Higher Incidence of Total Knee Arthroplasty in Women Than in Men

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In this issue of Orthopedics, Dr Carlos Lavernia, medical director of the Orthopaedic Institute at Mercy Hospital, discusses research stating that female patients postpone necessary knee arthroplasty procedures more often than male patients, as well as some of the possible causes for this discrepancy.

Please describe the evidence that shows female patients postpone total knee arthroplasty (TKA) more often than men (preoperative clinical scores, functional scores, etc).

Our group has done extensive research on patient-oriented outcomes in cohorts receiving total joint replacement. In a paper presented at the American Academy of Orthopaedic Surgeons, as well as at The Hip Society Meeting, we demonstrated that female patients come in for TKA with more severe impairment than male patients, in both function and pain.

In most areas, the percentage of patients undergoing TKAs is biased more toward women than men. How is it that research describes women postponing the procedure more so than men?

Although in most areas the percentage of female patients undergoing TKA is higher, our data suggests that perhaps it should be even higher than what it is since women postpone the procedure more than men.

Does this postponement occur across all major ethnic groups, or is there a subgroup of patients that has been shown to postpone surgery most often?

This delay occurs in some ethnic groups more than others. Our data demonstrated that this event occurs in black and Hispanic patients. These are the two main ethnic groups on which I perform arthroplasty surgery.

In addition to that, the expectations at initial presentation are different for both black and Hispanic patients. The results of our study of more than 600 patients demonstrated the preoperative differences between ethnic groups, as well as the differences between men and women. Expectations, knowledge, and values differentiate between men and women, as well as between Hispanics and blacks.

What are the negative effects of postponing a TKA?

The negative effects of postponing a TKA include the “never catching up” syndrome. We studied a cohort of over 200 patients who received primary hip or knee arthroplasty. The WOMAC and the SF 36 scales were used to study the patients perceived outcome throughout a 3-year period. The data (also C.J.L., Lee D, Rossi M, unpublished data, 2008) demonstrated that postponing a TKA or a total hip arthroplasty affects the results for <3 years postoperatively. The low scorers never catch up.
Patients presenting with scores of 40 or 50 only progress to a score of 80, as opposed to those presenting with a score of 50 or 60 who progress to a score of 90. The patient’s function and recovery—as well as pain relief—only improves a certain amount. Delaying the surgery decreases that improvement and is not advantageous.

**Why are patients postponing surgery? (Fear? Higher tolerance for pain in women than in men? Pain receptors at higher threshold for pain?)**

Our data suggests that patients postpone surgery due to anxiety and fear. We studied a cohort of 300 patients undergoing total joint arthroplasty and demonstrated that the anxiety level was higher in blacks, Hispanics, and women than in white men. Whether this is due to pain receptor differences or societal perceptions of pain is still to be determined.

**There have been similar reports of delayed diagnoses, delayed treatment, and postponement of elective surgeries along ethnic lines as well. Is there a correlation between this data and the ethnicity data that points to a bigger issue in health care?**

Past reports of delayed treatment and postponement of elective surgeries have been associated to socioeconomic issues including obtaining insurance and information as substantial factors.4,5

**How should this information be used? How will this knowledge change practices?**

This information is useful to clinicians because they can tell their patients who are reluctant to have the operation that delaying the surgery further will decrease their chances of optimizing their function and pain relief after the surgery.

There is a great need for patient education concerning this new data since the dogma in orthopedic surgery was to postpone the arthroplasty. This advice is now outdated and surgeons perhaps should nudge patients a little more than what they used to do when considering arthroplasty.

In a poster presented in February at the American Academy of Orthopaedic Surgeons Annual Meeting, we studied 121 patients undergoing primary arthroplasty and demonstrated that women reach the point of arthroplasty surgery with statistically significant lower quality of life and physical function when compared to men.6-8

Will direct-to-patient marketing efforts of the implant manufacturers potentially change any of this information in the future, or is this the duty of the health care system and/or the health care provider?

There have been a number of papers written on it and it is a controversial topic. I welcome these efforts because they engage the patients in the thinking process and make them research. I do not mind educating my patients when they come with Internet information; I feel that patient is better informed than a patient who does not research the surgical procedure. Additionally, most consumers in the United States do not spend enough time considering TKA information and deciding which surgeon is going to perform their surgery.

**REFERENCES**


