

PODIATRY INSTITUTE FACULTY ANALYSIS OF HALLUX VALGUS SURGERY

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The Podiatry Institute conducted a survey of its faculty members in October of 1991. The purpose of the survey was to categorize the number and type of hallux valgus surgery being performed by Institute members. Thirty-three faculty members were sent the survey form and requested to indicate the number and type of procedure that they performed during the previous year (October 1, 1990 to September 30, 1991) (Fig. 1). Twenty-five completed surveys (76%) were returned for evaluation.

DISTAL METAPHYSEAL OSTEOTOMIES

Figure 2 illustrates the results of the distal metaphyseal procedures. The Austin Bunionectomy is the most popular distal metaphyseal procedure (70.4%). Moreover, the long dorsal arm Austin (Kalish) is preferred (57%) to the standard Austin Bunionectomy (43%). The Modified McBride Bunionectomy is performed 15.9% of the time while the Reverdin Bunionectomy encompasses only 9.9% of distal metaphyseal procedures. However, when a Reverdin is performed, 40.5% are standard Reverdin, 38.1% are the Reverdin/Green/Laird type, and 21.4% are the Reverdin/Green variety. Silver Bunionectomies and Scarf Bunionectomies make up 3.3% and 0.5% of distal metaphyseal procedures respectively.

METATARSAL BASE PROCEDURES

First metatarsal base procedures are summarized in Figure 3. The oblique base wedge osteotomy is performed 79.4% of the time. The Mau osteotomy (10.1%), Lapidus procedure (10.1%), and cres-

centic osteotomy (0.4%) are the remainder of the first metatarsal base procedures. In addition, 22 of the 197 base wedges performed included a distal metaphyseal osteotomy. Likewise, all 25 Mau osteotomies were performed in conjunction with a Reverdin osteotomy.

FIRST MPJ ARTHROPLASTIES/ARTHRODESIS

Figure 4 displays the results of the first metatarsophalangeal joint destructive procedures. Joint implant arthroplasties were executed 47.6% of the time. 41.1% of the procedures were Keller Bunionectomies, and the first metatarsophalangeal joint was arthrodesed 11.3% of the time.

OTHER

A total of 80 Akin procedures were performed. Nineteen were without other procedures while 61 were in combination with other hallux valgus procedures.

Some of the results of this survey are expected and some of the conclusions may be surprising. However, this survey certainly opens the door to many concerns regarding the specifics of each of these surgical cases:

1. What type of fixation was used?
2. Was an adductor transfer performed?
3. Was the fibular sesamoid removed?
4. What was the difference in preoperative and postoperative range of motion of the 1st MPJ?

HALLUX VALGUS SURVEY

PROCEDURE	NUMBER OF PROCEDURES
SILVER BUNIONECTOMY	
MODIFIED MCBRIDE BUNIONECTOMY	
AUSTIN BUNIONECTOMY (STANDARD)	
LONG DORSAL ARM AUSTIN (KALISH TYPE)	
LONG PLANTAR ARM AUSTIN	
"Z" OR SCARF BUNIONECTOMY	
REVERDIN BUNIONECTOMY	
REVERDIN/GREEN BUNIONECTOMY	
REVERDIN/GREEN/LAIRD BUNIONECTOMY	
KELLER BUNIONECTOMY	
IMPLANT ARTHROPLASTY	
1ST MPJ ARTHRODESIS	
BASE WEDGE OSTEOTOMY	
BASE WEDGE OSTEOTOMY WITH DISTAL METAPHYSEAL OST.	
MAU OSTEOTOMY	
MAU OSTEOTOMY WITH DISTAL METAPHYSEAL OSTEOTOMY	
CRESENTIC BASE OSTEOTOMY	
CRESENTIC BASE OSTEOTOMY WITH DISTAL METAPHYSEAL OST.	
LAPIDUS TYPE PROCEDURE	
AKIN OSTEOTOMY; PERFORMED WITHOUT OTHER PROCEDURE(S)	
AKIN OSTEOTOMY; WITH OTHER PROCEDURE(S)	

Fig. 1. Hallux Valgus Survey

5. What were the preoperative and postoperative radiographic parameters?
6. If an implant was used, was it a total or a hemi?
7. Were there any intra-operative or postoperative complications?
8. Were there any other foot deformities present?

These are just a few of the questions that may be raised. As a result, this survey is the first step toward the development of a computerized data base at the Podiatry Institute. Beginning in 1992, whenever a hallux valgus procedure is performed, the surgeon will complete a two-page Hallux Valgus Study form (Fig. 5). The form will be sent to the Institute where the information will be imputed into the data base. For each surgical case, the surgeon will update the information as required. As demonstrated by the large number of procedures performed during the past year by only twenty-three surgeons, one can perceive that over time the data base will include vast amounts of information pertaining to many surgical cases.

The inherent design of the data base software will allow us to retrieve specific data to be viewed or printed, change or delete data, rearrange data into different orders for screen displays or reports, select subsets of data for specific purposes, perform calculations and store, view,

or print the results. In addition, printed reports may be produced that provide meaningful information to people who are not familiar with computers or data base management software.

There are many benefits to computerizing this information. The data is entered once and we have the ability to easily cross-reference and sort information for various studies. For example, if someone wanted to look at the long-term effect that an adductor transfer had on the tibial sesamoid position for Austin Bunionectomies, a report could easily be furnished. The software would sort out all Austin Bunionectomies with adductor transfers versus all Austin Bunionectomies without adductor transfers and supply the appropriate tibial sesamoid positions. With this report in hand, further statistical analyses may be performed. A study such as this would be far too time-consuming to consider preparing manually. In addition, as various studies are conceived, an individual is not only limited to his own cases. Instead, the data base gives us access to surgeries performed by all faculty members.

In the future, the data base can be modified to include other types of surgery in addition to hallux valgus surgery. Moreover, surgeons across the country equipped with a computer and modem, may be able to access the data base for entry or retrieval of information.

Procedure	Number Performed By Each Surgeon																	TOTAL						
SILVER	11				1	1				4			1	1			1	5	1			2	28	
MODIFIED McBRIDE	14	3	5		2		1		13	7	3	2	6	1		1	48	6	5	2		16	135	
STANDARD AUSTIN	13		3		10	65	11		1	10	3		3	30	6	19	5	20	7		5	46	257	
KALISH AUSTIN		17	4	3			28	20	7	8	2		17	20		7		37	4	25	90	38	14	341
"Z" OR SCARF									1													3		4
REVERDIN		6					4	5				1			1		1	5	4		5		2	34
REVERDIN/GREEN							5	7								1					5			18
REVERDIN/GREEN/LAIRD					20	4	3											5						32
																								849

Fig. 2. Distal Metaphyseal Procedures performed

Procedure	Number Performed By Each Surgeon																	TOTAL					
BASE WEDGE	11	4	1	1		9	10	7		4	1	3	44	4	4	6	4	4	14	12	6	26	175
BASE WEDGE WITH DISTAL OSTEOMY		3				3	10	1	2						1	2							22
MAU WITH DISTAL OSTEOTOMY					25																		25
CRESENTIC			1																				1
LAPIDUS						7	1	2			1	3	2		2	2	2	3		2			25
																							248

Fig. 3. First Metatarsal Base Procedures performed

Procedure	Number Performed By Each Surgeon																	TOTAL					
KELLER	1	1	4	1	5	6	8	3	1				5	1	3		2	15		5	8	69	
IMPLANT		4		3	8	4	4	6			2	17	2	7		5	2	4	5	3		4	80
1st MPJ ARTHRODESIS					6	1	1			1		4	2		2	1	1						19
																							168

Fig. 4. First Metatarsophalangeal Joint Destructive Procedures performed.

HALLUX VALGUS STUDY

PATIENT NAME:

PATIENT AGE:

DATE OF SURGERY: - -

SURGEON:

PROCEDURE:

SECONDARY PROCEDURE:

LEFT OR RIGHT FOOT (L or R):

TYPE OF FIXATION:

ADDUCTOR TRANSFER (Y or N):

FIBULAR SESAMOID REMOVED (Y or N):

OTHER DEFORMITIES PRESENT (Y or N):

If YES, please describe briefly: _____

INTRAOPERATIVE COMPLICATIONS (Y or N):

If YES, please describe briefly: _____

RANGE OF MOTION 1st MPJ	PRE-OP	IMMED POST-OP	6 MONTHS POST-OP	12 MONTHS POST-OP	18 MONTHS POST-OP
DORSIFLEXION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PLANTARFLEXION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

RADIOGRAPHIC PARAMETER	PRE-OP	IMMED POST-OP	6 MONTHS POST-OP	12 MONTHS POST-OP	18 MONTHS POST-OP
IM ANGLE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
HA ANGLE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
TIB SESAMOID POSITION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1st MET	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

COMPLICATION	1-7 DAY POST-OP	1-23 WKS POST-OP	6 MONTHS POST-OP	12 MONTHS POST-OP	18 MONTHS POST-OP
INFECTION	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
DISLOCATON	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
FIXATION FAILURE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
FRACTURE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
AVASCULAR NECROSIS	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
HALLUX VARUS	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
HALLUX LIMITUS	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ADDITIONAL DESCRIPTION OF COMPLICATION(S): _____

Fig. 5. Hallux Valgus Study