

Associated Risks of Spontaneous Lung Collapse after Shoulder Surgery: A Literature Review

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Abstract : Background: Shoulder arthroscopy is an increasingly common procedure. Pneumothorax post-shoulder arthroscopy is a rare complication. Objectives: Our aim is to highlight a case report of pneumothorax post shoulder arthroscopy and to conduct a literature review to evaluate the possible risk factors associated with developing a pneumothorax during or after shoulder arthroscopy. Case Report: We report the case of a 75-year-old male non-smoker who underwent left shoulder arthroscopy without regional anaesthesia and in the left lateral position. The general anaesthesia and surgery were uncomplicated. The patient was desaturated postoperatively and was found to have a pneumothorax on examination and chest X-ray. A chest tube drain was inserted promptly into the right chest. He had an uncomplicated postoperative course. Methods: PubMed Medline and Cochrane database search was carried out using the terms shoulder arthroplasty, pneumothorax, pneumomediastinum, and subcutaneous emphysema. We selected full-text articles written in English. Results: Thirty-two articles were identified and thoroughly reviewed. Based on our inclusion and exclusion criteria, 14 articles, which included 20 cases of pneumothorax during or after shoulder arthroscopy, were included. Eighty percent (16/20) of pneumothoraxes occurred postoperatively. In the articles that specify the side of pneumothorax, 91% (10/11) occur on the ipsilateral side of the arthroscopy. Eighty-eight percent (7/8) of pneumothoraxes occurred when subacromial decompression was performed. Fifty-six percent (9/16) occurred in patients placed in the lateral decubitus position. Only 30% (6/20) occurred in current or ex-smokers, and only 25% (5/20) had a pre-existing lung condition. Overall, of the articles that posit a mechanism, 75% (9/12) deem the pathogenesis to be multifactorial. Conclusion: The exact mechanism of pneumothorax is currently unknown. Awareness of this complication and timely recognition are important to prevent life-threatening sequelae. Surgeons should have a low threshold to obtain diagnostic plain radiographs in the event of clinical suspicion.

Keywords : rotator cuff repair, decompression, pressure, complication

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