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COMMENTARY

Surgical missions to developing countries: Ethical conflicts

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ABSTRACT

Each year scores of American physicians and nurses travel overseas, usually at their own expense, aiming to improve the lot of desperate patients in developing countries. Our journals are filled with images of smiling children who have benefited from these gifts of care. Still, practicing medicine, and especially surgery, in a sporadic fashion in distant lands can lead to poor outcomes. It does little to improve public health or advance medical education. We address some of the ethical dilemmas intrinsic to international surgical missions and discuss how we might redirect our resources to provide better care to more people.

Our team has just returned from a pediatric surgical mission to Addis Ababa, Ethiopia, under the auspices of Healing the Children, The Philadelphia Area chapter. Our group included a pediatric otolaryngologist and fellow, two anesthesiologists, four nurse anesthetists, a biomedical technician, several operating room and recovery room nurses, and an administrator. During our nine-day trip, we cared for 175 outpatients at the Black Lion Hospital, CURE International−Ethiopia, and the Makanissa School for the Deaf. We performed 15 major otologic surgeries, working one on one to teach the otolaryngology residents at Black Lion. We examined deaf children who had never received otologic care and fitted them with hearing aids. Like so many similar international surgical experiences, it was exhausting and elating—and quite possibly the wrong thing to do.

The concept of the medical mission has been around for a long time. Many come to Ethiopia and other developing countries every year. They bring much-needed equipment, surgical expertise, and caring professionals who do their best to confront the huge backlog of patients with advanced or neglected disease. At their best, such missions leave behind better equipped surgery departments and well cared-for children. At their worst, they dump expired supplies, leave sophisticated medical equipment that quickly fails (often for want of a fuse), and abandon incompletely treated patients.

Our group tried hard to avoid the common errors of overreaching and inadequate preparation that have sometimes led to surgical deaths. Still, we found ourselves caught in logistic and ethical traps common to surgical missions. This article will describe several of the ethical problems we encountered and how we addressed them (right or wrong). We will put forth some ideas for other otolaryngologists who wish to do good in poor countries.

Scope of the Problem

Ethiopia has a population of approximately 81 million. Given its high fertility rate (3.2%) and history of famine and war, almost one half of the inhabitants are younger than 18 years of age. Eighty percent of Ethiopians live in rural settings, often miles from paved roads or public transportation. Most villages do not have a physician, nurse, or other skilled health care workers. The average per capita annual income is $280. Ethiopia spends approximately one percent of gross domestic product on health care. This equals $4.50 per person per year. Although Ethiopians value education, the lack of salary support for physicians and nurses causes many to leave the field or to emigrate to other countries (73% attrition rate for Ethiopian educated physicians). It is often said that there are more Ethiopian physicians in metropolitan Washington, DC, than in Ethiopia.

There are six practicing otolaryngologists in Ethiopia, nearly all in Addis Ababa. Their otologic skills have been advanced by cooperation with various visiting teams during the last decade. There are no practicing audiologists in Ethiopia. A few sets of ear instruments and several operating microscopes have been donated to hospitals in Addis Ababa. A fledgling otolaryngology residency at Black Lion Hospital admits between three and five residents per year. The incidence of various otolaryngic diseases in the general population is unknown. There is a consensus among local physicians that acute otitis media and otitis media with effusion do not exist in Ethiopia. Despite this belief, there

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are large numbers of children and adults with tympanic perforations, chronic draining ears, and deafness.[1] The national pharmacopeia is limited to a few, inexpensive drugs. Only potentially ototoxic topical preparations are available for the treatment of chronic suppurative otitis media.

There are 12 practicing anesthesiologists in Ethiopia, none with formal pediatric anesthesia training. Most anesthesia care in Ethiopia is delivered by unsupervised nurse anesthetists. Lack of monitoring, medications, and equipment makes anesthesia-related death a real possibility, even during simple surgery.

Ethical Dilemmas

Triage

Classic military triage separates the wounded into three groups: those with minor injuries, those sure to die, and those who might benefit most from care. When confronted by large numbers of underserved children, many with advanced disease, similar logic must be applied (Fig 1).[2] Visiting teams that choose to take on the toughest cases in developing countries often pay the price for hubris. Even the finest surgeon can find herself in deep trouble when the blood bank is empty or the intensive care unit has no functioning ventilators. Warned about previous international misadventures, our team chose to operate on patients with treatable disease of moderate severity, mostly otologic. This decision led to some heart-wrenching choices when we were introduced to children with recurrent fungating tumors, microtia/aural atresia, and infected congenital defects, disorders we were trained to care for at home but that we could not reasonably confront in a place that lacked infrastructure and continuity of care (Fig 2). Why not transport children with advanced disease to the United States for surgery? This was Healing the Children's original mode of operation but has become much more difficult because of visa restrictions and austerity measures at many US medical centers.

Figure 1 Children and their parents waited hours for access to otolaryngology care.

Figure 2 Congenital malformations we were trained to treat could not be properly cared for on a brief surgical mission.

Taxes and Tips

Diversion of foreign aid into private hands is a continuing problem in many developing countries.[3] Ethiopia has worked hard to limit graft but still has its problems. Charitable donations are exempt, technically, from the 15 percent value-added tax on imported goods. In fact, an intense bureaucratic system exists to assure that no taxable gift goes unaccounted. As a result, properly cataloged shipments of

medical equipment are delayed in airports, and luggage containing instruments and medication is searched and impounded until additional documents can be produced. Faced with mission-defeating bureaucratic delays, is it ethical to pay the usual sums needed to release needed equipment and supplies from impoundment? It is Healing the Children's policy not to pay bribes. Some of our equipment never made it through.

What Is Informed Consent?

Medical and human rights abuses in the 20th century led to the development of clear standards of informed consent. We, trained in developed nations, assure patient autonomy and justice by disclosing reasonable risks, benefits, and alternatives to any operative intervention. What does this mean in a country where you don't speak the language, where the culture still supports the concept of the paternalistic physician, where the translator is a resident eager to do a case?[4] It is likely that we failed to fulfill the tenets of informed consent for most of the children we treated. Our concern is shared by many international surgeons.[5] A retrospective study of research protocols at Addis Ababa University found that most informed consents were unsatisfactory.[6] If we are looking to improve surgical care in the developing world, informed consent should receive the same consideration as supply and operative technique.[7]

Second-Class Care Versus No Care

Once an appropriate group of children is selected for surgery, how do you do your best for them? Despite conscientious preparation, many problems can arise. Crash carts, defibrillators, dantrolene, and other emergency drugs are nonexistent in Ethiopia. Few patients have a primary care physician who can provide medical information about them.

Time to operate! Necessary equipment remains impounded at the airport, sterile technique is questionable, and power surges destroy the anesthesia monitors. In general, we tried to maintain Western standards in the operating room. We insisted on "time-outs" and surgical site marking. We tried to balance risks and benefits for any procedure and aimed to complete any operation we started, even when power went out and the backup generator failed. There is strong pressure to finish, knowing this is a child's only chance for surgery. Still, in the middle of a tympanoplasty performed in fading daylight with loupes and a battery-powered headlight, it was hard to know if we were doing the patient a service (Fig 3).

Beyond immediate surgical care, there is the issue of continuity. In any short-lived mission, the surgeon has no choice but to cut and then run. We chose surgeries that required a minimum of skilled postoperative care. We worked with the otolaryngology program at Black Lion Hospital, training their residents and arranging postoperative follow-up in their clinics. We used the Internet to answer medical questions about our mutual patients. Still, this level of continuity would not be acceptable at home and may lead to inferior outcomes.

Figure 3 Completing a postauricular tympanoplasty after the electricity failed. Headlight, loupes, bulb suction.

Teach a Man to Fish . . . .

Medical missions aim to make the world better, one patient at a time. The Ethiopians we met were truly appreciative of the efforts of the well-meaning surgeons who visited their hospitals, provided equipment and supplies, and cared for desperately ill patients. What was unspoken, but obvious, looking at the existing standards of medical practice, was that 20 years of this patient-centered approach had not improved medical care for the vast majority of Ethiopians. The specter of "surgical tourism" was everywhere.[8] From rooms filled with nonfunctional donated equipment to closets piled high with outdated suture material, to children saved from death who still lived in the hospital suffering from incompletely managed disease.

"Don't give me a fish, teach me to fish," became the Ethiopian physicians' mantra. We wanted to help as many children as we could with our own hands—they wanted our skills and a steady stream of supplies to end their dependence on us.

Can We Change Our Ways?

As medical missions proliferate, it is important to re-examine the goals of international medicine. Are we doing what is best for patients and health care systems in developing countries, or are we doing what is fun for us (great cases, great adventure) at the expense of the children we hope to serve? Less glamorous than the surgical mission is the concept of the continuing educational mission. Sylvan Stool, one of the fathers of pediatric otolaryngology, pioneered this approach, constructing a short-term intense educational program, aimed at primary care providers. It included lectures, video instruction, and hands-on training in the diagnosis and treatment of otitis media. The value of this approach was validated in Latin America in a two-year

follow-up study.[9] Stool extended this concept with recurring missions that aimed to build an indigenous group of physicians with specific surgical skills (tympanostomy tube placement and tympanoplasty).

An ideal international educational system would be built around an outreach site, staffed year-round, with physician educators, residents, and students from the United States and from the host country working and learning together. Several US medical schools have developed joint programs with African medical schools, mainly focused on HIV-AIDS. International experiences are desired by residents and increasingly demanded by medical students. Forty percent of medical students have international medical exposure, and 90 percent of surgical residents express a desire for such an experience.[10] Medical schools competing for the best candidates must recognize the need to create and fund meaningful international education.

We hope to develop Temple University's recent affiliation with Addis Ababa University School of Medicine and to engage members of the American Society of Pediatric Otolaryngology to build a continuing pediatric otolaryngology educational presence in Ethiopia. Ultimately, however, the success of any international aid program depends on the host country learning to value medical care as it does agriculture, industry, and national security.

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