



THE CHILDREN'S HOSPITAL

JAMES R. KASSER, MD

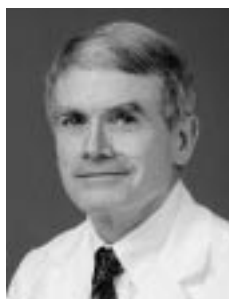


Consistent with the trend at other major teaching hospitals in the Boston area, the past year has been a busy one at Children's Hospital, with a steady increase in the number of cases and patients seen. This is quite different from the projections made five years ago of increased use of community hospitals and less referral to tertiary care centers. We have had a steady increase of 4 to 5 % per year in outpatient volume and an increase of about 7% per year in operating volume. The educational mission must be managed as a priority while responding to the clinical demands of patients, referring doctors, and the hospital. Our staff remains dedicated to a medical student and resident education program and maintains this as our number one priority.

To accommodate the growth of our program, as well as that of other divisions and departments in the hospital, and to and satisfy clinical and research demands, two new buildings are presently under construction. One is a large research building across the street from Children's Hospital, which will house the new orthopaedic lab on the top two floors. The second is a clinical building, which will add new operating and bed space, as well as enhanced emergency services and imaging capability. We are excited about the continuing growth of our institution and the major role that orthopaedics plays in it.

STAFF DEVELOPMENT

Over the past year John Emans was promoted to Professor of Orthopaedic Surgery at Harvard Medical School. The promotion recognized John's major contribution in spine surgery and his expanding role within the department. We have now established a Division of Spine Surgery within the department, which emphasizes the management of spine deformity in both its conservative and surgical forms. This has helped to expand and define the clinical role of spine surgery, as well as facilitate the development of a research program.



Dr. John Emans

John Hall is now working two half days per week and vacationing approximately 50% of weeks per year. His expertise is a tremendous benefit to our educational program both in the clinic and at conference. John's expanded retirement/leisure time has enhanced his personal and family life and is certainly

well deserved after his long career here at Children's. He has occasionally been seen assisting in the operating room but surprisingly he reports that he does not miss surgery or the "stress of surgery" in any way.

Dr. Michael Millis is continuing to expand the use of the periacetabular osteotomy in resolving hip problems in the adolescent and young adult. Through philanthropy, a clinical research endeavor has been put in place to support his clinical efforts. In developing the adolescent and young adult hip program at Children's Hospital, we added Young Jo Kim who finished the residency program here at Harvard three years ago and a fellowship two years ago. Dr. Kim received a PhD from MIT focusing on chondrocyte mechanics and signaling. The combination of Drs. Kim and Millis provides a clinical and research focus which will add tremendously to our knowledge over the coming years. With the continued expansion of this program, Dr. Millis has focused all of his clinical attention on hip surgery.

Dr. Waters is developing the upper extremity program here at Children's and in doing so has made it nationally and internationally recognized. Dr. Waters is coordinating an international brachial plexus study (coordinated through POSNA). It is hoped that this study will allow the determination of the value of early brachial plexus surgery in Erb's palsy. Dr. Waters has continued his other interests in congenital hand deformity and the cerebral palsy upper extremity with a streak of publications that is truly impressive.

Dr. Brian Snyder is the Director of the Biomechanics Lab at the Beth Israel Deaconess Medical Center during this period of transition at that institution. His job has not always been an easy one but he has an excellent level of grant funding and continues to build on the foundation left by Dr. Hayes. Brian's work focuses on the biomechanics of bone with benign and metastatic defects, as well as looking at bone microstructure in normal and pathologic states. Brian is beginning to work on the effects of osteopenia in the pediatric skeleton, and given the opportunities for dealing with osteopenia, this will be landmark work, which will be of tremendous benefit to patients.

Dr. Lyle Micheli has continued to expand the Sports Medicine group, which now consists of three full time orthopaedic surgeons, one podiatrist, three part time primary care sports medicine people and an array of fellows. The program has grown remarkably, paralleling the enthusiasm for children's sports in the Boston area and I suspect throughout the United States. The research productivity of this group is significant.

Dr. Micheli continues on many state-wide and national boards representing the interests of children in sport, both in prevention and treatment of injuries.

The Sports Medicine group is complemented by Drs. Peter Gerbino and Mininder Kocher. Dr. Gerbino's primary focus has been in patellofemoral joint problems in children and he continues to increase both clinical and research efforts in this difficult field. Dr. Kocher with his master's degree in public health is running our clinical effectiveness unit. Included in this group are David Zurakowski, a statistician and four research assistants, bringing the level of clinical research in our program into new prominence.

Dr. Lawrence Karlin, a spine surgeon who has been part of the National Study Group on Isola instrumentation has worked with others to refine techniques of spine surgery with further improvements in pedicle screw fixation and significant advances in spine surgery.

Dr. Timothy Hresko is in charge of our medical education program for medical students both at Children's Hospital and across the Harvard institutions. The medical students have had significantly improved rotations thanks to Tim's efforts. Tim also heads up our Trauma Program which continues to expand. With the use of the FluoroScan machine in the emergency room, care has been made much more efficient and this has allowed improved teaching of residents as well.

Dr. Daniel Hedequist joined our staff after completing his fellowship last year. Dr. Hedequist's focus is in spine surgery. He received the Zimble Traveling Fellowship, which allowed him to visit Hong Kong and Korea this past year. His trip was exciting and he comes back bringing new spinal techniques, including those of thoracic pedicle screws, as well as some of the anterior procedures, which have been made famous in Hong Kong. Along with Tim Hresko, he is developing the use of thoracoscopic surgery at our institution.

Dr. Gebhardt, representing one of the few cross-institution physicians within our system, continues to be an outstanding contributor in the world of orthopaedic oncology and is widely recognized as the pediatric authority in children's musculoskeletal oncology.

NATIONAL AND INTERNATIONAL LEADERSHIP

Members of our department continue to have leadership roles within the national organizations. This has been a busy year for me, as I have been President of the Pediatric Orthopaedic Society of North America and had to increase my international travel a bit. I was one of the presidential speakers at the combined meeting of the International Federation of Pediatric Orthopaedic Societies and the Japanese Pediatric Orthopaedic Society meeting in Sendai, Japan. I also represented the Pediatric Orthopaedic Society of North America at the European Pediatric Orthopaedic Society meeting in Istanbul Turkey. It was a pleasure to join with one of our former residents, Jack Flynn, who was one of the POSNA Traveling Fellows. Jack had been to Vienna, Rome and Prague as a traveling fellow prior to attending the meeting in Istanbul.

Dr. Emans is on the Board of the Scoliosis Research

Society and is the Secretary of this organization. Dr. Micheli is the USA representative to the Board of International Federation of Sports Medicine. He is the Chair of the USA Rugby Sports Medicine Committee. He is a team physician for the United States Figure Skating Federation and finally, he is Chairman of the Massachusetts Governor's Committee for Physical Fitness and Sport. Dr. Gebhardt finished his term as President of the Musculoskeletal Tumor Society and has been President of the Association of Bone and Joint Surgeons during this year. He also is a Director of the American Board of Orthopaedic Surgery and an active member of the RRC. Dr. Snyder is a member of a NIH Study Section. He also is the co-director of a one-day course at the Pediatric Orthopaedic Society Meeting involving the orthopaedic management of cerebral palsy. Dr. Timothy Hresko has been the Program Chairman for the Pediatric Orthopaedic Society of North America meeting this past year.

Beyond these specific roles, all members of the staff are active in their respective organizations nationally, participating in committee work, writing papers, and teaching.

LOCAL NEWS

This may surprise you but I took over as Chairman of the Department just about eight years ago. In these eight years we have witnessed a growth in the clinical activity of the pediatric orthopaedic service which is somewhat astounding. We have increased our surgical caseload from approximately 200 cases per month to just shy of 400. Our clinic has expanded remarkably to where the combined services of Sports Medicine and Orthopaedics see over 50,000 patients per year. In hopes of improving our efficiency, we have begun using a small portable fluoroscopy unit in the emergency room for the management of hand, wrist, ankle and foot fractures. This has provided a benefit in resident education, as well as improved efficiency. We are expanding the use of this unit to our clinical program on Fegan 2 to avoid lengthy trips to X-ray and to improve the overall efficiency of the imaging unit. Our Department of Radiology at Children's is quite active and is expanding now to its fourth MRI unit, which is a small magnet for extremities only. This small unit allows one to sit in a comfortable chair and place the extremity within the magnet rather than being put into the standard tubular unit. This makes the use of MRI less frightening to children. If this unit works satisfactorily we will expand its use to one of our satellite locations to try to improve efficiency in imaging.

With the increased clinical load one logically would ask what has happened to resident education. We continue to have resident conferences each morning. The morning conference schedule includes fracture conference, basic science conference, case presentation and a fellows' conference. We also are beginning a radiology/imaging conference one morning per month and a complications conference one morning a month.

The senior resident has reappeared at Children's, which is very helpful. The senior resident returns now in the fourth year for a 5 week review. I have always maintained that a

second rotation through Children's is critical to the knowledge of pediatric orthopaedics. I think this knowledge is important in all aspects of orthopaedic surgery.

The fellowship has increased to three fellows per year from two and this year we had three outstanding individuals in the fellowship program. Chris Iobst, MD came from South Carolina where he was influenced by Richard Gross and Paul Griffin, as well as the Debbie and Carl Stanitski, to pursue a career in pediatric orthopaedics. Chris is interested in lower extremity care both with external and internal fixation.

The second fellow is Maurice Albright, MD. Maurice Albright had been a resident at the University of Pittsburgh and went from there to Texas Scottish Rite Hospital in Dallas. After completing a year in Texas he opted for another year returning to his undergraduate alma mater, Harvard, for a stint in pediatric orthopedic surgery with us. His interest is in the broad area of pediatric orthopaedics including spine and all aspects of care.

The third fellow is Kevin Klingele, MD who came from Indiana University in Indianapolis for a one-year fellowship. His interest has been in sports and lower extremity pediatric orthopaedics.

Last year's fellows included Tim Schrader, MD, who accepted a staff position at Atlanta Scottish Rite Hospital, working with Ray Morrissey, MD and Daniel Hedequist, MD, who joined our staff.

We have accepted fellows for the next two years and believe it or not we are accepting applications for August 2004.

Given the deficient state of the match for pediatric orthopaedic fellowships, we have elected to no longer participate in it. This is a trend seen throughout the country, with nearly all other programs offering pediatric fellowships doing the same. There are probably 15 to 20 individuals looking for pediatric orthopaedic postgraduate spots with over 60 available positions. In the atmosphere of scarcity of fellows, it seems that a match has been uniformly unsuccessful. While this does cause some logistical problems for the applying residents, it is difficult to change.

Within our institution, we spent several days during the fall of 2001 in a retreat to try to chart the direction of our program over the next five years. This has been linked to a strategic planning session in the hospital. Our performance over the past few years, as well as the demand for our services allowed us to be positioned as one of the growth services for the hospital. As we proceed on this course, I think you should be assured that we will relate the increased volume in a positive way to resident and fellow education.

SOCIALLY

The academic program at Children's is complemented by attempts to get the residents and staff together. Our semianual outings with picnics, "rib night" and Christmas party continue. We have an annual visiting professor in honor of David Grice, which unfortunately in the wake of September 11th was canceled this past year. We will continue to have this as an annual event and look forward to the program this fall.



Residents and Staff, The Children's Hospital (January to June 2001)



Residents and Staff, The Children's Hospital (July to December 2001)

Our clinical group has sponsored a Las Vegas night, nights at Red Sox games, and numerous other activities to increase teamwork within the group. Mr. Jim Cote, our Department Manager has been active in this process, as well as the Spirit Team.

LABORATORY

Despite the difficulties created by having our Basic Science Laboratory split into two divisions, one in Enders and a second down towards the Fenway Park area, this group continues to thrive under the leadership of Drs. Melvin Glimcher and Peter Hauschka. The Scientific Advisory Committee reviewed the laboratory this year in hopes of facilitating plans for the coming transition. The feeling from this elite external evaluation team was that "the laboratory group has done pioneering work in the areas of bone and tooth mineralization including studies of matrix phosphoproteins and continues to make significant contributions. The department and Children's Hospital now have the unique opportunity to develop and further support a laboratory that under Dr. Glimcher's farsighted leadership, has contributed enormously to our understanding of the basics of bone structure and formation, including the recognition of the

importance of its mineral substance". With total funding in excess of 2 million dollars per year and an active research staff, we are readying ourselves for a move into the new research building, which will be completed in the fall of 2003. Our laboratory will occupy roughly 8,000 square feet on the top two floors of this building. We will begin a search for the director of the laboratory in the coming year and look excitedly towards this opportunity.

SUMMARY

In summary, the program at Children's is thriving and growing on many fronts. While this is occurring, the attention to medical and resident education is paramount. We continue to provide an unequaled opportunity for pediatric orthopaedic education.

Department of Orthopaedic Surgery, The Children's Hospital

James R. Kasser, MD

John E. Hall Professor of Orthopaedic Surgery
Harvard Medical School

Orthopaedic Surgeon-in-Chief
Children's Hospital

President, Pediatric Orthopaedic Society
of North America (POSNA)

Council on Education and Task Force on Educational
Effectiveness, AAOS

Subcommittee of Professors
Harvard Medical School

Vice President of Physicians Organization
Children's Hospital

Clinical Faculty

John B. Emans, MD

Professor of Orthopaedic Surgery
Harvard Medical School

Director, Division of Spine Surgery
Children's Hospital

Board of Directors, Scoliosis Research Society

Board of Directors, International Spine Society

Mark C. Gebhardt, MD

Ilfeld Associate Professor of Orthopaedic Surgery
Harvard Medical School

President, Musculoskeletal Tumor Society

Director, American Board of Orthopaedic Surgeons

Peter G. Gerbino, MD

Instructor in Orthopaedic Surgery
Harvard Medical School

John E. Hall, MD

Professor of Orthopaedic Surgery
Harvard Medical School

Daniel Hedequist, MD

Instructor in Orthopaedic Surgery
Harvard Medical School

M. Timothy Hresko, MD

Assistant Professor of Orthopaedic Surgery
Harvard Medical School

Orthopaedic Medical Student Education Director
Harvard Medical School

Trauma Committee, Children's Hospital

Lawrence I. Karlin, MD

Lecturer in Orthopaedic Surgery
Harvard Medical School

Young-Jo Kim, MD, PhD

Instructor in Orthopaedic Surgery
Harvard Medical School

Mininder S. Kocher, MD, MPH

Instructor in Orthopaedic Surgery
Harvard Medical School

Director, Clinical Effectiveness Unit
Children's Hospital

Lyle J. Micheli, MD

Associate Clinical Professor of Orthopaedic Surgery
Harvard Medical School

Director, Division of Sports Medicine
Children's Hospital

Michael B. Millis, MD

Associate Professor of Orthopaedic Surgery
Harvard Medical School

Chairman Research Committee, POSNA
Editorial Board, Journal of Pediatric Orthopaedics

Leela Rangaswamy, MD

Lecturer in Orthopaedic Surgery
Harvard Medical School

Robert K. Rosenthal, MD

Assistant Clinical Professor of Orthopaedic Surgery
Harvard Medical School

Past President, American Academy of Cerebral Palsy

Frederic Shapiro, MD

Associate Professor of Orthopaedic Surgery
Harvard Medical School

Brian D. Snyder, MD, PhD

Assistant Professor of Orthopaedic Surgery
Harvard Medical School

Acting Director, Orthopaedic Biomechanics Laboratory

Peter M. Waters, MD

Associate Professor of Orthopaedic Surgery
Harvard Medical School

Director, Hand Surgery Program
Children's Hospital

Seymour Zimble, MD

Lecturer in Orthopaedic Surgery
Harvard Medical School

Clinical Professor of Orthopaedic Surgery
Tufts Medical School

David Zurakowski, PhD

Assistant Professor of Orthopaedic Surgery
Harvard Medical School

Fellows

Pediatrics

Maurice Albright, MD

Chris Iobst, MD

Kevin Klingele, MD

Sports

Pierre D'Hemecourt, MD

Keith Loud, MD

Michelle McTimony, MD

Martha Murray, MD

Andrea Straccioli, MD

Basic Science Faculty

Melvin J. Glimcher, MD

Harriet M. Peabody Professor of Orthopaedic Surgery
Harvard Medical School

Director, Laboratory for the Study of Skeletal Disorders
and Rehabilitation, Children's Hospital

Research: Mineralization of Bone;
Phosphoproteins in Bone and Cartilage

Peter V. Hauschka, PhD

Associate Professor of Orthopaedic Surgery
Harvard Medical School and Harvard Dental School

Research: NO in Bone Resorption;
Cytokines in Growth and Bone Repair;
Breast Tumor Metastases to Bone

Frederic Shapiro, MD

Associate Professor of Orthopaedic Surgery
Harvard Medical School

Research: Bone Healing and Cell Interactions

Erdjan Salih, PhD

Assistant Professor of Orthopaedic Surgery
Harvard Medical School

Research: Phosphokinase Sites in Phosphoproteins;
3-D X-ray Crystallography

Samy Ashkar, PhD

Instructor in Orthopaedic Surgery
Harvard Medical School

Research: Immunological Factors in Bone Healing

Keith R. Solomon, PhD

Instructor in Orthopaedic Surgery
Harvard Medical School

Research: Membrane Mechanisms of Growth Factor
Signaling Regulation in Osteoblasts

Kevin McHugh, PhD

Instructor in Orthopaedic Surgery
Harvard Medical School

Research: Integrins and Bone Resorption

Yaotang Wu, PhD

Instructor in Orthopaedic Surgery
Harvard Medical School

Research: NMR Spectroscopy and Bone Imaging

Jinxi Wang, PhD

Instructor in Orthopaedic Surgery
Harvard Medical School

Research: Bone Healing and Fracture Repair

James G. Clifton, PhD

Instructor in Orthopaedic Surgery
Harvard Medical School

Elsa S. Strawich, PhD

Research Associate, Children's Hospital