Date (CSS Member)	Message	Attached Documents
11/20/17 (Dr. Jon Warner)	Dear Members of the Codman Shoulder Society, Attached please find a case presentation of my patient. Any comments or advice on this case would be greatly appreciated. Thank you in advance for your help.	Case Presentation PPT
11/20/17 (Dr. Bassem Elhassan)	Dear JP, Tricky case. If he has family with him can you please ask them if his mother had normal pregnancy/ delivery with him. I do have a number of similar cases (probably 12) who I found that they had some type of complication at time of delivery which may mean that they had some obstetric brachial plexus injury that eventually resolved but they remained with the shoulder dysplasia. Based on his age I would reconstruct his posterior glenoid with osteochondral glenoid allograft or tricortical iliac crest bone graft. If the latter is done than the posterior capsule can be use for interposition. If he has associated significant anterior biceps pain then I would add subpectoral biceps tenodesis. Please keep us posted what you plan to do for him.	
11/20/17 (Dr. Jon Warner)	*Thank you Bassem. I'm surprise to hear you'd do an interposition of capsule over the bone graft given our experience with such interpositions in other circumstances. This also raises question as to stabilizing role of posterior capsule if you use it as such. Do you have a case with follow-up after such a procedure?*	
11/20/17 (Dr. Bassem Elhassan)	*Dear JP* *The posterior capsular interposition is completely different than what we had published. The main purpose for it is that to have living capsular tissues between the bone autograft or allograft and the native numeral head. The rest of the humeral head articulates with the native remaining glenoid.* *I have done close to 60 such reconstruction in patients with obstetric brachial plexus injury and or dysplasia. I haven't published about the one with obstetric which is the majority because the group is very heterogeneous with added surgeries like anterior capsular release, acromial osteotomy, trapezius transfer.*	*Patient Case PPT (Bassem Elhassan)*

	However for those who presented like your patient I have done probably a dozen with good results in around 80% of them. *However I do not have long term follow up.* *I'm going to ask one of my fellows to review them and will let you know.* *What I noticed is that as long as the humeral head is not fully poseriorly subluxated then they do well. However, if the humeral head is fully posteriorly subluxated then they may erode the posterior bone graft over time and these patients may better benefit from anterior release and possible lower trapezius transfer to balance the force couple and maintain the head centered.* *Will give you an update once I have the data.* *Hope this helps*	
11/21/17 (Dr. Jon Warner)	*Thanks Bassem. 60 cases is a large experience. Maybe I should suggest the patient come to you for what you plan. I had actually, long before you worked with me, done capsular interposition in posterior glenoid bone graft but never enough to write up. Not sure it was durable for my patients. I'd be very interested to see even one of your cases with a preop and postoperative X-ray or image of some kind.*	
11/20/17 (Dr. Amit Sood)	I would do biceps tenodesis. Dysplasia present for long time and shoulder pain only for 1.5 years, thus labral tear may be secondary to his line of work doing construction, so would treat him like any other symptomatic SLAP tear. Prefer tenodesis over repair because unsure if dysplasia resulting in any further strain to the superior labrum and this would avoid a recurrent tear.	
11/20/17 (Dr. Marc Safran)	JP – I rarely weigh in on these, and I know you have managed these before. The fact you are putting it out there may be because you have not found the solution that works best. But I do think the problem is the dysplasia, which I do not have a good answer for. But I think killing the biceps (tenodesis) is the wrong thing. The biceps likely hurts because it is overworking trying to provide some semblance of stability in the face of no bony contribution. The only thing I can think of for this guy is to provide some bony support – possibly posterior glenoid bone graft with	

	iliac crest, or consider distal tibial OC graft and if need be, can add anterior stability later as well. Just my thought	
11/20/17 (Dr. Jon Warner)	Thanks, Marc: My purpose is to help the patient with crowd sourcing through C.S.S. so that they feel they have a pooled opinion. This is simply Eminence as there is no Evidence for treatment. Appreciate your input. I think bone grafting likely to be treatment worse than the condition as there is no literature support that I know of this. My hope is to use C.S.S. in the future for such a sounding board but will try to bring this into a group format rather than emails.	
11/20/17 (Dr. Ruth Delany)	Dear Dr. Warner, I had a similar case last year, 29 years old, 35 degrees retroverted and painful. Some of my colleagues commented that they have found these patients often to have a very hypertrophic posterior labrum that is almost compensating for the glenoid dysplasia to an extent, and they have had some (at least temporary) success with repairing that arthroscopically - I wonder if we are seeing that on the axial image of the MRI shown in your presentation? In my patient, I scoped him in the hope that there would be something like that, but he had no posterior labrum to speak of and the posterior half of his glenoid was already arthritic. I ultimately did a posterior glenoid osteotomy (with iliac crest graft) on him, and so far he is reasonably happy at 18 months post op - SSV 70-80%, no pain, sleeping at night, has switched from construction to a computer job. Walch believes that doing the osteotomy tends to accelerate the arthritis, so I'm not sure in the long term if I did the right thing for this guy, but for now he is ok. I got a follow up CT scan at 6 months, which showed healing of the bone graft and osteotomy, but when I put it through Blueprint, I was disappointed to see the version had only been corrected to 16 degrees. Having said that, I planned out a total shoulder just to see if it was now possible in his shoulder, and it was, so I suppose I have gotten him to a point where TSA would be an option without needing posterior glenoid bone grafting or considering a reverse, and that in itself may buy time in the long term for him.	Case Presentation: GH Arthritis in a Young Patient PPT (Delaney)

	I think there is nothing to lose by scoping your patient first, addressing his biceps and possibly seeing if there is a posterior labrum to work with. Then if there is no improvement, I think it is worth considering a posterior glenoid osteotomy. I hope that is useful. I feel like I don't have anything much to offer that you don't already know. Happy Thanksgiving. P.S. Not sure I would agree to do the osteotomy in him if he continues to smoke. Also, I found the slides from the presentation of my similar case, presented last March at our national shoulder/elbow meeting, attached.	
11/20/17 (Dr. Jon Warner)	Thanks for sharing your case, Ruth. Very nice. Most surgeons would not recommend an osteotomy and I've had quite a bit of experience with this high risk operation. My experience has been continued OA with short period of pain relief. When you do this you also affect the infraspinatus which may be problematic. I've also done a Hemi with posterior bone grafting but these are rare cases. Not sure my patient bad enough for these treatments.	
11/20/17 (Dr. Jon Ticker)	JP: For this 25 yo smoker and drinker construction worker, I'd want to get to know him better. If he has not had PT and NSAIDs, personally, I'd start with that. Should that fail and you get a better sense of him, correcting his glenoid version (if the surfaces are acceptable) is likely the best to set him up for future procedures as needed. I've not had to do a posterior bone graft in years, so I'll defer to you and Bassem. If he's thinking about a career change, this might be the right time. I think he'll be your patient for as long as you are in practice in Boston once you operate on him. That's my 2 cents.	
11/20/17 (Dr. John Macy)	Hi Jp and all, He looks like he has well maintained joint space. I have several (5 or so) of these cases in patients <40, in which I have been " less aggressive " and done scope, posterior labral repair with absorbing anchors, leave glenoid retroversion alone, no biceps tenodesis (not their pain) and they have done "ok". In 1ppd smoker, all bets are off. I	

	would NOT do allograft in 25yo smoker/drinker. Too high risk for falls & failure in my hands. I also have several others (>40 yrs old) and done HH CAP Resurfacing, no change in glenoid retro, and they are doing ok (some are VERY satisfied, at least 3 with bilateral), buying time before conversion to augmented glenoid/total and/or Reverse. The ones that do ok are those with lower demands, not construction workers. I know how much you love Resurfacing ....but it really does work (when done well and not oversized) in the right patients (this is prob not one). Maybe good topic for Codman group study??	
11/20/17 (Dr. Joe Eichinger)	Difficult problem for sure and the evidence available to guide treatment is not great. However, I'd recommend a posterior labral repair. Yes - it has a higher potential for failure than if he didn't have dyplasia it but it can work. See attached paper - level 4 series but you can have patients with glenoid dysplasia experience a good outcome with a well done arthroscopic bankart repair. Obviously you need to warn the patient that it may not work but I would start there. I think the biceps symptoms will resolve if you can improve the posterior instability problem and would leave it alone. The biceps symptoms are likely a secondary problem. If the patient fails the arthroscopic labral repair then a congruent posterior bone graft can be successful. I would avoid the osteotomy. See JBJS review paper. My two cents!	Glenoid Dysplasia: Pathophysiology, Diagnosis, and Management (Eichinger et al JBJS 2016) Arthroscopic treatment of posterior shoulder instability in patients with and without glenoid dysplasia: a comparative outcomes analysis (Galvin et al JSES 2017)
11/20/17 (Dr. Brent Ponce)	Scope posterior labral repair at a minimum. Consider a bony augment. Nice if there was a way could arthroscopically augment with distal clavicle.	
11/20/17 (Dr. Philippe Clavert)	Dear JP, I had to treate such a case once. The patient has this dysplasia due to an infection during his childhood. I fixed the labrum and did nothing on the biceps even if I am still a biceps killer. I put the patient in a sling for a month and then started the rehab. I did an MRI 6 months after the surgery. The tear	

	healed. The result was good on the pain but the patient remained stiff in IR. He was happy with this.	
11/20/17 (Dr. Greg Mallo)	Dr. Warner, Just a thought- Perhaps you can gauge the contribution of the (SLAP)/biceps labral complex pathology to overall pain with a U/S guides biceps groove injection. Anecdotally, I have found this helpful in cases of overlapping or mixed pathology. (OA, radicular pain, AC pain) Also, as you taught me, smoking can be an issue with any bone grafting procedure especially allograft. Maybe the "low hanging fruit" ie the biceps can provide some relief.	
11/20/17 (Dr. Ronald Navarro)	Hi JP, Tough case patho-anatomically with those extenuating social history factors adding to degree of difficulty. I don't see many bridges burned by addressing the labral pathology especially if you (used loosely, more referring to an organizational imperative) can get him to stop smoking. You can always do the more herculean efforts if you don't reduce his pain to lower levels AND behavioral health may play a role in his expectations as well as modulate his understanding of pain.	
11/20/17 (Dr. George Athwal)	Hey JP, Great case, a worry for me is pain with "any shoulder motion". I have a difficult time making them better. For this case, I suspect there is nothing that will provide him with long term predictable pain relief. I would need to involve him in the decision making process. It is reasonable to consider labral repair, and bonegrafting primarily. Up to the patient. If you are keen to bonegraft as primary, which is not unreasonable, I would measure out his distal clavicle, may be enough and has cartilage. Final option, if all fails, I would mention fusion now.	

11/20/17 (Dr. Arnold Alqueza)	Dr. Warner, Difficult case. I wonder if imaging the contralateral shoulder would offer anymore information on his source of pain. If he has posterior glenoid hypoplasia as well on the left but no labral tear, then maybe the labral repair would make sense. With apprehension as well on the symptomatic side, I'm not sure there is a clear surgical solution that can be done in one setting. Maybe starting with the least complex first may be the way to go.	
11/20/17 (Dr. Neal Chen)	Agree with Bassem that this is probably a mild plexus that resolved When you put in scope I would assess the anterior capsule Looks hypertrophic as well Answer might be simple as an anterior release without L'Episcopo transfers	
11/20/17 (Dr. Reuben Gobezie)	JP, I would try an ultrasound guided injection into the biceps sheath to test the concept of whether or not this is the pain generator in his dysplastic shoulder	
11/20/17 (Dr. Peter Millett)	JP Tough case. I am not sure I have a great answer and more information might be helpful. Why does he have pain and what is the source? These would be the first questions I would answer. If the source is indeed his labrum, I would repair his labrum +\- biceps tenodesis. But it may not be that simple. We all have seen many patients with glenoid dysplasia who have xrays like this who are painless, so his exam or selective injections would be important to help elucidate the exact source of his pain. At 25, there are no perfect options, and no cures. Therefore in my opinion, all solutions will likely only be bridges to other surgical procedures. Fusion, bone grafting, caps interposition, osteotomy, arthroplasty, etc. all would be compromises that are non-	

	curative and would in my hands most likely reserved for more advanced disease.	
11/21/17 (Dr. Jon Ticker)	*Wait a minute.* *The first few words of my reply to you highlighted the smoking and drinking, which is why I would give pause. Anyway tho, I agree with Peter that anything done now is a bridge to the next one, so correcting the version with an extra-articular osteotomy could be considered.*	
11/21/17 (Dr. Mike Freehill)	Dr Warner, Have to take step back and really think about this. His complaints are vague and exam doesn't allow you to pinpoint the etiology of his pain. Coupled with the social factors- ppd smoker...To me this guy falls into the category of someone, as you taught us, you could make worse. I would first put some onus on him, will he quit smoking (cotinine tests), is he compliant. Would you diagnostic injections, staged (biceps sheath, intra-articular) to find primary source of discomfort. The posterior labral tear is large, and though he has 40 degrees of retroversion, reapir and posterior capsulorraphy could help him and perhaps smaller better initial intervention. Also, depending on biceps injection, subpec tenodesis. Thank you for this case- very thought provoking. Also, amazing to read so many experts thoughts and opinions- I learn so much from everyone and feel honored to be part of group.	
11/21/17 (Dr. Danny Goel)	Hi JP, My thoughts are as follows: You've listed this patient has had progressive pain. He presents with pain throughout and with motion. His exam suggests ROM loss (particularly 20d with ER). His MRI shows a centred GHJ with perhaps some thickening of the anterior capsule on the axial view. Given the common findings of labral pathology and glenoid dysplasia, his centered glenohumeral joint, I would not have expected loss of passive ROM but this seems to fit with his insidious non-traumatic onset.. Should this be the case, I would start with a structured PT program to establish full active and passive ROM. At present, if he truly has ROM loss, any active motion will preferentially load him posteriorly and would make an otherwise asymptomatic labral tear, now symptomatic.	
11/21/17 (Dr.	Dr Warner-	Shoulder Pain/Glenoid

Stephen Parada)	Thanks for initiating a great discussion on this. As everyone knows, posterior labral pathology is very common in the army and glenoid dysplasia continues to be something we encounter as well. I've attached a PPT of 3 recent patients with similar radiographic findings but different complaints and physical exam findings that I treated differently according to their response to treatment and whether or not they complained of instability. Spoiler: I did a posterior glenoid reconstruction with an allograft distal tibia in pt #3. I have done 6 of these surgeries in the last 3 years with moderate results. With only short-term follow-up on so few patients, I'm not sure I can yet make a determination of the overall success of this procedure. Certainly in patients who already have arthritic changes, they do not do as well. 4 of these patients have remained on active-duty, 1 was medically retired due to my surgery being his 5th shoulder surgery and one was medically retired due to psychiatric conditions. 6/6 had failed an arthroscopic posterior instability surgery and had continued complaints of posterior instability prior to my surgery. I'll continue to follow these patients and eventually be able to report these outcomes, however, I'm not sure there are any great options for patients like this. I appreciate this forum to discuss cases like this and have enjoyed reading the opinions of the group.	Dysplasia: A tale of 3 Patients PPT (Stephen Parada)
11/21/17 (Dr. Matt Provencher)	JP, Very interesting case. We had a pretty sizable series of these somewhat rare problems in the Navy from San Diego. One of the main areas was chronic scapular muscle dyskinesia. We worked extensively on this, including scapular shirts, positioning, biofeedback, etc. This was only successful to a small degree. I agree with Joe in that doing a posterior labral repair would be what I would recommend first if non surgical fails. We had reasonable success with this – but not all repairs lasted forever.	

	Interestingly, in "posterior" instability – obviously dysplasia and other issues here – we have found that the biceps is inflamed and theorize that this is due to posterior translation of the HH on the glenoid with "stress" in the biceps tendon restraint complex. In a more run of the mill posterior instability – we have published that biceps pain improved with appropriate rehab in the setting of a successful posterior stabilization. If this fails from a posterior stabilization standpoint – then I have then gone to a graft as Bassem suggested – either ICBG, but now transitioning to a fresh OC allograft (distal tibia). For these cases, I have been doing a 3D printout in plastic, obtaining a sawbones DTA and then doing the procedure at my desk prior to the OR. I then sterilize both the 3D printout and the DTA sawbones for the back table and then generally insert arthroscopic or "mini open" and fix arthroscopic from posterior. We need a better solution for this. By the way, wonderful forum for discussion – CSS is very impactful.	
(11/21/17) Dr. Bassem Elhassan	*Great input Matt,* *I echo your experience with distal tibia allograft, using fresh frozen glenoid osteochondral allograft.* *But as you have mentioned, we need longer follow-up and we will still need as a group to figure out the most appropriate treatment for this difficult group of patients.*	
11/22/17 (Dr. Steffen Jehmlich)	Dear JP, Difficult task. Evidence is low. First, I would check the contralateral side since Hypoplasia of the glenoid is often bilateral (JBJS 1993 Wirth/Rockwood case series 13 out 13 in group 1 and 2 / see attached paper) . If this is the case in this patient and he is painfree on the contralateral side I would consider a trial of PT with antiinflammatories because 3 reasons: 1. All tests are positive and to my mind inconclusive because the shoulder is in a state of inflammation. 2. In case of surgery the compliance of the pat. is probably low (alcohol, smoking) and with surgery at this point it could be an awful rehab (postoperative stiffness).	Hypoplasia of the glenoid. A review of sixteen patients (Wirth, Lyons, and Rockwood JBJS 2009) Painful Jerk Test (Kim, Park, Park, and Oh AJSM 2004)

	3. With less inflammation I would reassess the shoulder, if the Jerk test is without pain I would continue PT, if is painful I would opt for surgery (see attached paper). In case of surgery I would scope debride, check for cartilage damage and treat it and fix the chronic (posterior cyst formation) labral tear. I would only address the biceps if there is a considerable tear. I would not chose an iliac crest since it has all chances to fail (alcohol, smoking) and to be resorbed since posterior subluxation is mild. I would counsel the patient to consider to change his profession, if possible.	