



CASE REPORT

Neglected posterior dislocation of the shoulder: A systematic literature review



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KEYWORDS

axillary radiographic view;
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Summary Posterior dislocation of the shoulder (PSD) is a rare injury; the diagnosis is often missed on initial examination. We present a systematic review of the current literature and discuss the key of the diagnosis of PSD. We searched the MEDLINE, PubMed, EMBASE, MD Consult, and the Cochrane Controlled Trial Register databases for the articles according to our eligibility criteria. Finally, 53 articles were included in our systematic review. There were 242 shoulders in 205 patients. In total, in the initial assessment with anteroposterior radiographs in 166 cases, only 19 (11.4%) cases confirmed the right diagnosis. When anteroposterior combined with axillary or Y view radiographs or computed tomography were present as the initial assessments in 36 cases, the diagnoses were made correctly and timely (100%). When axillary or Y view radiographs or computed tomography were taken subsequently, the diagnosis was confirmed in all 205 patients.

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Introduction

Posterior dislocation of the shoulder is a rare injury (< 4% of all shoulder dislocations). The diagnosis of this injury is often missed (60–79%) on initial examination [1–4]. The

special clinical and radiographic characteristics made McLaughlin [4] consider it as a “diagnostic trap”.

Although the imaging technique is advancing and it is well known now that it is important to recognize posterior dislocations of the shoulder, many cases continue to be missed by the physicians who first see the patients and therefore appropriate treatment is delayed. Delay between injury and diagnosis has been reported to be as long as 10 years in some cases. A considerable number of patients with delay on diagnosis resulted in chronic pain, stiffness, and functional disability. The most common causes for delay include the physician’s failure to suspect the

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Table 1 Inclusion/exclusion criteria.

Inclusion criteria	Exclusion criteria
General adult population	Radiologic reports, review articles, technical notes
Original journal publication in English	Case report/series with no details about patients
Published between 1980 and 2013	Only observational or descriptive studies without follow-up
Level I, II, III, or IV study	

diagnosis on the initial examination, late presentation by the patient, and inadequate radiographic investigation. The key to diagnosis of this injury lies in maintaining a high index of clinical suspicion and performing appropriate radiographic investigations.

Because of a relatively high incidence of delay on the recognition of PSD, this paper presents a systematic review of the current literature and discusses the key of the diagnosis of PSD.

Systematic review of the literature

In December 2013, a systematic search was performed in the MEDLINE, PubMed, EMBASE, MD Consult, and the Cochrane Controlled Trial Register databases by two independent reviewers. Article inclusion criteria consisted of all journal articles published from 1980 to November 2013. Search keywords included: shoulder, posterior dislocation, and reverse Hill–Sachs. Studies without full-text were not included. Articles referring to traumatic posterior instability without actual traumatic dislocation were also excluded. References of the obtained articles and relevant articles were also screened. Search results were screened according to the eligibility criteria (Table 1). Finally, a set of 53 articles [2,5–56] was included in our systematic review (Tables 2 and 3).

Results

Study flow is outlined in Fig. 1. Only 53 articles were retained for data extraction after evaluation. Of these articles, 15 were case series (> 5 patients) and 48 were case reports (< 5 patients). There were 242 shoulders in 205

Table 2 Patients missed initially.

Study	Year	Population	Age (y)	Sex	Aetiology	Uni/Bilateral	Delay (mo)	Initially radiological investigation
Vastamäki and Solonen [5]	1980	2	50.5	F (1), M (1)	Seizures	Uni (1), Bil (1)	13.5	AP
Hawkins et al. [2]	1987	21	49.2	M	Trauma (11), seizures (10)	Uni	12	AP
Keppler et al. [10]	1994	7	53	M	Trauma	Uni	5.2	AP
Gerber et al. [12]	1996	4	56	F (3), M (1)	Trauma (1), seizures (3)	Uni	5	AP
Cheng et al. [15]	1997	5	58	F (3), M (2)	Seizures	Uni (3), Bil (2)	23	AP
Aparicio et al. [18]	2000	6	53.7	F (2), M (4)	Trauma (2), seizures (4)	Uni (5), Bil (1)	3.9	AP
Bozkurt et al. [26]	2004	1	41	M	Trauma	Uni	6	AP
Sperling et al. [27]	2004	12	56	F (6), M (6)	Trauma (6), seizures (6)	Uni	26	AP
Spencer et al. [29]	2005	2	45	F (1), M (1)	Trauma	Uni	1.25	AP
Takase et al. [30]	2006	1	41	F	Trauma	Uni	28	AP
Verma et al. [31]	2006	1	26	M	Trauma	Uni	1	AP
Duralde et al. [33]	2006	4	52	M	Seizures	Uni	0.13	AP
Martinez et al. [35]	2008	6	31.6	F (3), M (3)	Trauma (3), seizures (3)	Uni	2	AP
Agarwal et al. [36]	2008	1	66	M	Seizures	Bil	0.03	None
Ivkovic et al. [37]	2007	1	52	M	Seizures	Bil	3	None
Chalidis et al. [38]	2008	1	34	F	Trauma	Uni	3	AP
El Shewy et al. [39]	2008	17	48.5	F (3), M (14)	Trauma (14), seizures (3)	Uni	0.75	AP
Gavriilidis et al. [41]	2010	11	53	F (1), M (10)	Trauma (8), seizures (3)	Uni (10), Bil (1)	13.9	AP
Singh et al. [42]	2009	3	37	M	Trauma	Uni	4.7	AP
Diklic et al. [43]	2010	13	42	F (3), M (10)	Trauma (10), seizures (3)	Uni	4	AP
Modi et al. [45]	2009	1	64	M	Trauma	Uni	0.6	AP
Toker et al. [46]	2012	1	34	M	Trauma	Uni	0.07	AP
Schliemann et al. [47]	2011	25	53	M	Trauma	Uni	2.2	AP
Li et al. [48]	2011	1	30	F	Trauma	Uni	1	AP
Poyanli et al. [50]	2011	1	52	M	Seizures	Bil	1	None
Torrens et al. [51]	2012	1	45	M	Seizures	Bil	3	AP
Kokkalis et al. [55]	2012	1	40	M	Seizures	Bil	4	AP

AP = anteroposterior radiograph; F = female; M = male.

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