

Surgical camps: the Ugandan experience

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Over a period of one week, a surgical team visited three hospitals in two districts of Northern Uganda to offer free surgical services and to teach basic surgical skills to up-country doctors. The team, consisting of 10 surgeons in various specialities, two anaesthetists and two surgical residents, saw 500 patients, of whom 272 had surgery. This was the first such surgical camp organised by the Ugandan surgeons. This paper describes the pattern of surgical operations performed and the benefits gained from such a camp.

Introduction

Uganda, with a population of 22 million people, has fewer than 100 surgeons. Of the available surgeons in the country, about 70% practice within Kampala city, where only 5% of the population lives. The remaining 95% of the population, living mostly in the rural areas, is served by only 30% of the specialist surgeons.

Therefore, to a peasant in a rural village, access to a surgeon is not only difficult and troublesome, but is in most cases impossible. Yet, according to King¹, in the minds of the public, surgery has an importance which medicine does not have. Surgery is also considered to be the most technically demanding of all the tasks that a doctor has to manage.

Unfortunately, most district doctors find difficulties in managing even the most basic surgical conditions. Consequently, referral to regional hospitals has been the traditional way of trying to provide surgical services to the rural population. However, referral, especially in sub-Saharan Africa, is mainly a myth. The roads are usually so bad, and vehicles break down so frequently, that only the fittest patients survive the transfer according to Doeschate² and Jellis³ observed that "The people of our rivers, swamps and lakes travel slowly and delay may be measured in days or months. Even on dry land, the ambulances may travel at the pace of an ox". He also noted that "with a little more knowledge of appropriate techniques, far more patients could be treated in the peripheral hospitals".

It was with such a background that the Association of Surgeons of Uganda (ASOU) organised a pilot project in which surgical teams travelled to three hospitals in the Lira and Apac districts of Northern Uganda.

The objectives of this project or 'Surgical Camp' were the following:

- 1 to offer free specialised surgical services in three hospitals which had no specialists or regular visiting surgeons,

- 2 to provide CONTINUOUS MEDICAL EDUCATION (CME) to the doctors in Lira and Apac as well as the neighbouring districts,
- 3 to teach basic surgical and management skills to the doctors possessing no specialized surgical training, but who are required to operate in their hospitals,
- 4 to reduce the expenses that would have accrued had these patients been transferred to a referral hospital.

Patients and methods

The defined area for the project was the Lira and Apac districts of Northern Uganda. The surgeons met and sensitised the district medical officers, political leaders and government officials of the two districts. Permission was sought from the management teams of the three hospitals for use of the hospital facilities and staff. The planned visits were advertised locally and in the national media. Screening of the patients was done first by the local medical teams and later by the visiting surgical teams.

The surgical teams were comprised of the following personnel:

General surgeons	5
Orthopaedic surgeons	2
Urologist	1
Oral surgeons	2
Anaesthetists	2
Surgical residents	2

Personnel were randomly distributed to the three hospitals in the two districts.

The teams arrived at the hospitals on a Sunday afternoon and immediately reviewed and assessed the patients already selected by the hospital doctors. Operations were performed daily from Monday to Friday. Postoperative rounds were done daily, in the mornings. The teams left the districts on Saturday.

A repeat visit was made by one surgeon two months later for review and final assessment and evaluation of the work done during the surgical camp.

Results

A total of 500 patients consulted the team, of whom 272 were treated surgically. Their ages ranged between 2 months and 80 years. Of those who had surgery, 175 (64%) were males and 97 (36%) were females (M:F=1:0.55).

The commonest operation performed was hydrocoelectomy, performed in 70 (25.7%) of the patients. Hernia repair was the commonest general surgical operation performed in 65 (23.9%) of cases (Table 1). There were 15 (5.5%) vesico-vaginal fistulas repaired (Table 2). Among the bone and joint operations performed, sequestrectomy was the commonest in 10 (3.7%) of cases (Table 3). Repair of cleft lip (3 cases), bladder extrophy (2 cases) and hypospadias (2 cases) were among the paediatric surgical cases managed in the camp (Tables 1 and 4).

TABLE 1 General and genito-urinary operations

Type of operation	No. of patients	%
Hydrocoelectomy	70	25.7
Inguinal hernia repair	65	23.9
Excision of skin lesions	21	7.7
Thyroidectomy	13	4.8
Laparotomy	6	2.2
Femoral hernia repair	5	1.8
Repair of bladder extrophy	2	0.7
Repair of hypospadias	2	0.7
Other general surgical operations	6	2.2
Other genito-urinary operations	8	2.9
TOTAL	198	72.6

TABLE 2 Gynaecological operations

Type of operation	No. of patients	%
VVF Repair	15	5.5
Hysterectomy	7	2.6
Salpingectomy	4	1.8
Others	9	3.3
TOTAL	35	13.2

TABLE 3 Bone and joints operations

Type of Operation	No of patients	%
Sequestrectomy	10	3.7
Release of contractures	5	1.8
OTHERS	9	3.3
TOTAL	24	8.8

TABLE 4 Oral and ENT operations

Type of operation	No. of patients	%
Repair of cleft palate	3	1.1
Excision of mandibular tumour	3	1.1
Excision of salivary gland tumour	3	1.1
Others	7	2.6
TOTAL	16	5.9

Morbidity and mortality

No deaths were recorded. Two patients who underwent VVF repair had leakage of urine, one in the immediate postoperative period, the second after a month. Postoperative sepsis was recorded in 10% of the cases compared to a 50% sepsis rate recorded in these hospitals prior to the surgical camp.

Cost

The administration in the two districts catered for transport, accommodation and meals for the surgical teams. All that amounted to a total of Uganda Shs 5 million or US \$5,000, an average of US \$18.4 spent on each patient by the districts.

ESS Workshop

A total of 20 doctors working in the Lira, Apac and nearby districts participated in the Essential Surgical Skills workshop. Participants were exposed to practical skills in resuscitation, endotracheal intubation, surgical toilet, chest drainage, bowel anastomosis, and colostomy.

Discussion

The idea of specialists travelling to render services in a location distant from their normal place of work is not new. The Interplast surgeons from the

Netherlands have, for nearly a decade, been performing reconstructive surgery in Uganda. MSF, the Flying Doctors and the Red Cross travel globally offering medical services to people in disaster areas. However the idea of local experts drawing up a regular programme to send teams to provide free services to needy parts of their own countries is a project which has not been explored adequately. The pilot programme described in this review was an eye-opener for many doctors. The 'surgical camp' enabled the surgical team to assess the environment under which doctors in those hospitals worked, to assess their surgical skills, and where lacking, to teach such skills. Strict theatre discipline and practices resulted in reduction of the infection rate by about 40%. King⁵ contends that specialists should visit the districts for many reasons, not least to remain in contact with the reality of the total health problems in the health units.

Of the 272 patients managed surgically during the camp, about 100 would otherwise have been transferred to the referral hospitals due to the complexity of the surgical problem.

The transport costs and feeding would have, in total, cost about six times (US\$30,000) more than the 5 Million Uganda shillings spent by the two districts. The cost of sending an ambulance is inconceivable. The FLYSPEC (Flying Specialists) project initiated in Zambia in 1982 clearly showed that taking specialists to upcountry hospitals for short periods has tremendous advantages in terms of skills imparted and cost-effectiveness⁶.

However, this needs to be a regular and sustainable project⁷.

Difficulties and challenges

Because of the wide publicity in the electronic and print media about the visit, the number of patients who turned up for review was overwhelming.

Initially the local doctors screened over 1000 patients, left 500 for the team to see and eventually only 272 had surgery. This showed that the general population is in very great need of specialist services. Co-operation and support of the local doctors, politicians, and district officials are absolutely essential for the success of a surgical camp.

This involves a series of preparatory meetings for planning and sensitization.

Lack of investigative facilities in the hospitals means that some cases may not be handled at these rural hospitals.

Sustainability of such camps requires a lot of commitment from the relevant authorities, specialists and local doctors.

Conclusion

1 Surgical camps will not replace the traditional referral system, but if well organised, they can greatly reduce the number of referrals to the

central hospitals. This would, in turn, save on the districts' budgets.

- 2 Another advantage is that patients are treated near home.
- 3 The local doctors would acquire better knowledge and the essential surgical skills and the confidence necessary for managing surgical cases.

References

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