

Clinical Impact of Motor Vehicle Collision on Hip Pain: A Review of Hip Arthroscopy Patients

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Disclosures

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Introduction

- Little is known regarding the effects of major blunt trauma, a motor vehicle collision (MVC), on patients undergoing subsequent hip arthroscopy.
- **Hypothesis:** Patients with a history of MVC will present with more severe hip pathology based on functional capacity, pain relief, and diagnostic imaging compared to those without a history of MVC.

Methods

Review of hip arthroscopy cases between 2010 and 2015 (n=791)

Excluded patients*
(n=228)

Study sample
(n=563)

- * • Joint space <2mm
- Previous hip surgery
- Trauma from any other causes
- <3 months of hip symptoms

MVC (n=19)

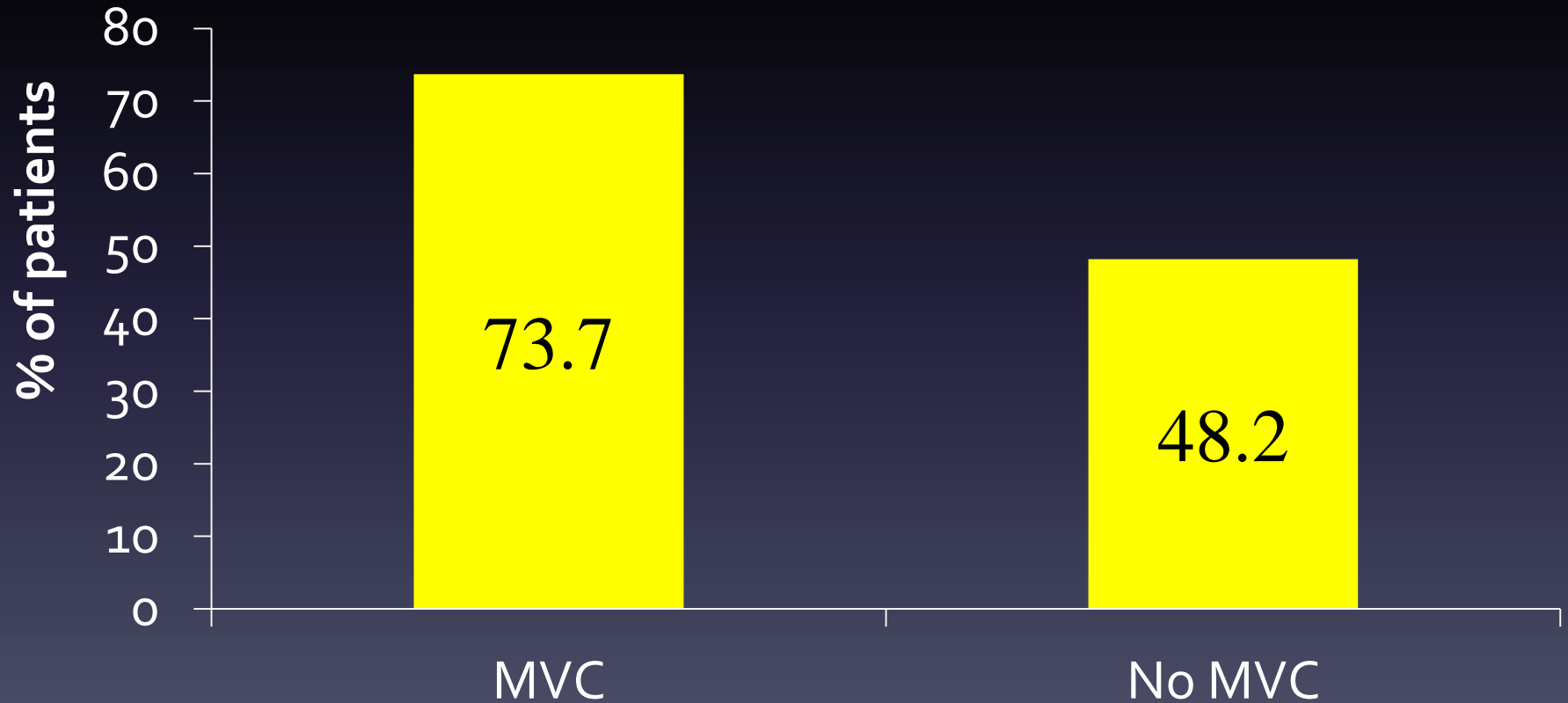
No MVC (n=544)

Methods

- Evaluated: Location of hip pain, pain with activity, non-operative interventions, diagnostic imaging findings, and intraoperative arthroscopic procedures
- Chi-square and Students T test analysis utilized to compare variables. Statistical significance: p-value <0.05

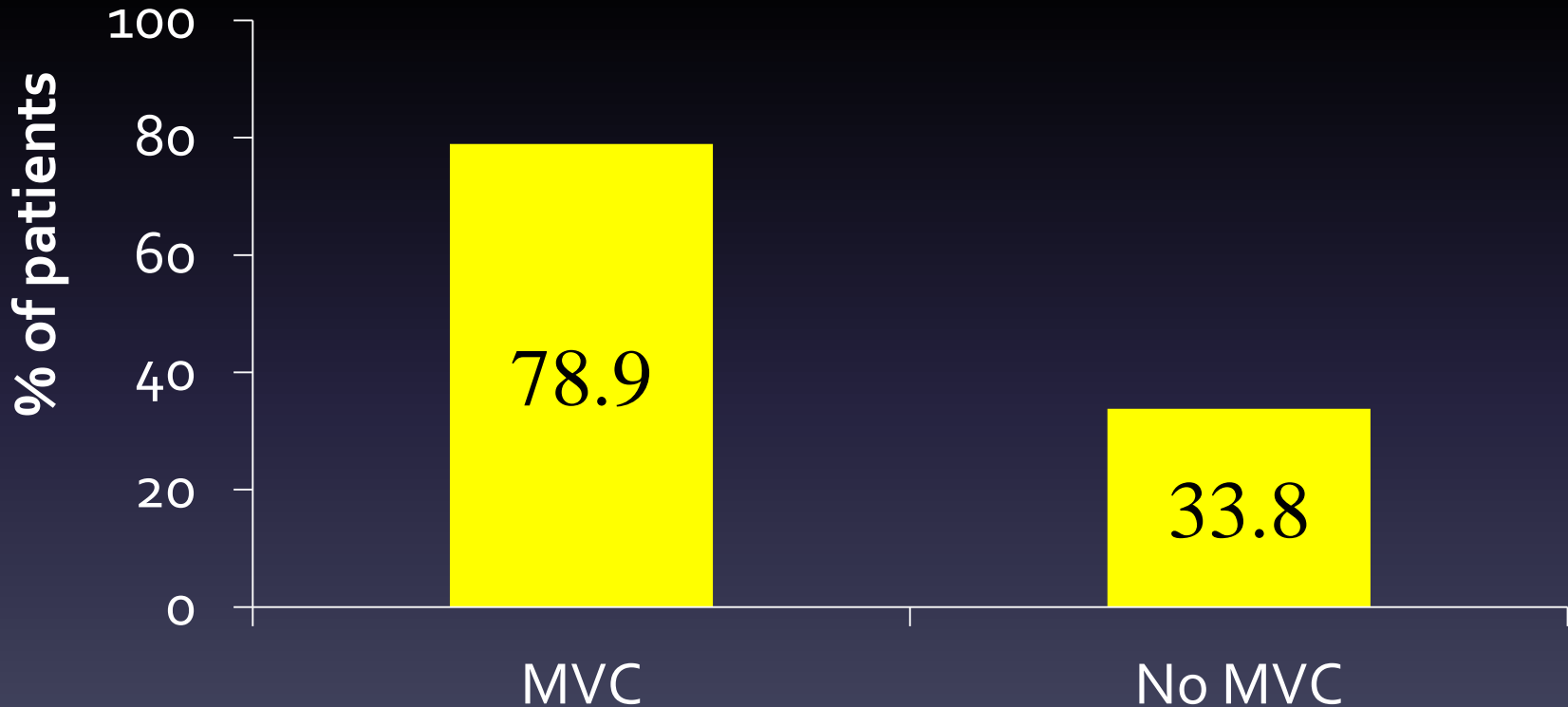
Results – Lower back pain

	MVC	No MVC
n=	14/19	262/544



Results – Low impact pain

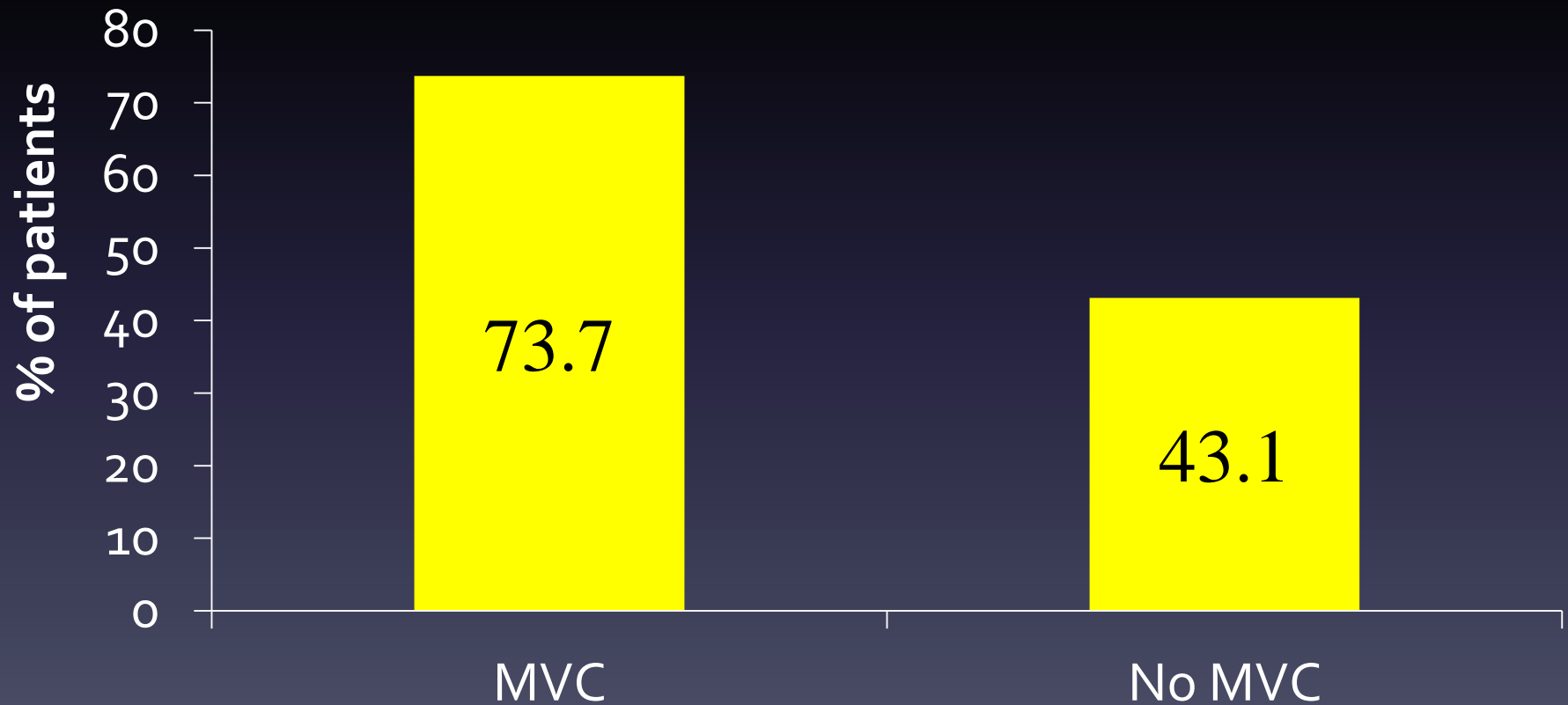
	MVC	No MVC
n=	15/19	184/544



Low impact activities included bending, sitting, standing, and yoga

Results – Narcotic utilization

	MVC	No MVC
n=	14/19	235/544



Results – Diagnostic Imaging

No differences in MRI findings based on a history of MVC

	No MVC	MVC	P-value
Magnetic Resonance Imaging			
Labral tear	99.0%	100%	0.813
Acetabular chondromalacia	88.6%	88.9%	0.977
Acetabular subchondral cyst	13.2%	28.6%	0.246
Femoral head chondromalacia	10.3%	20.0%	0.487
Femoral head subchondral cyst	5.2%	16.7%	0.224

Results – Arthroscopy

- History of MVC was associated with:
 - Lower rates of femoroplasty
 - Higher rates of iliopsoas release

Arthroscopy Procedure	No MVC	MVC	P-value
Synovectomy	99.6%	100%	0.768
Capsular release	4.2%	10.5%	0.190
Acetabuloplasty	72.6%	63.2%	0.366
Femoroplasty	97.1%	78.9%	<0.001
Labral repair	89.7%	94.7%	0.475
Microfracture	20.8%	21.1%	0.892
Loose body excision	8.8%	10.5%	0.798
Iliopsoas release	28.9%	57.9%	0.007

Discussion

- Despite differences in the clinical presentation, the type and severity of hip pathology did not differ between groups. However, patients without a history of MVC more often underwent surgery to address bony impingement.
- The results from this study support the hypothesis that a history of a MVC in an operative hip arthroscopy cohort is associated with **more severe pain symptoms and greater narcotic consumption** than patients who present with hip pathology without a history of MVC.

Conclusion

These findings highlight a **potential barrier to successful perioperative management** of pain and functional symptoms in patients with a history of significant blunt trauma.

These findings provide a foundation for further investigation into the effects of increased narcotic consumption on the short- and long-term outcomes following hip arthroscopy

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Thank You



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