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Editorial: Morbidity management of lymphatic filariasis: a focus on filarial hydrocele and lymphoedema

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Editorial on the Research Topic

Morbidity management of lymphatic filariasis: a focus on filarial hydrocele and lymphoedema

Background

The parasitic infection Lymphatic Filariasis (LF) primarily induces two clinical conditions: limb and breast lymphoedema and hydrocele. Global elimination of LF as a public health problem has two components: mass drug administration of anthelmintics to at-risk populations for not less than five years and clinical management of those affected, Morbidity Management and Disability Prevention (MMDP). Each endemic country requires success with both for WHO validation of elimination.

Providing care requires identifying affected patients and making appropriate care available. Identification entails accurate diagnosis. Appropriate care requires actions based primarily on *i*) hydrocele surgery and *ii*) self-care with appropriate skin hygiene and physiotherapeutic interventions, together with supportive treatment for acute inflammatory attacks.

Correct diagnosis of filaricele (LF-hydrocele) is essential, is based on physical examination, transillumination, and if possible ultrasonographic examination of a scrotal swelling. Differentiating hydrocele from other scrotal conditions such as hernias and epididymo-orchitis - conditions needing different clinical management - is important. Diagnosis of lymphoedema requires careful examination of affected limbs, consideration of clinical history, and assessment of patients' quality of life.

Standard surgical management of filaricele now includes total resection of the tunica vaginalis, with antibiotic coverage post-operatively. Although hydrocelectomy is a common, safe procedure, potentially serious complications can occur. This surgery must therefore be conducted meticulously, with careful haemostasis and follow-up. Recommended treatment for lymphoedema is based on a hygiene care package with supportive physiotherapy and mental

health care. Patients who suffer debilitating systemic acute attacks (“filarial attacks”) often need urgent attention, careful follow-up, including antibiotic treatment when necessary.

This Research Topic of articles highlights important aspects of LF morbidity management: filarial surgery, lymphoedema care, manuscripts that have gone through the review process, and been published in *Frontiers of Tropical Diseases* for this Research Topic, “*Morbidity management of lymphatic filariasis: a focus on filarial hydrocele and lymphoedema*”.

Waihenya, Githui, and Schouame (1) describe how Kenya has organised Morbidity Management and Disability Prevention (MMDP) since 2023, exemplified by describing an 83-year-old patient who suffered a bilateral hydrocele containing several litres of fluid for sixty years before receiving treatment. They demonstrate how Ministries of Health can usefully collaborate with a not-for-profit organization, train surgeons and other health workers, and provide quality care to LF patients in difficult-to-reach locations.

Knowing how well an MMDP programme is functioning, ensuring quality care, and reaching all affected persons is vital to documenting that LF Elimination criteria are fulfilled. . describe a smartphone-based application, a “Hydrocele Tracker” of preoperative, intraoperative, postoperative aspects, and follow-up evaluations, that can assist in improving supervision, understanding the surgical outcomes, and reasons for any complications. Such a tool can improve reporting and data quality for Ministries of Health with active LF programmes and will assist in the preparation of the elimination dossier needed for validation of elimination.

Nigeria and Uganda used this new application to elicit “patient experiences and satisfaction. The article also elaborated on how training was done and how patients were mobilised, screened, and treated. Their emphasis on a longer postoperative follow-up period, i.e., week 1, week 2, month 1, and in the case of Uganda, also 6 months, is an important contribution to the field. Documenting longer-term outcomes as a specific indicator in the programme monitoring and evaluation process, one that is often omitted from disease surveillance. Nigeria and Uganda acquired useful data on numerous indicators that programmes normally do not acquire, e.g., the rate, types, and severity of surgical complications.

Countries must identify, provide self-care instructions, and follow clinical outcomes for the lymphoedema patients as inexpensively as possible. Noting that no gold standard exists, compared two approaches for identifying lymphoedema and hydrocele patients among 753,557 individuals in 168,126 households in 15 districts. They gained a wealth of important information for planning, budgeting, and implementing MMDP for lymphoedema, and hydrocele. The use of a “job-aid” containing clinical photos is most useful in assisting health extension workers reliably identify hydrocele and lymphoedema patients.

It is vital to understand the extent to which health facilities are ready to provide LF morbidity care, and to identify what assistance they may need to be functional. tested two tools in four countries (Côte d’Ivoire, Guinea-Bissau, Liberia and Mali), one developed by WHO to assess lymphoedema management services, the other from Liverpool School of Tropical Medicine (LSTM), to assess facility-readiness to handle hydrocele surgery. Using these tools strengthened three important elements of providing health care for LF patients: 1) ensuring care quality, 2) identifying weaknesses, thus allowing for corrective action, 3) overall strengthening the national health system by strengthening acquisition of materials and equipment, and the capacities of personnel. These authors provide useful discussions of training and activity roll-out, the administration of questionnaires, patient awareness, the use of educational materials, and other important issues. For hydrocoele surgery, they present assessments on emergency patient-transfer systems, staff training, infection-prevention, and other important aspects.

These articles provide a wide-ranging set of perspectives and innovations that LF-endemic countries will likely find helpful as they free their people of lymphatic filariasis and the suffering and socio-economic damage it causes.

Author contributions

SM: Writing – original draft, Writing – review & editing. AS: Writing – review & editing. CM: Writing – review & editing.

Conflict of interest

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