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Paper Session 1: Working to Optimize Patient Outcomes

Patients' Expectations from Foot and Ankle Surgery: Relationships with Demographic and Clinical Characteristics

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Introduction/Purpose: Few authors have investigated patients' expectations from foot and ankle surgery, and standardized means of assessing expectations are lacking. Managing patients' preoperative expectations may help improve their ultimate satisfaction with surgery. In a previous study (in press), we developed a valid and reliable patient-derived expectations survey for patients undergoing foot and ankle surgery. In this study, we aimed to examine relationships between patients' preoperative expectations and their demographic and clinical characteristics. We hypothesized that patients with more disability and those with anxiety or depressive symptoms would have greater expectations.

Methods: All adult patients scheduled for elective foot or ankle surgery by one of six orthopaedic foot and ankle surgeons were screened for inclusion over eight months. Preoperatively, patients completed the Foot & Ankle Surgery Expectations Survey in addition to the Foot & Ankle Outcome Score (FAOS), Short Form (SF)-12, Patient Health Questionnaire (PHQ)-8, Generalized Anxiety Disorder 7-item scale (GAD-7), and pain visual analog scale (VAS). The expectations survey contains 23 expectations categories, each with five answer choices ranging from "I do not have this expectation" to "complete improvement" expected. It is scored from 0-100; higher scores indicate greater expectations. Differences in expectations score with categorical variables were assessed with t-tests and single factor analysis of variance (ANOVA). Differences in number of expectations and number of expectations with complete improvement expected were assessed with Mann-Whitney U and Kruskal Wallis tests. Relationships between expectations and continuous variables were assessed with linear regression.

Results: 352 patients (average age 55 ± 15 , range 18 to 86) were enrolled. Expectations were not significantly related to age. Women expected to achieve complete improvement more often than men ($p = 0.011$). Other factors significantly associated with higher expectations ($p < 0.05$) included non-Caucasian race, workers' compensation, use of a cane or other assistive device, diagnosis of ankle instability or osteochondral lesion, and greater medical comorbidity (Table). Patients with a history of prior orthopaedic surgery were less likely to expect complete improvement. Worse function and quality of life (as assessed by all FAOS subscales and SF-12 physical and mental components), more depressive and anxiety symptoms, and higher pain VAS scores were associated with higher expectations scores and more expectations ($p < 0.001$ for all).

Conclusion: The results of this study may help inform surgeons' preoperative discussions with their patients regarding realistic expectations from surgery. Generally patients with worse function and more disability had higher expectations from surgery. Addressing these patients' expectations preoperatively may help improve their ultimate satisfaction with surgery.

Table. Expectations scores and numbers of expectations are listed for groups of interest, with p-values representative of the difference between the group of interest and all other patients. Higher expectations scores indicate more expectations. *p < 0.05.

	Mean expectations score (range, 0-100)	p-value	Mean number of expectations (range, 0-23)	p-value	Mean number of expectations with complete improvement expected (range, 0-23)	p-value
All patients (n=352)	60.3 ± 18.7	n/a	16.3 ± 4.4	n/a	8.1 ± 6.8	n/a
Male sex (n=120)	57.1 ± 18.1	0.663	15.9 ± 4.5	0.172	6.7 ± 6.5	0.011*
Female sex (n=232)	61.8 ± 18.8		16.6 ± 4.3		8.7 ± 6.9	
Caucasian race (n=319)	59.1 ± 18.5	<0.001*	16.1 ± 4.3	<0.001*	7.7 ± 6.7	0.002*
Non-Caucasian race (n=33)	71.6 ± 16.3		18.6 ± 4.0		11.8 ± 7.2	
Currently working (n=231)	59.5 ± 18.9	0.689	16.1 ± 4.4	0.256	7.9 ± 6.9	0.449
Currently not working (n=120)	61.5 ± 18.3		16.7 ± 4.3		8.4 ± 6.8	
On workers' compensation (n=9)	66.3 ± 16.7	0.304	19.6 ± 4.1	0.017*	6.4 ± 7.5	0.344
Uses cane, walker, or wheelchair (n=21)	71.2 ± 17.9	0.005*	19.0 ± 2.9	0.002*	10.8 ± 8.1	0.110
History of prior orthopaedic surgery (n=143)	59.1 ± 18.2	0.331	16.4 ± 4.3	0.828	7.0 ± 6.4	0.002*
On narcotic medication (n=17)	63.1 ± 10.9	0.520	19.5 ± 2.6	0.001*	4.1 ± 5.1	0.012*
Diagnosis of hallux valgus (n=92)	55.5 ± 19.2	0.005*	15.0 ± 4.4	<0.001*	7.7 ± 6.6	0.680
Diagnosis of hallux rigidus (n=39)	56.1 ± 17.0	0.138	15.2 ± 3.9	0.029*	7.9 ± 6.5	0.883
Diagnosis of pes planus (n=38)	62.9 ± 13.4	0.357	17.4 ± 2.7	0.225	7.1 ± 6.4	0.373
Diagnosis of ankle arthritis (n=35)	63.0 ± 17.8	0.370	17.3 ± 4.1	0.157	7.2 ± 6.5	0.486
Diagnosis of chronic tendon injury (n=28)	66.5 ± 18.5	0.065	17.8 ± 4.3	0.028*	9.5 ± 7.3	0.283
Diagnosis of ankle instability or osteochondral lesion (n=27)	70.0 ± 18.6	0.004*	18.1 ± 3.8	0.026*	11.1 ± 7.3	0.024*
Diagnosis of mid- or hindfoot arthritis (n=19)	48.9 ± 16.0	0.006*	15.1 ± 5.2	0.314	2.4 ± 4.0	<0.001*