Evidence-Based Surgery in Africa

Andrew Hill

Department of Surgery, University of Auckland Middlemore Hospital, Auckland, New Zealand

Correspondence to: Prof Andrew Hill; email: a.hill@auckland.ac.nz

Keywords: Evidence-based surgery, Africa, Guidelines
Ann Afr Surg. 2020; 17(3):97–98
DOI: http://dx.doi.org/10.4314/aas.v17i3.1
Conflicts of Interest: None
Funding: None

© 2020 Author. This work is licensed under the Creative Commons Attribution 4.0 International License.

Invited: 22 June 2020
Revised: 14 July 2020
Accepted: 20 July 2020

African surgery was at one time all about managing extraordinary cases not seen by the general surgeon in western countries. How things have changed! In this issue are examples of outcomes research, basic anatomical research, paediatric surgery, rural surgery, multidisciplinary care and, of course, the obligate rare case reports that only Africa could produce.

The papers by Otieno et al. and Murerwa et al. provide a link between anatomical parameters and surgical pathologies and procedures (1,2). Since anatomical parameters are influenced by genetics and the environment, the case can be made to use African data to determine variations in surgical approaches, and explain certain pathologies.

So, what does this say about African surgery in 2020? First, the old problems are still there. Advanced disease to test the most experienced clinician still contributes significantly to the surgical caseload confronting surgeons. Second, African academic surgery is starting to flourish. Questions relevant to the practising African surgeon are now being addressed, not by the ivory towers in rich western countries but by local academics and surgeons deeply embedded in Africa.

Most evidence-based surgery is currently derived from practice in western countries (3,4). But how is this relevant to a rural Zambian hospital where some of the commonest causes for an emergency laparotomy for peritonitis are perforated peptic ulcer (now a rarity in many western hospitals) and perforation of the terminal ileum (5)? How often does a surgeon in London see caecal perforation from trauma in a woman with HIV? And how many surgeons in Boston have seen a ruptured giant renal cell carcinoma?

Thus, it is encouraging to see African surgeons getting to grips with evidence-based surgery in Low- and Middle-Income Countries. Western surgeons, who write the guidelines that are in many of our major journals, usually have all the diagnostic equipment, easy access to intensive care and help from multiple other disciplines, including anaesthesia, in the management of their patients. These things, which are taken for granted, are in short and variable supply to their African brothers and sisters.

Therefore, current ‘evidence-based’ guidelines may have little or no relevance to many situations that African surgeons may find themselves in. While many guidelines recommend the use of various diagnostic modalities preoperatively, in many parts of Africa peritonitis is often a clinical diagnosis and the abdomen is opened without knowledge of the pathology that lies within (6).

In the many and varied contexts of surgery across the African continent, new ways of thinking need to be developed, promulgated and taught to trainees in ways appropriate to the local situation(7-9). This will be hastened by the use of modern tools including social media, and rapid and comprehensive literature searches, and will be supported by established leading journals, such as the *Annals of African Surgery,* and surgical societies across the regions. Standards of care and surgical guidelines need to be developed, recognising the exigencies of the situation’s surgeons are practising in. How does a surgeon manage thyroid malignancy without FNA? How does a surgeon manage trauma without a CT scan? How does a surgeon do vascular surgery without interventional radiology? How does a nation plan its

surgical services and what information will the health department will base its decisions on?

As specialization develops across the continent, the general surgeon working in difficult circumstances needs to be remembered at all times. Specialists, who write surgical guidelines and speak at international conferences, need to make sure that guidelines produced do not make it more difficult to manage patients in rural Africa by recognizing the many and varied situations that African surgeons operate in. While it is desirable that every international guideline incorporates local and regional guidelines produced in Africa, surgeons in the region are called to familiarize and prioritize these home-grown guidelines (10).

I applaud the authors of the papers in this issue of the journal and I congratulate the editors on developing the journal into an important tool that will enable African surgeons to manage African patients in Africa with African resources.

References

1.Otieno EH, Mwachaka P, Odula P, et al. The inion is not a reliable landmark of the torcula in posterior fossa craniotomies. Ann Afr Surg. 2020;17(3):103–105.
2.Murerwa R, Amuti T, Muuthuri N, et al. Dorsal morphology of the calcaneus—An osteological study. Ann Afr Surg. 2020;17(3):112–115
3.Gustafsson U, Scott M, Hubner M, et al. Guidelines for peri-operative care in elective colorectal surgery: Enhanced recovery after surgery (ERAS®) society recommendations: 2018. World J Surg. 2019;43(3):659–95.
4.Glasgow SC, Morris AM, Baxter NN, et al. Development of the American Society of Colon and Rectal Surgeons' Rectal Cancer Surgery checklist. Diseases of the colon &rectum. 2016;59(7):601–606.
5. Karachentsev S. Peritonitis—Epidemiology and management at a rural hospital. Ann Afr Surg. 2020;17(3):120–125.
6. Pericleous M, Sarnowski A, Moore A, et al. The clinical management of abdominal ascites, spontaneous bacterial peritonitis and hepatorenal syndrome: A review of current guidelines and recommendations. Review Eur J GastroenterolHepatol. 2016;28(3): e10–8.
7. Hill AG, Perakath B, Bissett IP, et al. The management of rectal cancer in a resource poor environment—A review. Int J Surg. 2006;4(2):127–30.
8. Joshi A, Borraez-Segura B, Anwer M, et al. An International Collaborative Study on Surgical Education for Quality Improvement (ASSURED): A project by the 2017 International Society of Surgery (ISS/SIC) Travel Scholars International Working Group. World J Surg. 2020:1–12.
9. Zafeeo M, Yu J, Onakoya PA, et al. African Head and Neck Society Clinical practice guidelines for thyroid nodules and cancer in developing countries and limited resource settings. Head & Neck. 2020.
10. Osahae SO. Update of Guidelines for management of prostate cancer in West Africa 2019: Consensus working document. West Afr J Med. 2020;37(2):159–172.