

Burden of hospitalizations related to spinal tumors in France

2012 VS 2014

OBJECTIVES

The burden of hospitalizations related to spinal tumors in France has previously been published by extracting data from the PMSI 2012-2013 (French Medical Information System)¹. With regards to the availability of new treatments, the objective of this study was to reassess the burden of hospitalizations related to spinal tumors in France in 2014-2015. A descriptive benchmark has been performed with the previous study in order to highlight potential evolutions.

METHOD

DATA EXTRACTION

Study period:

January 1st, 2014 to December 31st, 2015.

Design:

Retrospective study of the PMSI-MCO (Medicine, Surgery, Obstetric) 2014-2015 database, a comprehensive collection of all inpatient stays in France.

Data extraction:

All hospital stays in 2014 with spinal tumors were extracted from the PMSI, using International Classification of Diseases, 10th revision (ICD-10) codes to identify spinal tumors: C41.2 or C41.4 or C41.8 as principal/related diagnosis (PD/RD) or significantly associated diagnosis (SAD) for primary tumors; association of ICD-10 codes C79.5 and M49.5* as PD/RD/SAD or M49.5* alone as PD/RD for secondary tumors.

PATIENTS AND HOSPITAL STAYS SELECTION AT INCLUSION

An algorithm and a medical review were carried out to identify stays related to spinal tumors:

- Stays with primary tumors as PD/RD as well as stays combining codes C79.5 and M49.5*, one of which as PD/RD were automatically selected.
- A medical review in collaboration with a coding physician was deemed necessary when the following criteria were encountered: primary tumor codes as SAD; C79.5 and M49.5* codes both as SAD; M49.5* code as PD/RD without any other spinal tumor code. This medical review aimed at excluding stays which were not directly related to spinal tumors.

FOLLOW-UP OF PATIENTS

Patients were followed during one year from their first stay in 2014 (e.g. March 2014 to March 2015).

An additional selection of all their 2015 stays with spinal tumors was performed according to the algorithm and medical review above described.

ECONOMIC EVALUATION

Hospital costs were estimated from a healthcare payer's perspective. Associated costs during this period were added up: a total annual cost ("burden") as well as a median annual cost per patient were calculated. Valuation was performed considering French official DRG (diagnosis related groups) tariffs for 2014 and 2015 expressed in 2017 Euro, as well as supplements.

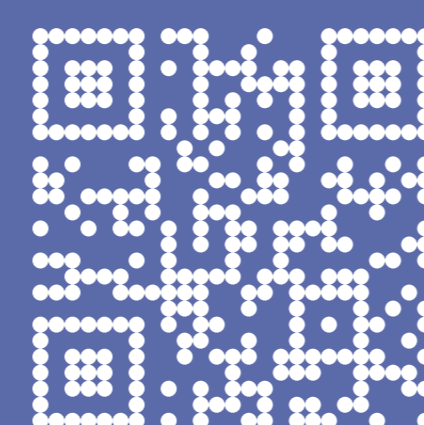
BENCHMARK TO 2012-2013 DATA

Same database and method had been used in the 2012-2013 analysis¹. 2012-2013 costs were updated in 2017 Euro.

CONCLUSION

The current study highlights an increase of the number of patients hospitalized for spinal tumors in 2014: 3,445 patients (+4.9%) for a total of 10,029 hospitalizations during one year of follow-up (+6.5%). While chemotherapy sessions decreased (-15.3%), more radiotherapy sessions were performed (+13.0%). Hospital-related costs associated with spinal tumors remained high, increasing of +7.5%. Similarly, the median annual cost per patient increased by +11.3%. New spinal tumors treatment modalities could reverse this trend.

References :
 (1) de Léotoing L, Fernandes J, Tournier C, Jouaneton B, Vainchtock A. An Assessment of Annual Costs of Patients Hospitalized for Spinal Tumors in France: Analysis Using the PMSI Database. Value Health. 2015 Nov;18(7):A443.



RESULTS



POPULATION

2012 - 2013

9,415 stays

3,284 patients

Stays

+6.5%

Patients

+4.9%

2014 - 2015

10,029 stays

3,445 patients



CHARACTERISTICS OF PATIENTS AND STAYS

2014-2015

- The characteristics of patients and stays were almost the same as 2012 - 2013.
- Patients were 66 ± 19 years old on average and were mainly female (53%). 3 out of 4 patients were above 56 years old.
- During the 1-year follow-up, 203 patients (6%) died at hospital. 335 patients (10%) presented an advanced multiple myeloma (ICD-10 codes C90* as PD/RD/SAD). 95% of stays occurred in public hospitals.
- Ambulatory stays (length of stay, LOS = 0 day) accounted for more than half of the stays (56%). Median LOS associated with full hospitalizations (LOS > 0 days) was 7 days [Q1 3 – Q3 15].



TYPE OF MANAGEMENT (STAYS)

2012 - 2013

27.6%
2601

29.9%
2814

1.4%
135

30.4%
2860

6.3%
590

2.0%
185

2.4%
230

Chemotherapy

-15.3%

Radiotherapy*

+13.0%

Palliative care

+9.9%

Other medical management

-1.4%

Spine surgery

+10.3%

Other surgery

-21.3%

Other management

+15.5%

*Public hospitals only

2014 - 2015

23.4%
2 348

33.8%
3 387

1.6%
158

30.0%
3 005

6.9%
693

1.5%
155

2.8%
283



TOTAL COST

2012 - 2013

€26.3 million

+7.5%

2014 - 2015

€28.5 million

2012 - 2013

€5,900
€3,005 - €9,107

MEDIAN COST (PER PATIENT)

+11.3%

Q1 - Q3

2014 - 2015

€6,556
€3,522 - €9,681