH and KNUST School of Medical Sciences

• Since Phase 2, the unit has taken both fourth year and sixth (final) year medical students of its affiliate University (KNUST) through their regular practical rotations, didactic teachings as part of a training module.

• Outstanding beneficiaries: Dr. P E Hoyte-Williams, Dr. Edmund Turkson, Dr. Boutros Farhart, Dr. Emile Tano, Dr. Zainab Schumacher and many more
KATH and Residency Education in Plastic and Reconstructive Surgery with Ghana College of Physicians & Surgeons and the West African College of Surgeons

• In the year 1998 the RPSBU got its full accreditation for residency training from the West African College of Surgeons and then from the inception of the Ghana College of Physicians and Surgeons (2013)

• In 2015, the RPSBU graduated its first fully locally trained Plastic and Reconstructive Surgery Specialist, Dr. P E Hoyte-Williams

• The unit is yet to graduate two other candidates who are currently in their final year
KATH and Residency Education in Plastic and Reconstructive Surgery with Ghana College of Physicians & Surgeons and the West African College of Surgeons

• Two other doctors have also been enrolled recently into the Senior Residency Program and are set to complete in 2018

• The unit is hopeful to produce at least twenty (20) Plastic and Reconstructive Surgery Specialists within the next decade
Awards
Awards

• Pan African Burns Society; Dr. Fareeda Agyei “Management of severe burn injuries with topical Heparin: the first evidence-based study in Ghana” on behalf of the Unit. Best Junior Resident Presenter 2012
Awards

• Professor Pius Agbenorku was appointed as an Editorial Board Member for journals:

• Annals of Burns and Fire Disasters in 2010

• Burns and Trauma J in 2012

• Plastic & Aesthetic Research in 2015

• Etc, etc

• Earlier: ASPS International Scholar Award 1999-2000 to Plastic Surgery Centers of Excellence ….
  UMHS Arn Arbor; Columbia Univ Harlem Hospital, New York; Southfield Plastic Surgery, etc.
Publications

Over 150 articles produced by staff of the Division:
- General plastic surgery
- Orofacial clefts
- Breast diseases
- Burns: research, acute, reconstruction
- Trauma
A few of burns publications:


3. Agbenorku P. Experience in the management of axillary post-burn scar contractures. http://dx.doi.org/10.4314/njpsur.v6i2.63646

Burns publications contd.


A few list of publications


Major Challenges faced during the Evolution Period

• Opposing views

• Finance
Lessons Learned

• Hard work and discipline

• Do not despise small beginnings

• Progressive work and perseverance is key

• Dialogue and Networking
Securing Funding

• Do not be too quick to seek funding from international bodies

• Dialogue

• Try to present preliminary results
Securing Funding

• Fund providers should be informed that:

  • Investment

  • Recognition

• Residents training
Perpetuation of KATH BICU

• Regular maintenance of infrastructure and changing old equipment

• Training and retraining of our health personnel

• Encouraging our final year medical students to pursue FGCS (Plast), FWACS (Plast) as their specialty

• Engage junior colleagues in consulting, decision making and outreach programs

• Increasing burns research
CONCLUSIONS

• Improved burns management

• Burn care professionals are also encouraged to undertake developmental burn care projects no matter the challenges

• The experience gained so far has better equipped us to mentor upcoming burn centers and healthcare providers across the globe; most importantly in Africa. Hopefully in the near future when the prevailing challenges are met, KATH BICU will be a reputable international burns center, providing complete and the most effective burn care and management
REFERENCES


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9. ReSurge Africa (2010-2014)


Thank you