

REPORT ON THE 2ND ANORECTAL MALFORMATION CONFERENCE 2019 HELD AT THE KENYATTA NATIONAL HOSPITAL

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Summary

The Kenya Association of Paediatric Surgeons (KAPS) in collaboration with the Kenyatta National Hospital (KNH) and the University of Nairobi (UON) held the 2nd Anorectal Malformation (ARM) Conference in July 2019. The theme of the conference was “Comprehensive care in ARM” The main objective for the conference was to promote holistic care in the management of ARM. This was a 5-day event characterized a 4-day workshop on the surgical aspects of ARM held at the Kenyatta National Hospital and a 1-day scientific seminar held at the Radisson Blu Hotel. The participants were exposed to skills and knowledge specifically on the surgical approach at the first encounter, the role of endoscopy and the considerations in re-operations. The panel discussion with the mothers of children with ARM marked the climax of the seminar with the launch of the ARM support group whose main aim is to promote holistic care in ARM.

1. BACKGROUND

The Kenya Association of Paediatric Surgeons (KAPS) in collaboration with the Kenyatta National Hospital (KNH) and the University of Nairobi (UON) held the 2nd Anorectal Malformation (ARM) Conference in July 2019. The theme of the conference was “Comprehensive care in ARM” The main objective for the conference was to promote holistic care in the management of ARM.

2. SITUATION ANALYSIS

During the first conference held in 2017, social challenges affecting the families of children living with ARM was raised as a topic of concern. Additionally, there was need to develop a support programme to provide education and psychosocial support for the affected.¹ This formed the basis of the present theme in line with management towards a comprehensive socially acceptable outcome for ARM.

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3. TRAINING ACTIVITIES

The conference was designed to include a surgical workshop and a seminar. The surgical workshop took place for four days and was held in the main paediatric surgical theater of the Kenyatta National Hospital. The seminar was a single day event which took place at The Radisson Blu Hotel, Nairobi Kenya.

3.1 The participants

There was a total of 110 participants who attended the conference. The cadre of the delegate attendees consisted of paediatric surgeons, general surgeons, paediatric anesthesiologists, paediatricians, medical officers, nurses, nutritionists and residents in surgery and anesthesia. This delegation included representatives from the University of Nairobi, Kenyatta National Hospital, AIC Kijabe Mission Hospital, Kenyatta University, Coast General Teaching and Referral Hospital (CPGH), Moi Teaching and Referral Hospital(MTRH), Jaramogi Oginga Odinga Teaching & Referral Hospital (JOOTRH), St Francis Community Hospital, the Nairobi hospital, Mbagathi County Hospital and the Mater Hospital. Additionally the affected families were an important participating group to the event.

The trainers were recruited from the faculties of paediatric surgery in the represented institutions who form the membership body of the Kenya Association of Paediatric Surgeons. They are paediatric surgeons with experience in colorectal surgery, urology, neonatal surgery and laparoscopic surgery.

3.2 The workshop

The workshop was hosted by the Kenyatta National Hospital and declared open by the chairman on the organizing committee Dr P. Mwika. He introduced the theme to the delegates and highlighted the various activities that were to take place during the week. The 4-day surgical workshop had three main sessions which included a morning lecture session, a practical surgical demonstration session aided by live video coverage with commentary and an interactive



question and answer session after the surgical demonstration. (Figure 1 & 2) The main topics covered in the workshop session included:

1. Social Challenges in the management of ARM
2. Surgical approaches and relevant anatomy
3. Anesthetic Considerations in ARM
4. Role of endoscopy in cloacal malformations
5. Surgical consideration in Redo surgery



Fig 1A: Delegation posing for a picture after a live demo during the ARM workshop. **Fig1B:** Dr J. Lessan teaching on the pre-surgical interpretation of a distal pressure colostogram. **Fig 1C:** Dr S. Swaleh(center) demonstrating surgical technique of anorectoplasty



Fig 2A: Delegates watching live ARM surgery from the viewing room. **Fig2B:** Dr P. Mwika (center) demonstrating on the surgical anatomy of the ARM patient during one of the workshop sessions. **Fig 2C:** Dr K. Kihiko setting up for common channel endoscopy in cloacal malformation,

There was a total of 8 patients who underwent surgery during the surgical sessions. The children were pre-selected by the event facilitators to include various variants of ARM, these included:

ARM with no fistula; ARM with Recto-vestibular fistula, recto-perineal fistula, recto- urethral fistula, bucket handle deformities and cloacal malformations. (Figure 3)

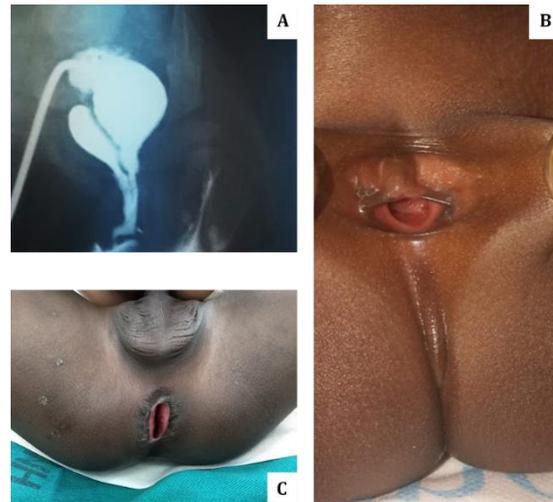


Fig 3A: Contrast study of one of the patients with cloacal anomaly, Note the absence of Mullerian remnants a rare variant of the anomaly. **Fig 3B:** Perineal examination of the patient in fig 3A above. Note the single perineal opening suggestive of cloacal anomaly. **Fig 3C:** Neo-anus of a patient with multiple surgeries presenting with stool incontinence. An MRI reported an ectopic neo-anus with good sphincter capacity

Dr J. Lessan introduced the surgical concepts of anorectoplasty and emphasized on the need to identify the midline and follow the midline dissection plane as guided by nerve stimulation

Dr J. Litiku highlighted the various challenges in the management of ARM focusing on the social aspects and resource availability including specialists, infrastructure and support programmes. ARM is associated with low socio-economic status and requires specialized personnel from different fields to deal with the complexity of the various types of ARM.² Therefore, a holistic approach towards management will promote better outcomes.

The role of endoscopy in defining the anatomy in cloacal malformations was highlighted in a presentation by Dr K. Kuria who led the demonstration by outlining the cloacal anomaly with aid of cystoscopy, vaginoscopy and the common channel endo-length assessment.(Figure 2) Endoscopy allows the surgeon to define the common channel length and to identify and manage associated urogenital anomalies e.g hydrocolpos, vaginal septum and uterine anomalies. The approach of endoscopy to define the variants of cloacal anomalies is now regarded as standard and should be used as a pre-operative assessment guide in definitive surgery.³

In particular two cases had undergone multiple operations and were selected to train delegates on the surgical considerations in Re-do surgery.(Figure 2) The training sessions this year were geared towards ensuring the definitive surgery is done effectively with minimal to no complication to avoid re-operations which were highlighted as a major cause of poor outcome in ARM.^{4,5}

Dr F. Osawa and Dr S. Hamdun, led the demonstration and discussion on re-do surgery. The highlighted considerations were classified as preoperative, intraoperative and post-operative. The pre-operative considerations include assessment on severity of anomaly; bowel function post initial surgery and assessment of sphincter and pelvic floor muscles by use of imaging. Intra-operatively, the highlighted surgical considerations were adequate exposure and rectal mobilization; correct and fine plane dissection and visualization of the muscle complex despite prior muscle stimulation. Post-operatively, the considerations highlighted included infection prevention protocols and compliance to dilatation schedule which has been documented as prognostic factor to anal stricture formation.⁶

3.3 The Seminar

The seminar had 4 main sessions moderated by the association members with presenters who led discussions on research papers and updates in management of ARM.

The key note address was given by Prof Kuremu Tenge from Moi University, he began his address by citing a quote by W.J Potts *"In general, atresia of the rectum is more poorly handled than any other congenital anomaly in the newborn. A properly functioning rectum is an unappreciated gift of the greatest price."* The main highlights of the address were:

1. Promotion of early care to improve survival & outcome.
2. Investment in surgical personnel and support services.
3. Collaborations and sharing of resources locally.
4. Capacity building of complex anomalies by experts.
5. Effective measures on transitioning to adult care in ARM.

Dr C. Kebuka, a paediatric radiologist gave updates on the imaging practices in ARM specifically the utility of MRI in evaluation of

patients. MRI has become an important tool in ARM evaluation due to advances in technical capabilities, reduced exposure to ionizing radiation and superior anatomical description of ARM and associated anomalies.⁸

Dr C. Mwendu gave a superb presentation on the new frontiers in ARM management. She was keen on the implementation of treatment plans, improvement of communication among different specialties and promotion of better patient outcomes. Specifically, Dr Mwendu highlighted the unmet need in the surgical care of ARM in Africa with Kenya's estimated mean national surgical delay for ARM being 1.5 years and an extrapolated national surgical backlog of 493 cases.^{9,10}

Panel discussion

A panel discussion on the social aspects of ARM was the highlight of the seminar, mothers with children affected by ARM shared their experiences in raising children with ARM. (figure 5) It was an emotional yet eye opening session as the mothers vividly described the challenges they undertake in their daily lives. The highlighted issues were; stigmatization by society; delayed schooling of their children; low socio-economic standards of living, and inaccessibility of healthcare. The discussion ended by the mothers volunteering to be the champions of the newly launched ARM support group that will promote a mother-mother mentoring approach on how to raise a child with ARM.



Fig 4A: From left to Right: Prof K. Tenge, Dr J. Kiboi, Dr F. Osawa, Dr J. Lessan. **Fig4B:** Dr F Kambuni (left) presenting an award to Dr J Ndung'u (right) for his distinguished service in the field of Paediatric Surgery. **Fig 4C:** Prof Tenge Kuremu delivering his Key Note Speech.

Awards

To honor distinguished service and presentations, Dr F. Kambuni hosted an award ceremony where the following awards were presented to the following individuals:

1. Dr Caroline Mwendu: Best presentation: New frontiers in ARM.
2. Dr James Ndungu: Distinguished service in the field of Pediatric Surgery.
3. Prof Tenge Kuremu: Champion in the evolution of Pediatric surgery in Africa.

6. RECOMMENDATIONS AND ACTION PLAN

Recommendations were compiled to formulate measures to improve and promote comprehensive and holistic care in ARM. The action plan was geared towards the goal of making the conference an international event by inviting experts and delegates interested in the field of ARM globally and by building capacity through training workshops in various counties in Kenya. Additionally, a national register for ARM was proposed

7. CONCLUSION

In conclusion, the ARM conference 2019 aimed to promote comprehensive care in Anorectal malformations. The participants were empowered with both skills and knowledge specifically on the surgical approach, the role of endoscopy and the considerations in re-operations. The panel discussion with the mothers of children with ARM marked the climax of the seminar with the launch of the ARM support group whose main aim is to promote holistic care in ARM.

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2. University of Nairobi
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Fig 5A: Dr T. Jumbi (center) moderating the panel discussion session. The mothers of children with ARM shared experiences and challenges. Also, in the picture are nurses, from left to right, Ms. Rose Njoroge, Ms. Catherine Ngugi & Ms. Daisy Kamau. **Fig 5B:** Delegation that attended the 2nd ARM conference held in Nairobi on the 15th - 19th of July 2019.

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