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Care pathways in physical and rehabilitation medicine (PRM): The patient after proximal humeral fracture and shoulder hemi-arthroplasty

Parcours de soins en médecine physique et de réadaptation (MPR) : le patient après fracture de l'extrémité supérieure de l'humérus traitée par prothèse humérale

P. Ribinik [a,*], P. Calmels [b], P. Edouard [b], M. Genty [c], A.P. Yelnik [d]

[a] *Service de MPR, centre hospitalier de Gonesse, BP 30071, 95503 Gonesse cedex, France*
[b] *Service de MPR, laboratoire de physiologie de l'exercice (LPE EA 4338), CHU Bellevue, 42055 Saint-Étienne cedex 02, France*
[c] *Centre thermal d'Yverdon, avenue des Bains 22, 1400 Yverdon-Les-Bains, Switzerland*
[d] *UMR 8194, service de MPR, université Paris Diderot, groupe hospitalier Saint-Louis–Lariboisière–F.-Widal, AP–HP, 200, rue du Faubourg-Saint-Denis, 75010 Paris, France*

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Abstract

This document is part of the ''Care Pathways in Physical and Rehabilitation Medicine'' series developed by the French Physical and Rehabilitation Medicine Society (Sofmer) and the French Physical and Rehabilitation Medicine Federation (Fedmer). For a given patient profile, each concise document describes the patient's needs, the care objectives in physical and rehabilitation medicine, the required human and material resources, the time course and the expected outcomes. The document is intended to enable physicians, decision-makers, administrators and legal and financial specialists to rapidly understand patient needs and the available care facilities, with a view to organizing and pricing these activities appropriately. Here, patients with acute proximal humeral fracture requiring shoulder hemi-arthroplasty are classified into four care sequences and two clinical categories, both of which are treated according to the same six parameters and by taking account of personal and environmental factors (according to the WHO's International Classification of Functioning, Disability and Health) that may influence patient needs.

Keywords: Shoulder hemi-arthroplasty; Care pathway; Physical and rehabilitation medicine

Résumé

Le présent document fait partie d'une série de documents élaborés par la Société française de médecine physique et de réadaptation (Sofmer) et la Fédération française de médecine physique et de réadaptation (Fedmer). Ces documents décrivent, pour une typologie de patients, les besoins, les objectifs d'une prise en charge en médecine physique et de réadaptation (MPR), les moyens humains et matériels à mettre en œuvre, leur chronologie, ainsi que les principaux résultats attendus. Le « parcours de soins en MPR » est un document court, qui doit permettre au lecteur (médecin, décideur, administratif, homme de loi ou de finance) de comprendre rapidement les besoins des patients et l'offre de soins afin de le guider pour l'organisation et la tarification de ces activités. Les patients présentant une fracture de l'extrémité supérieure de l'humérus et traités par prothèse humérale sont ainsi présentés en quatre périodes et deux catégories cliniques, chacune étant traitée selon les six même paramètres tenant compte, selon la Classification internationale du fonctionnement, des facteurs personnels et environnementaux pouvant influencer les besoins.

Mots clés : Prothèse humérale ; Parcours de soins ; Médecine physique et de réadaptation

1. English version

This document is part of the ''Care Pathways in Physical and Rehabilitation Medicine'' series developed by the French Physical and Rehabilitation Medicine Society (Sofmer) and the

* Corresponding author.
E-mail address: patricia.ribinik@wanadoo.fr (P. Ribinik).

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French Physical and Rehabilitation Medicine Federation (Fedmer). The objective is to inform future discussions on pricing for follow-up and rehabilitation care activities by suggesting procedures that complement the fee-for-service approach. For a given patient profile, each document provides an overview of the patient's needs, the care objectives in physical and rehabilitation medicine (PRM) and the required human and material resources. The first ''Care Pathways in PRM'' documents are now available on the Sofmer's website (www.sofmer.com) and have been published in the medical literature [1,4,9,11–15]. The documents are deliberately concise, so that they are easy to read and apply. They are based on the opinion of the contributing expert group, following an analysis of the regulations, legislation and guidelines in force in France [5,7,10], a literature review [2,3,6,8] and validation by the Sofmer's Scientific Board.

However, each document in the ''Care Pathways in PRM'' series is much more than a simple tool that can be used when discussing pricing: it also helps us to define the true content of our fields of expertise in physical and rehabilitation medicine. For each condition, patients are first grouped into the main categories as a function of the severity of their disability. Each category is then subdivided according to the International Classification of Functioning, Disability and Health (i.e. as a function of the various personal or environmental parameters likely to influence execution of the ''optimum'' care pathway).

Patients having undergone shoulder hemi-arthroplasty for proximal humeral fracture are classified into four care sequences and two categories that take account of personal and environmental factors.

1.1. Target population

Patients having undergone shoulder hemi-arthroplasty after a proximal humeral fracture.

1.2. The care sequences

1.2.1. Principles

The time line for post-surgical care is related to the patient's health status prior to the trauma, other comorbidities prior to surgery (e.g. trauma-associated lesions), the time required for bone consolidation, the surgical technique and the implants used.

The organizational procedures for post-surgical care take account of the patient's health status and sanitary/social environment.

The care pathway described here corresponds to the most commonly encountered situations.

1.2.2. Categories and phases

One can define two categories and four phases:

- category 1: one impairment;
- category 2: several impairments.

Each category can be divided into six subcategories:

- a: impairment with no additional barriers;
- b: a requirement for material adaptation of the patient's environment;
- c: an inappropriate or inadequate medical care network;
- d: social difficulties;
- e: career plans;
- f: associated medical conditions with a functional impact.

1.3. Category 1: one impairment

1.3.1. Impairment with no additional barriers (1.a)

1.3.1.1. The preoperative phase (1.a.1). In the context of trauma, this phase (which is generally an integral part of care pathways that subsequent involve surgery) is often quite short and is conditioned by the patient's clinical status. In most cases, it is performed by the surgical team in an orthopaedic unit.

However, there are still a number of objectives – although the latter may be difficult to set up or perform:

- provide information on the post-surgical follow-up as part of a collaborative project between the surgeon and the PRM specialist;
- perform an analytical preoperative assessment and evaluate socioprofessional conditions, in order to determine a functional prognosis and guide future referrals;
- propose referral for postoperative rehabilitation and functional retraining.

1.3.1.2. Phase 1. Rehabilitation between postoperative weeks 1 and 4, when the patient's arm is immobilized (1.a.2)

1.3.1.2.1. Objectives. The objectives are: pain relief, application and adjustment of the sling, maintenance of elbow, wrist and fingers mobility, adaptation for activities of daily living.

1.3.1.2.2. Resources. The resources used are as follows:

- in the surgical department – immediate postoperative care:
  - check-up for massage/physical therapy (MP), plus daily MP,
  - an assessment or consultation with a PRM specialist (recommended for complex clinical or environmental situations);
- following discharge from the surgical department. Outpatient care:
  - MP two to three times a week for 4 weeks,
  - an MP assessment before and after the series,
  - consultation with the surgeon at postoperative week 4.

1.3.1.3. Phase 2. Between postoperative weeks 4 and 6 (with consolidation of the tuberosities at week 6) (1.a.3)

1.3.1.3.1. Objectives. Recovery of passive shoulder mobility, pain relief.

1.3.1.3.2. Resources. The outpatient care is as follows:

- MP five times a week (or daily) for 2 weeks;