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Title:

Trends In Surgical Management of Adhesive Capsulitis

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Disclosures:

Matthew Best has the following disclosures:

Other/educational support from Arthrex

Other/educational support from Smith and nephew

Other/educational support from Stryker

Background

- Adhesive capsulitis results from progressive fibrosis of the glenohumeral joint capsule resulting in pain and stiffness of the shoulder.
- Conservative methods of treatment include non-steroidal anti-inflammatory medications, corticosteroid or hyaluronic acid injections, and physical therapy.

Background

- Surgical treatment options include manipulation under anesthesia (MUA) and arthroscopic intervention to lyse adhesions.
- This study aimed to observe the overall trends in (1) surgical management for adhesive capsulitis, (2) surgical treatment modality for adhesive capsulitis, and (3) demographics and comorbidities of patients undergoing surgical management of adhesive capsulitis between 2010 and 2019.

Methods

- The PearlDiver database, a national all-payer's claims database containing over 120 million patient records, was used to perform a retrospective trends analysis.
- Patients who have a diagnosis of adhesive capsulitis were identified using International Classification of Disease (ICD) 9 and ICD-10 billing codes.
- Incidence of adhesive capsulitis was analyzed between 2010 and 2019.

Methods

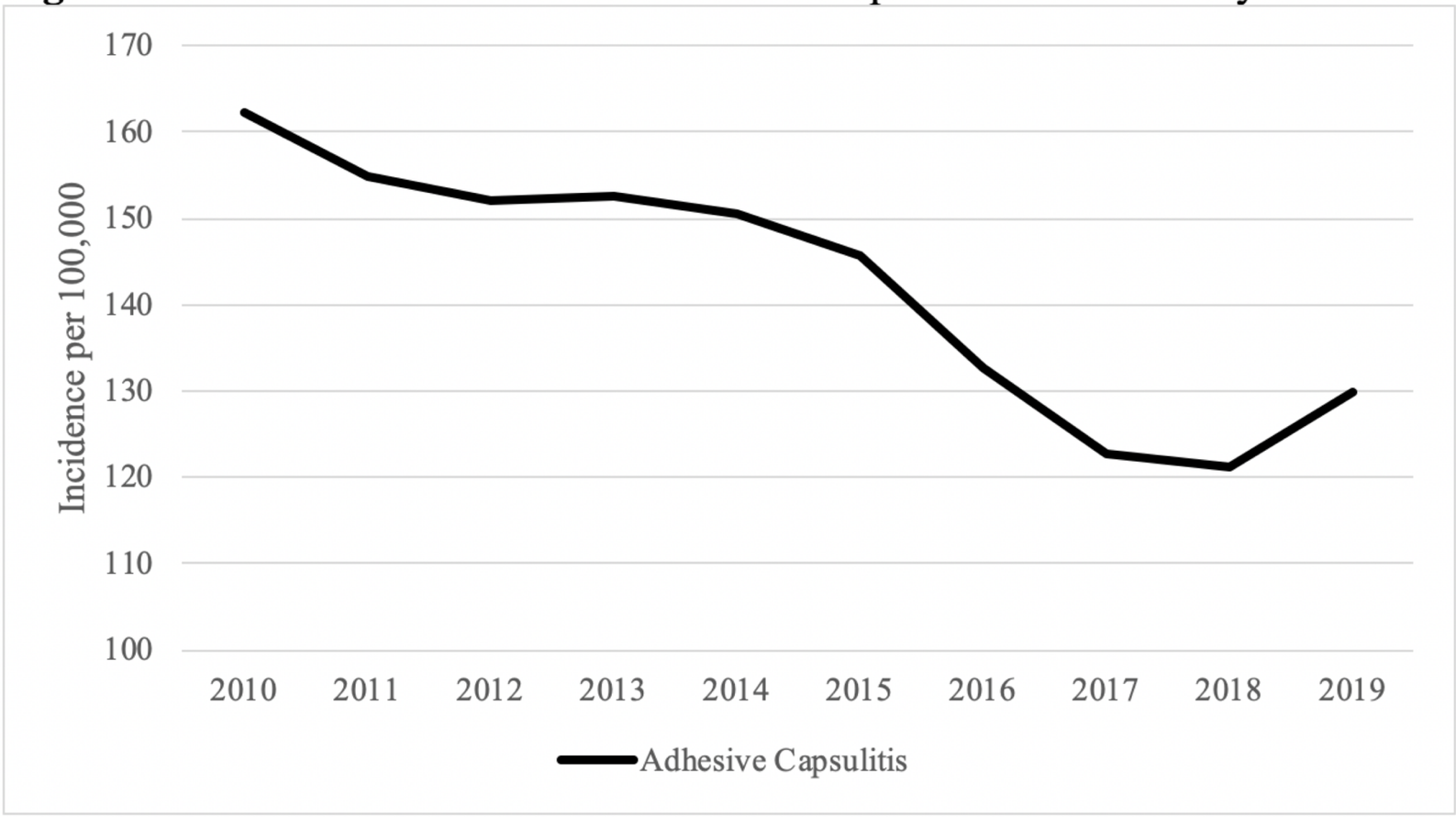
- Incidence of surgical management for adhesive capsulitis as well as average age, gender, and average Charleston comorbidity index (CCI) were analyzed. Surgical management included MUA and arthroscopic lysis of adhesions (ALOA).
- Compound annual growth rate (CAGR) was calculated for each trends analysis and a p-value<0.05 indicated significant findings.

Results

- A total of 908,980 patients with a diagnosis of adhesive capsulitis were identified between the years of 2010 and 2019.
- The incidence of adhesive capsulitis was 93,736 per 100,000 in 2010 and 83,886 per 100,000 in 2019 amounting to a significant decrease in the incidence during this period (CAGR: -2.01%, $p<0.001$).
- The trend of overall incidence of surgical management significantly decreased between 2010 and 2019 (CAGR: -5.77%, $p<0.001$) with 8,370 patients per 100,000 in 2010 and 4,870 per 100,000 in 2019.

Results

Figure 1. Trends in the incidence of adhesive capsulitis between the years of 2010 and 2019.

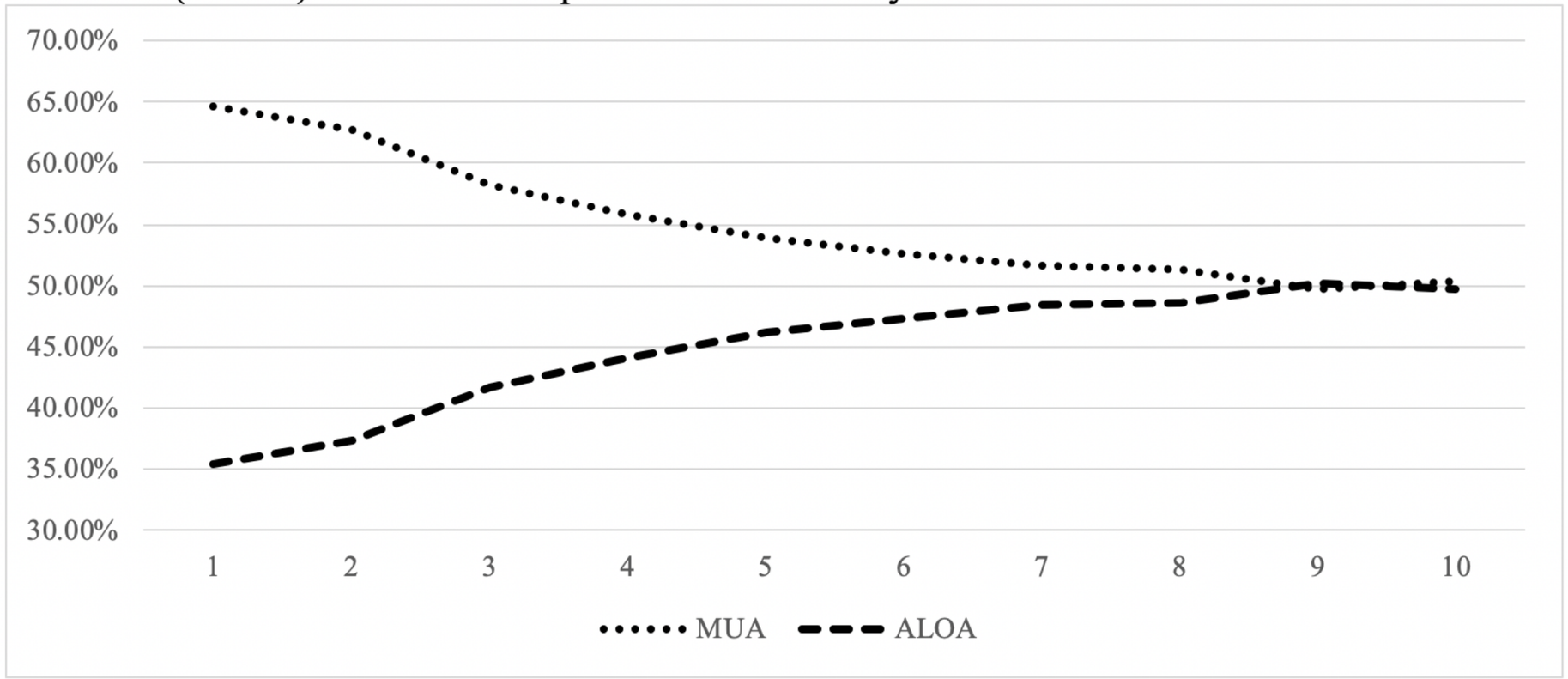


Results

- The utilization of MUA significant decreased (CAGR: -2.25%, $p<0.001$) while the utilization of ALOA significantly increased (CAGR: 3.13%, $p<0.001$) during this period.
- The average age of patients undergoing MUA increased but was not significant ($p=0.193$), while the average age of patients undergoing ALOA significantly increased (CAGR: 0.25%, $p=0.004$).

Results

Figure 2. Trends in utilization of manipulative under anesthesia (MUA) and arthroscopic lysis of adhesions (ALOA) for adhesive capsulitis between the years of 2010 and 2019.



Results

- The percentage of females undergoing MUA and ALOA peaked in 2018 with 71.40% and 58.24% undergoing the procedure, respectively.
- In terms of comorbidities, the average number of comorbidities of patients undergoing MUA And ALOA significantly increased (CAGR: 8.78%, p=0.001 and CAGR: 9.35%, p=0.004, respectively).

Conclusions

- This study showed that the incidence of adhesive capsulitis has decreased between the years of 2010 and 2019.
- Additionally, the incidence of surgical management for adhesive capsulitis has decreased.
- In terms of surgical modality, there has been an increase in the utilization of manipulation under anesthesia and a decrease in the utilization of arthroscopic lysis of adhesions during this period

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