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Author

Webley, James

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To Do, or Not to Do, That Is the Question

James Webley, MD FAAEM*

Emergency physicians are the experts for anterior shoulder dislocation reductions. We have the drugs, we have the airway skills, we have the reduction techniques, and we do most of the shoulder reductions in the USA. Bring 'em on. We...just do it!

So, let me pose a hypothetical case for you.

While working in the ED you are transferred a demented nursing home patient who had a chest x-ray taken because he had been coughing. There was no pneumonia, but an anterior shoulder dislocation was discovered. The past records that accompany him do not mention any shoulder problem at all. Apparently, just a serendipitous finding. What would you do now?

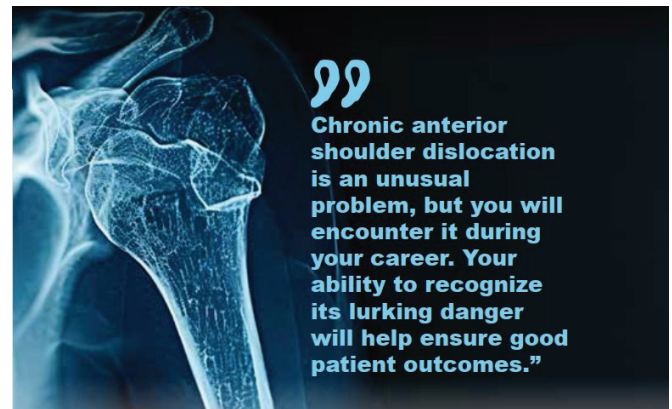
Let's go over a little history.

In 1941 Calvet reported a case series of 91 chronically dislocated anterior shoulder closed reductions.¹ After reduction, 68 of the patients had an axillary artery rupture and 34 died. (Yikes!) In 1996, Rockwood recommended reduction of chronic anterior shoulder dislocations in the operating room, under general anesthesia, and with a vascular surgeon available. The orthopedic community had learned Calvet's lesson and was wary.

The proposed mechanism for axillary artery rupture is thought to be:

1. Adhesions form between the chronically dislocated humeral head and the closely approximated axillary artery.
2. Reduction applies traction to the artery through the adhesions.
3. Traction causes the artery to rupture.

But what is a chronically unreduced anterior shoulder dislocation? Definitions of this vary all over the map from hours to a year. But, if the mechanism by which the artery's rupture is the formation of adhesions, three weeks would seem to be a very reasonable time frame.



Fine. But this is old news, right?

Verhaegen in 2012 reported two cases of axillary artery rupture following reduction of a chronic anterior shoulder dislocation.² One of these cases was only 12 weeks old. Recommendations in "The Shoulder Fifth Edition" say reduction of a chronic anterior shoulder dislocation should be done under general anesthesia. In a 2021 series of patients, the orthopedists performed all their gentle reductions under general anesthesia.³ It makes me a little queasy to read these articles since on several occasions I have unwittingly tried to reduce a chronic anterior shoulder dislocation.

Even though there is a risk, at least, we are helping the patient...right?

Well...not so fast. Sahajpal reviewed 50 cases of chronic anterior shoulder dislocation and there were 27 good results.⁴ (Hooray!) But no good results if the

shoulder was dislocated for more than four weeks. (Bummer.) So, an attempt of closed reduction has risk with no discernable benefit. A classic example of “Just don’t go there.”

Chronic anterior shoulder dislocation is an unusual problem, but you will encounter it during your career. Your ability to recognize its lurking danger will help ensure good patient outcomes.

So, what would you do with our hypothetical case? I’ll suggest since you do not know when the dislocation occurred, and it may well be more than three weeks, you should allow your local orthopedic surgeon to enjoy “this interesting consult.”

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