

Orthopedic Mission to Jinotega, Nicaragua August 2010

A Report

Carried out under the auspices of

Dickson-Diveley Orthopaedic Education and Research Foundation
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Team Members

Dahners Laurence Orthopedic Surgeon trauma
Leo Jan Orthopedic Surgeon hand
McNamara Gerald Orthopedic Surgeon general
Esther Robert Orthopedic Surgeon tumors
Meeker James Orthopedic Surgeon resident
Moore Vicki Anesthesiologist
Bullard Ty Anesthesiologist
Garvey Matt Anesthesiologist resident
Kamis Nadine RN
Flores Luz Surgical technologist
Dahners Eleanor translator
Brown Robert volunteer

Contacts in Jinotega

Dr. Felix Balladeres (Ortopedista Hospital Victoria Motta)
Dr. Felix Gonzales (Ortopedista Hospital Victoria Motta)
Dr. Felipe Paredes (Ortopedista Hospital Victoria Motta)
Dr. Raphael Trujillo (Ortopedista Hospital Victoria Motta)

The Location

Nicaragua was very poor as a result of the Sandinista war but continues to recover with significant improvements noted each year when we return. Jinotega (the city of the mists) is located about 100 kilometers north of Managua, Nicaragua at an altitude of about 1,000 meters.

The drive from Managua now takes about one hour 45 minutes. Like other tropical cities at higher altitudes Jinotega has a very pleasant climate year round. This trip in August falls in the rainy season and it rained every day but most of each day was very pleasant. Temperatures ranged from 65-80 degrees during our stay there.

Jinotega is placed in a small valley in the coffee growing mountains and has a population of about 120,000 people. We stay three blocks away from the hospital in the Hotel Café, a very nice facility which is very clean and has a fine restaurant. It even has Wi-Fi for laptops. We went out to several other nice restaurants during our stay and they also provided good food. The tap water is apparently chlorinated and other than some mild diarrhea and a couple of colds, no one got seriously sick (however many of us were taking daily Doxycycline for Malaria and diarrhea prevention).

The Facility

The hospital is in the middle of the city and moderately old with large multibed wards in narrow wings for ventilation. There are some “private” wards with private rooms for patients with insurance but none of our patients this year were in them.

The operating theater has three rooms, of which they kindly allow us the use of the two largest. The third is mostly used for C-sections and other emergencies during our stays. Much of their equipment is in poor condition. Sterile practice is problematic as they are not careful about the sterile field and gowns and drapes often have perforations. They do not use sterile waterproof barriers on their back tables or surgical field. They do not have a flash autoclave and so any instruments needing rapid sterilization are placed in a “sterilizing solution” (composition unknown). They have very few infections though. Circulators and Anesthesia Technicians (who provide the anesthesia) often leave the rooms for extended periods of time.

They have no fluoroscope or portable x-ray machine.

We brought some battery powered Stryker 2000 and 4000 surgical drill-saw combos, however, they do not have a flash autoclave and so cannot sterilize the batteries (which still must be wiped with alcohol and covered with stockinette or a glove). They are running low on batteries for these. They use Black and Decker drills, wiped down with alcohol for minor procedures but the ones we have taken them are now defunct so we brought another by Suzuki.

They have a video tower with which they have done a few arthroscopies over the past year using the arthroscopes and instruments we brought.

The Schedule

We traveled all day Saturday arriving in the evening.

We held clinic from 8 to 3 on Sunday

We operated from 8 to 3-5 on Monday – Thursday.

We left for Managua Friday at 2pm and flew out on Saturday at 8AM.

The Patients

We saw about 100 patients in the clinic on Sunday with about 6 more “consults” during the week between surgical cases. Many of the patients had conditions that were untreatable or that we did not have the expertise or equipment to treat.

We performed 34 operations which are listed in the table below.

	Room A	Room B
Monday	Vilma Rivera Muñoz; 62F, Right TKR: McNamara	Elena Salgado Arauz; 30F, Right Tibial Plateau Orteotomy: Dahners
Monday	Wilmer Aguirre; 31M, Left Knee Scope: McNamara	José Domingo Montenegro; 25M, Right Hand Tendon and Nerve Repair (blocked): Jan Leo
Monday	Augusto Altamirano Gonzalez; 18M; E/O Osteochondroma, Right foot, base 1 st (blocked); Bob Esther and James Meeker	Jesus Gutierrez Herrera: 18M, Repair right thumb ext. tendon (blocked): Jan Leo
Monday	Elber Lanza Miranda; 54F; Right Bimalleo Low Ankle/y ORIF(blocked) Dahners	Santus Matilda Donaire; 37M, E/O Foreign body Granuloma, Right Palm (blocked): Jan Leo
Tuesday	Karen Portillo; 48F, Left TKR: McNamara	Angel Gabriel Montenegro; 5M, TX Malunion Femur, Shorten bone pinning: Dahners and Meeker
Tuesday	Edgar Osequera; 28M, Right ORIF PIP Joint Dislocation: Jan Leo	Benjamin Rodriguez Cruz; 30M, Left Knee Arthroscopy, EUA: McNamara and Meeker
Tuesday	Gustavo Espinoza; 48M, Right Acromioplasty/Excision Calcium Deposit: Jan Leo	Alicia Chavarria Granado; 55F, ORIF Right Femoral Neck Non-union Subtrochanteric Osteotomy: Dahners
Tuesday	José Francisco Arzuliga; 59M, Right TKR: McNamara	Willder Santiago Carrazco; 32M, ORIF Left Femoral Non-Union: Dahners
Wednesday	Estela Poveda; 62F, Right TKA, OA: McNamara	Julio Lopez Rodriguez; 32M, Left Hip Fusion: Dahners
Wednesday	Renato Quintero; 42F, Left Knee Scope: McNamara	Valesca Valdivia; 14F, Right Tendon Achilles Lengthening: Esther and Meeker
Wednesday	Miriam Siles; 41F, Left Shoulder A Joint/? Cuff (block): Jan Leo	Bismark Gutierrez Torrez; 19M, Right Distal Femur Osteochondroma: Esther and Meeker
Wednesday	José Luis Pineda; 50M, Left Tibial Oseomyelitis Debride: Esther	Dominga Hernandez Isaguirre; 60F, Right Knee Fusion, Power Large Frag: Dahners
Wednesday	? 43F CRPP L distal radius	
Thursday	Mavra Herrera 60F Left TKR McNamara	Francisco Reyes 26M L Tibial Nail FX Dahners
Thursday	Morelia Crez Rodriguez 13F Old pelvic fx Release adductors MUA Meeker/Dahners	Roberto Centeno Lopez 25M Tendon transfers radial n palsy Leo
Thursday	Silvio Zamora 33M L knee scope MMT McNamara	Karen Torrez Cancierras 21F Bankhart repair multiple shoulder disloc Leo
Thursday	Daniel Cacere 16M L knee scope' McNamara	Miriam Zalaya 25F Excise R thumb pyogenic granuloma Leo/Esther
Thursday	? 30F I&D L hand mangled in corn grinder José Francisco Arzuliga; 59M, Right TKR	

We encountered no known complications on this trip.

The Equipment

We took approximately 1200 pounds of tools, supplies, medications, equipment and implants with us, most of which we left in Jinotega.

We expended a lot of effort in organizing the supplies that are there.

Results from the previous year's surgery

We saw three patients from previous years' surgery. The doctors assured us that the others were all doing well (although this is difficult to believe).

A patient status post a knee fusion in January, doing well.

A patient status post a Dupuytren's release in January, doing well, wants the other hand done this coming January.

A patient status post a TKR in January, doing well.

Overall

We all had a wonderful time with very gracious hosts, believe we did some good for the people of Nicaragua and are ready to go back next year.

NEXT YEAR

Equipment to take

Injectable steroids

- pliers, wire cutters, out of chrome cobalt so they will tolerate autoclaving
- pin/bolt cutters
- videotapes or books (in Spanish if possible) that demonstrate

sterile technique, how to setup the back table and drape the patient

AO technique

Campbell's

dyonics shavers linvatec shavers Linvatec machine often needs to be rebooted

#2 ethibond

large self retaining retractors

cement, cement, cement

extension cords for OR

Power and batteries for Styker ref 4115

O vicryl

2" ace wrap
T handle chuck (big ass)
3" tape
sterile stockinette
coban
slings
staples
richard staples - have inserter?

- Small Frag Screws – all sizes, but especially shorter ones
- Large Frag Screws - all sizes, but especially shorter ones
- Instruments for Angled Blade Plates and more plates various sizes
- Fiberglass Casting Material
- Sterile Webril
- Sterile Esmarchs
- Small Mallet
- Steri Strips and Benzoin
- Small Ronguers, wire cutters
- Scissors-Mayo and Metzenbaum
- Ace Bandages
- Suture – Ethibond and Monocryl
- Mini Frag Screw Driver for 1.5 and 2.5 Screws
- Cautery Pencils
- Suction Tubing
- Sterile Yankauer and Neuro Suction tips
- Sterile Gloves
- Fiber Wire

- Knee Immobilizers – all sizes
- Alumi Foam finger splints
- Arm Slings
- 4 x 4 and 4 x 8 Gauze for Dressings
- Laps
- Cloth Gowns
- Cloth Drapes
- Small Osteotomes - Hand
- Large Osteotomes – Narrow Widths
- Currettes – Small Sizes
- Rasps
- Permanent Markers
- Bins to Organize Supplies
- Label Maker

Equipment to invent

- Autoclavable impervious drapes for back table and “U” drapes for patient limbs
- o Tarps?

Medical textbooks that are only 1-2 editions out of date (spanish texts are great if you can get them but english are helpful too, and we can read them when we're stumped)

If you feel like spending some money at the store, bring some

"organizer trays" like for silverware or desk drawers that we can sort screws into,

Cordless electric drills (Black and Decker type) theirs are all dead!!!!!!!!!!!!

7, 10 and 11mm wrenches for them to use on external fixators

wire cutters, pliers and vice grips that don't have rubber handles if you can find them

Baggies to sort things into