

## **Changing Patterns of Pain Type and Distribution following Total Hip Arthroplasty: A Prospective Study Using Ransford Pain Drawings**

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### **INTRODUCTION:**

Pain ratings are an important outcome of total hip arthroplasty (THA), but specific patterns of pain type and location have not been well studied. The aim of this study was to determine if recurring patterns of pain distribution and type on pain drawings were associated with postoperative outcomes for primary THA procedures.

### **METHODS:**

We administered a Ransford Pain drawing to determine the pain type and location of patients undergoing primary THA. The collected data included pain type and location. To determine the association between pain, location, and outcome, chi-squared tests were used to compare the data.

### **RESULTS:**

Patients experienced decreasing pain over time, with 65% of patients reporting no pain at the first follow up, while 52% of patients reported no pain at 1 year ( $P=0.173$ ). Stabbing pain was the most common type of pain preoperatively, reported by 88% of patients, while 31% reported burning pain. At the first follow up, only 10% of patients reported stabbing pain ( $P=0.003$ ), 14% reported burning pain ( $P=0.002$ ). Among patients who followed up over a year later, 19% reported stabbing pain ( $P<0.001$ ), 24% reported burning pain ( $P=0.516$ ). The most common location for pain was the anterior coxal region (63%) and groin regions (48%). At the first postoperative visit, the most common pain location was the posterior coxal region (14%). Beyond one year, the most common locations for pain were the anterior upper thigh (33%) and middle thigh regions (24%).

### **DISCUSSION AND CONCLUSION:**

THA effectively manages to decrease pain as early as the first postoperative visit. Following surgery, patients may still experience pain, but the character and location of the pain are different compared to the preoperative assessment.