Surgery in Jamaica

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Jamaica, at 4244 square miles (6830 km²) and with some 2.6 million inhabitants, is the largest and most populous country in the English-speaking Caribbean (Figure). The island is best known for its tourism industry, excellent rums, jerked pork, and, of course, reggae music.

HOSPITAL FACILITIES

Tertiary health care in Jamaica is provided largely by the government. There are 23 government (public) hospitals and 10 private hospitals. Some of the public hospitals have small private wings attached.

The government hospitals are classified as types A, B, C, and specialist. There are 3 type A hospitals: the University Hospital of the West Indies (UHWI) and Kingston Public Hospital (KPH), located in Kingston, and Cornwall Regional Hospital, which is in Montego Bay. These are multidisciplinary hospitals that provide services for all medical specialties. They are fully supported by laboratory and radiological departments and constitute the referral centers for the island.

The UHWI is the premier teaching hospital in Jamaica and, arguably, in the English-speaking Caribbean. It comprises some 520 beds, with adult and neonatal intensive care units, renal dialysis, and a division of emergency medicine with an accident and emergency unit. The radiology division offers a full range of procedures, including computed tomography and magnetic resonance imaging. The hospital initially provided service for public patients only, but a 30-bed private facility was added 12 years ago. Recently, groundbreaking took place for the addition of 2 operating rooms to the present 5-theater suite and for a dedicated cardiothoracic and neurosurgery intensive care unit.

All the surgical specialties are represented, and most surgical procedures are offered. These include major bowel resections, laparoscopic cholecystectomy, aortic aneurysmectomy, radical cancer surgery, renal transplantation (mainly at the KPH now), joint replacement, liver resection, and image-guided neurosurgery. It is the only hospital in which open heart surgery is performed and is 1 of 2 referral centers for neurosurgery, the other being the KPH.

At the UHWI, there are some 4500 elective admissions each year to the various surgical specialties and 1100 trauma admissions. The number of operations done by the various specialties is shown in the Table. All surgeons at the UHWI are full-time or associate academic staff of The University of the West Indies. The attending staff includes 9 general surgeons, 3 orthopedic surgeons, 2 urologists, 2 cardiothoracic surgeons, 2 ophthalmologists, 1 neurosurgeon, 1 otorhinolaryngologist, 1 pediatric surgeon, and 1 plastic surgeon. There are 4 qualified attendings in the division of emergency medicine, which is run by the Department of Surgery, Radiology, Anesthesia & Intensive Care.

The Kingston Regional Hospitals comprise the KPH and 5 specialist facilities that provide multidisciplinary and specialist medical care for most Jamaican patients.

Located in downtown Kingston, the 505-bed KPH provides medical services for adults in the specialties of surgery, anesthesiology, medicine, radiology, and ra-
diotherapy. The accident and emergency care department sees approximately 60,000 patients each year, of whom 20,000 are referred for admission. There are 10,000 elective admissions annually. The hospital is accredited for undergraduate and graduate surgical training.

The specialist hospitals are the 250-bed Victoria Jubilee women’s hospital (which provides services for obstetric and gynecological patients), 236-bed Bustamante Hospital for Children, 100-bed National Chest Hospital (which initially served as a tuberculosis sanitarium), 40-bed Hope Institute (an oncology hospital), and 70-bed Sir John Golding Rehabilitation Centre.

The 400-bed Cornwall Regional Hospital is located in Montego Bay, the tourism capital of the island.

There are 5 type B hospitals. These hospitals have the specialties of internal medicine, general surgery, obstetrics and gynecology, pediatric medicine, and anesthesia. Most general surgical procedures are performed at these hospitals. However, the more complex cases are referred to the type A hospitals. There are 10 type C hospitals. These are headed by an attending general surgeon, who performs general surgical procedures and obstetrics and gynecology. The nature of the procedures varies depending on the anesthetic and nursing support available.

There are 10 private hospitals, 5 in Kingston, 3 in Montego Bay, 1 in the center of the island, and the other on the southwest coast. The bed capacities range from 20 to 50. All are supported by nearby laboratory and radiological facilities.

**SURGICAL DISEASE**

Surgical disease patterns in Jamaica are similar to those in North America. The common cancers (breast, colorectal, and prostate) have a similar incidence. There is a high incidence of trauma, and trauma management comprises 30% to 50% of public hospital practice. Diabetes mellitus is endemic, and the surgical complication of “diabetic foot” is common. Unfortunately, this frequently results in amputation because of a combination of poor patient compliance and inadequate resources.

Trauma patients are managed initially by general surgeons. At the KPH and UHWI, all the surgical specialties are available 24 hours daily for consultations. Trained emergency medicine physicians are present in the emergency departments of both these institutions. However, in the rural hospitals, injured patients are seen initially by junior residents who are not in any training program.

The prevalence of trauma in the urban areas has a negative effect on the ability of the service to offer elective surgery to the population. At the KPH, 1 in 3 elective operations is canceled because of urgent trauma cases. In addition, the cost of delivering care to trauma patients comprises a substantial proportion of the health budget.

At the KPH, trauma patients occupy 25% to 30% of the total bed complement at any one time. Twenty percent of emergency admissions to the hospital daily are as a result of trauma. Most of these are orthopedic and neurosurgical resulting from motor vehicle crashes.

**GRADUATE SURGICAL TRAINING**

Regional undergraduate training in the arts and sciences was formally begun in 1948 with the establishment of the University College of the West Indies, under the aegis of the University of London, England. The first Faculty of Medicine had an intake of 33 medical students. In 1962, the University College of the West Indies became an independent entity, and the name was changed to the University of the West Indies.
Although the emphasis in the early years was on medical undergraduate education, the medical faculty was fully cognizant of the need to offer formal training for its graduates locally. Until the 1960s, graduate training in surgery for English-speaking Caribbean nationals consisted of local experience, followed by courses and examinations in the United Kingdom or enrollment in a North American residency program. Although both options produced qualified surgeons, neither was entirely satisfactory. While those who became fellows of the British Royal Colleges usually returned to practice in the region, the British examinations were designed to select candidates for training but not to assess their suitability for specialist appointment. On the other hand, the North American programs, while providing a suitable exit-level qualification, also offered the opportunity for more immediately rewarding practice appointments, with the result that few returned to practice in the Caribbean.

In 1967, a formal proposal for instituting a graduate surgical training course leading to the award of a higher degree by the University of the West Indies was submitted to the board of the Faculty of Medicine. Five years later, in 1972, this became a reality when the first group of residents was admitted for training in general surgery. The following year, an otolaryngology program was implemented, and courses in orthopedics, urology, neurosurgery, cardiothoracic surgery, and pediatric surgery were subsequently added.Residents in these programs, although based mainly at the UHWI, rotate at the KPH, Bustamante Hospital for Children, and National Chest Hospital. Overseas electives are encouraged in the senior years so as to broaden experience.

The programs are a hybrid of British and American. The first 2 years are spent in 3-month rotations through general surgery, orthopedics, urology, neurosurgery, cardiothoracic surgery, and pediatric surgery. During this time, residents attend weekly seminars in anatomy, physiology, and pathology. At the end of these 2 years, they must pass an examination in these 3 basic science subjects, plus principles of surgery, before proceeding to the second part of the program. The second part of the program may last 3 to 4 years (depending on the specialty) and consists of rotations in the resident's chosen specialty. Following the acceptance of a casebook of 20 cases with commentary and documented operative experience, the resident is allowed to sit for the degree examination. This consists of 2 essays and an oral examination. On passing the examination, the resident is awarded the doctor of medicine in surgery degree in the appropriate specialty. With the degree, the graduate may be appointed at the consultant (attending) level.

To date, we have graduated 31 residents in general surgery, 8 in orthopedics, 9 in otolaryngology, 3 in urology, 2 in cardiothoracic surgery, 2 in pediatric surgery, and 1 in neurosurgery. Some of these graduates have been appointed to the academic staff of the University of the West Indies, most have attending surgeon appointments in the government of Jamaica medical services, a few are practicing on other Caribbean islands, 1 is in Canada, and another is in the United States.

Sixteen years ago, the Department of Surgery at the UHWI assumed responsibility for the accident and emergency care services at the hospital, established the emergency medicine division, and initiated the training of emergency medicine physicians in Jamaica. The program has 16 residents in training and has graduated 7 physicians with the doctor of medicine in emergency medicine degree.

An American College of Surgeons Advanced Trauma Life Support program was started 2 years ago and has so far certified 106 physicians. There are plans to have all emergency department physicians and surgical residents certified through this program.

STAFFING

There are 96 general and specialty surgeons on the island. Fifty-six work in the government hospitals, 22 at the UHWI, and 18 solely in private practice. Forty-seven surgeons have the doctor of medicine in surgery degree, 76 have been awarded fellowship from the various Royal Colleges of Surgery in the United Kingdom, 4 are fellows of the Royal College of Surgeons of Canada, and 7 have the diploma of the American Board of Surgeons. Thirty-nine surgeons have been elected to fellowship in the American College of Surgeons and constitute the local chapter. All surgeons are members of the Association of Surgeons in Jamaica.

In all government hospitals, the consultant surgeons are supported by teams of residents to augment the service. There are no residents in the private hospitals.

RESEARCH

Surgical research is largely clinically based, with most reports documenting clinical experience. Recently, registries to collect data on trauma, breast disease, and colonic cancer have been developed. A collaborative study on prostate cancer, which has a high incidence in this country, is under way.

Trauma represents the largest portion of the surgical workload in Jamaica. It comprises 75% and 30% of operations done at the KPH and UHWI, respectively. A trauma registry was established at the UHWI in 1998. To date, there are more than 6000 patients in the registry. It uses a commercially available trauma software program (Trauma; Cales & Associates, LLC, Louisville, Ky). The epidemiological pattern of injuries in Jamaica differs from that seen in most institutions in the United States, where motor vehicle crashes account for most trauma admissions. In Jamaica, 40% to 50% of cases are due to intentional injuries, mainly from interpersonal violence, and only 20% are due to motor vehicle crashes. Patients admitted in developed countries who are victims of motor vehicle crashes are usually more severely injured than are patients with intentional injury in our country. This is supported by the finding that the local cases have a mean injury severity score of 6.64 and an m statistic of 0.86.

HEALTH CARE FINANCING

The national budget of Jamaica in 2001-2002 was J $22 billion (US $400 million). Of this, 3.9% was budgeted for health. To properly finance the Ministry of Health,
between 9% and 10% of the national budget is required, so it is evident that health is underfunded.

Health care in Jamaica is financed by the government of Jamaica, by fee for service, and by private health insurance. There is no national health care plan. Initially, access to government-supported (public) hospitals was free. Recently, because of the underfunding of the health sector, it has become necessary to charge fees based on the ability to pay, but no patient is denied care because of the inability to pay. This situation is unsatisfactory, and the public hospitals continue to be without adequate financial resources.

Upgrading and replacement of equipment is slow and often depends on philanthropy from the private sector. A national health fund is expected to be launched to help pay for the cost of drugs for patients having longstanding diagnoses of chronic diseases, such as diabetes mellitus, hypertension, and arthritis. A national health insurance scheme has been proposed, which should assist in recovering the costs of hospitalization, especially for the indigent.

Surgical options have become increasingly complex and sophisticated, but in most hospitals there is a need for well-trained general surgeons with additional experience in the care of the trauma patient, especially during the acute phase. With the support of adequate numbers of nurses, some with graduate training, and the regular availability of basic laboratory and imaging services, it will be possible to provide the level of surgical care for the Jamaican people appropriate to our needs and size.

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