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Bulletin de la Dialyse à Domicile

Home dialysis in french speaking countries in 2020 (RDPLF* data base).

(Dialyse à domicile dans les pays francophones en 2020 (base de données RDPLF)

* RDPLF : french language peritoneal dialysis and home hemodialysis registry.

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Note : ce texte est disponible en Français à la même adresse url : https://doi.org/ 10.25796/bdd.v4i1.61543

Résumé

Le RDPLF collecte les principales données de dialyse péritonéale des centres francophones et, depuis 2012, celles hémodialyse à domicile (HDD). Cet article présente une synthèse des principaux résultats dans le RDPLF en 2020. Il met en évidence des différences importantes dans les pratiques et les profils des patients entre pays francophones. La mortalité chez les patients avec symptomes cliniques de COVID-19 a varié de 15 à 63 % selon les pays. Une légère baisse du taux d'incidence en dialyse péritonéale en 2020 a été observée alors que la pandémie Covid-19 aurait dû favoriser le domicile. Chez les patients en HDD, l'hémodialyse quotidienne cinq jours sur sept, à bas débit de dialysat, est prédominante dans les nouveaux centres et commence à apparaître parfois comme un mode de transition qui permette le maintien à domicile des patients qui ne peuvent continuer en dialyse péritonéale. En HDD l'utilisation d'un cathéter central est fréquente en Belgique alors que ceci est exceptionnel en France. De même, en France, la ponction de la fistule artério veineuse demeure classique alors qu'en Belgique la technique Buttonhole est largement préférée. Nous n'avons pas observé de mortalité COVID-19 en HDD en 2020 mais seuls 47 % des patients HDD sont inclus dans le RDPLF alors que 98 % des patients de DP sont inclus.

Abréviations :
DPCA : Dialyse Péritonéale Continue Ambulatoire
DPA : Dialyse Péritonéale Automatisée sur machine
DP : Dialyse Péritonéale
HDD : Hémodialyse à Domicile

Mots clés : DPCA, DPA, Dialyse Péritonéale, Hémodialyse à Domicile, registre

Summary

The RDPLF collects the main peritoneal dialysis data from centers in French-speaking countires and, since 2012, home hemodialysis (HHD) data. This article presents a summary of the main results in the RDPLF in 2020. It highlights important differences in the practices and patient profiles between French-speaking countries. Mortality in patients with clinical symptoms of COVID-19 varied from 15 to 63% depending on the country. A slight drop in the incidence rate for peritoneal dialysis in 2020 was observed when the Covid-19 pandemic should have favored a dialysis treatment at home. In patients with HHD, daily hemodialysis five days a week, at a low flow rate of dialysate, is predominant in the new centers and sometimes begins to appear as a mode of transition which allows to maintain at home patients who cannot anymore be treated by PD. In HHD, the use of a central catheter is frequent in Belgium while this is exceptional in France. Likewise, in France, puncture of an arteriovenous fistula remains classic, while in Belgium the Buttonhole technique is widely preferred. We did not observe COVID-19 mortality in HHD in 2020 but only 47% of HDD patients are included in the RDPLF while 98% of PD patients are included.

Abbreviation :
DPCA : Continuous Ambulatory Peritoneal Dialysis
DPA : Automated Peritoneal Dialysis
DP : Peritoneal Dialysis
HDD : Home Hemodialysis

Key words : CAPD, APD, Peritoneal dialysis, home dialysis registry

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I – PERITONEAL DIALYSIS

Introduction

The database of the French Peritoneal Dialysis Registry (RDPLF) contains data from patients treated with peritoneal dialysis (PD) at home since 1986, or even since 1980 in some centers. For the main module, the total number of patients, all of whom are from Francophone countries, is 45,150 as of December 31, 2018. The latter main module is practically exhaustive for France because it contains a few more patients than that of the Renal Epidemiology Information Network (REIN) registry, which is considered exhaustive. The differences in the number of patients treated with PD in the REIN and RDPLF are probably due to a different update rate of patient records (annual for the REIN, real time for the RDPLF). The other modules are of variable completeness but remain representative of a large number of patients as shown in Table I.

A detailed description of the RDPLF data base was published a few years ago [1], and various articles on optional modules have been published recently [2-9] to which we refer the reader. The aim of this article is to summarize the raw results observed in the main module in 2020 and to encourage, from there, future more elaborate researchs in the RDPLF data base with more elaborated statistical modeles.

⬇ *Table I. Number of centers and patients included in each module (section) of the RDPLF since 1986*

Modules	Centers included	Patients included
Main mandatory module (survival and infection)	243	45,140
Nurse section	179	15 000
Nutrition et dialysis adequacy section	109	3694 (13132 reports)
Catheters section	190	12615 (13438 reports)
Anemia section	117	3288 (16395 reports)
Cardiac insufficiency	56	216 (770 reports)

Entry methods and quality control.

Of the centers, 95% enter their data through the web, the majority of them in real time without a delay of more than 1 month between two updates. Quality control of the data is ensured at several levels:
- Automatic control of absence of data or likelihood by the software.
- Real-time control by the secretary at each web entry of the centers.
- Daily check by a nurse.
- Monthly check by a second nurse.
- Reminder for each center by the secretary when highlighting an oversight or possible error during quality control, with the ultimate call made by a doctor if necessary.

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Participation of Francophone Centers at the RDPLF

Historically, the centers that participated in the RDPLF in DP are the following:

Algérie : 3 centres, Argentine : 1 centre
Belgique : 31 centres
Congo : 1 centre
France : 256 centres
Maroc : 7 centres
Sénégal : 1 centre
Suisse : 4 centres
Tunisie : 7 centres
Uruguay : 2 centres

Argentina, Congo, Senegal and Uruguay ceased their participation after 2 to 3 years so that, in 2020 and Algeria too, but one center of Algeria started again to participate from eary2020, so six Francophone countries have continued to regularly participate for more than 30 years. The number of centers and patients followed in 2020 is summarized in Table II.

⬇ *Table II. Active centers in 2020 and number of patients treated as of December 31, 2020*

Countries	Centers	Patients
Algeria	1	10
Belgiium	17	323
France+DROM	153	2891
Marocco	6	171
Switzerland	3	38
Tunisia	6	209

Profile of patients treated in Francophone countries participating in the RDPLF.

We have split metropolitan France and DROM-COM knowing that Martinique and Guadeloupe do not participate in the RDPLF and only the centers in Reunion, New Caledonia and Tahiti are grouped in the DROM-COM region. Different populations and climatic conditions justify the distinction of metropolitan France. The age averages, the comorbidities summarized using the Charlson index [10] and the presence or absence of diabetes vary widely from one region to another, explaining the need for assistance. Intervention by the family or a nurse depends on the capability to provide financial support, family solidarity or availability of caregivers. In Morocco, the high percentage of uncompleted assessments when the majority of patients are transplantable is probably due to the fact that some centers start the assessment only when a living donor is expected. Data are summarzed in table III.

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Table III : Profile of patients from the RDPLF who are treated with PD in the Francophone region

	France metro	DROM-COM	Belgium	Marocco	Tunisia
% male	60	50	64	51	55
Age±SD	67±17	58±14	62±17	44±17 + 26 % children : 8.5±49 yrs	42±16
Charlson median	6	6	6	2	2
Percentage diabetes	36	57.2	37	12	20
Cardio Renal syndrome (%)	5.8	0	6	0	0
Autonomous(%)	53.7	53.3	62.2	70.4	92
Nurse assisted(%)	40.3	36.2	24.8	0.49	0
Familiy assisted (%)	5.5	8.3	11,5	29	8
Assisted without pre-cision(%)	0.4	2.2	5	0	0
Not transplantable (%)	46.3	42	48.6	21.8	13.8
Refuse to be Trans-plantated (%)	5.3	6.1	4	7.8	4.7
Pre transplant exams not done (%)	6	3.5	5.3	23.8	23.7
Under pre transplant examination (%)	16.7	30.5	15.5	17	24
Registered on waiting list	25	25	22	7.7	4.7

Presence of arteriovenous fistula.

Opinions on the utility of performing an arteriovenous fistula (AVF) in patients treated with PD remain contradicting. This should be done at the level of the RDPLF, which is the subject of further study. The purpose of this article is to make an inventory by looking into patients who underwent treatment as of January 1, 2021, and the percentage of those with an AVF.

In Belgium, 6,5% of the patients had an AVF.
In France, 5,3% of the patients had an AVF.
In Marocco, 22,8% of the patients had an AVF.
In Switzerland, 0% of the patients had an AVF.
In Tunisia, 8,2% of the patients had an AVF.

We made a calculation by considering only those patients on a transplant waiting list:

In Belgium, 8,9% of the patient on the waiting list had a AVF preexisting to PD and 0% had a AVF during PD.

In France, 4,2 % of the patients on the waiting lis had a AVF preexisting to PD and 1,7% had a AVF during PD.

In Morocco, 26% had a preexisting at PD and 11% had a AVFduring PD.

In Tunisia, 16,6% had a preexisting AFV at PD, none during PD.

Recall that, in 2008, the working groups at the High Authority of Health considered not recommending (strong agreement), in case of DP, an AVF if the patient is waiting for transplantation [11].

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Treatment modalities used in the French-speaking region as of December 31, 2020.

Treatment modalities widely vary over time and from country to country (Table IV). Apart from Tunisia, the majority of the countries have a higher proportion of patients treated with continuous ambulatory peritoneal dialysis (CAPD) at the start of the treatment before they are transferred DPA. Thus, it appears that the tendency of studies to consider a 90-day treatment as a stable treatment is an approximation that still ignores 6% to 8% of the transfers from DPCA to DPA.

⬇ *Table IV : Variation of the PD modality by country*

	Initial treatment		Treatment at day 90		Last known treatment	
	CAPD	APD	CAPD	APD	CAPD	APD
Belgiium	64%	36%	41%	59%	38%	62%
France	80%	20%	67%	33%	61%	39%
Marocco	55%	45%	50%	50%	42%	58%
Switzerland	92%	8%	79%	21%	66%	34%
Tunisia	38%	62%	38%	62%	37%	63%

Peritoneal infections.

Peritoneal infections in patients in 2018 are summarized in Table V. Although infection rates are relatively similar in France, DOM-TOM and Belgium, they appear significantly lower in Morocco and especially inTunisia. It is important to remember that during regular database quality checks, centers that have a low rate of infection are systematically called to confirm whether all infectious episodes are reported. No explaintation is evident for the extremely low rates in Tunisia : under declaration of peritonites was supected, but the physicians in charge of feeling the registry permanently confirmed the number were real and they declared all episodes. The percentage of peritonitis in which no germ is identified is significantly higher in DOM-TOM, Morocco and especially Tunisia, where no germ is identified in 43% of the cases. Recall that in international recommendations, the percentage of peritonitis without organism should not exceed 15% [12]. In France, this percentage is low. There are, however, significant variations between centers as has been demonstrated in a previous article of this review [13]

⬇ *Table V: Frequency of peritonitis in prevalent patients in 2020 (months between episodes)*

Systems	France metro	DOM-COM	Belgium	Marocco	Tunisia
All	40	26	23	34	71
CAPD	42	26	27	39	48
APD	39	26	21	30	99
Aseptic peritonitis	20%	23,7%	18,9%	37%	36%

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Duration of the treatment and events.

In Figures 1 to 4, we have presented the incidence of transfer, death and transplantation events in France, Belgium, Morocco and Tunisia respectively, taking into account competitive risks. It is important to note that these curves are indicative as they are not adjusted for age, sex and co-morbidities which differ widely from one region to another (see Table III). The causes of patients stopping dialysis in 2020 are summarized in Table VI for France and Belgium. We did not do the calculations for Tunisia and Morocco because the numbers over one year were too low for a sufficient estimate.

These curves were produced using the RDPLF WEB application, which was previously described in a previeoux issue [14], available at the URL: https://shiny.rdplf.org/rdplf-hdd/

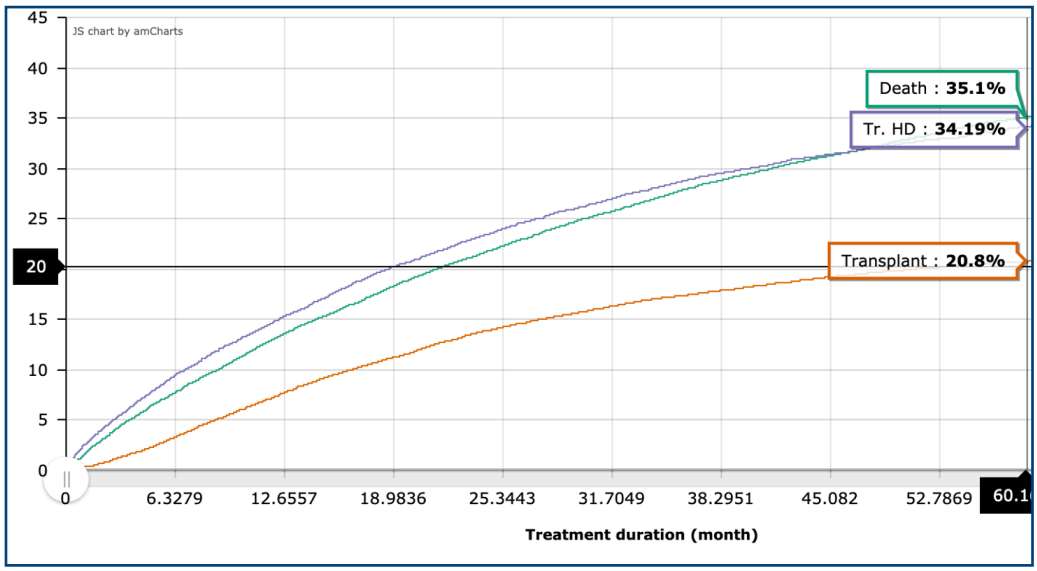

Figure 1. Cumulative incidence of events on PD in FRANCE in incident patients from 2010 January to 2020 december, using competitive events

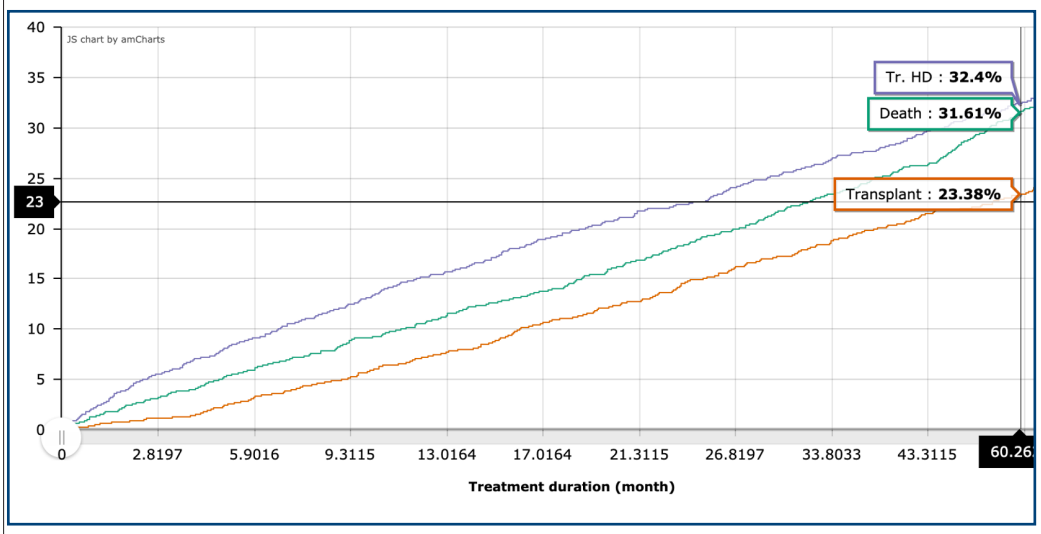

Figure 2. Cumulative incidence of events on PD in BELGIUM in incident patients from 2010 January to 2020 december, using competitive events

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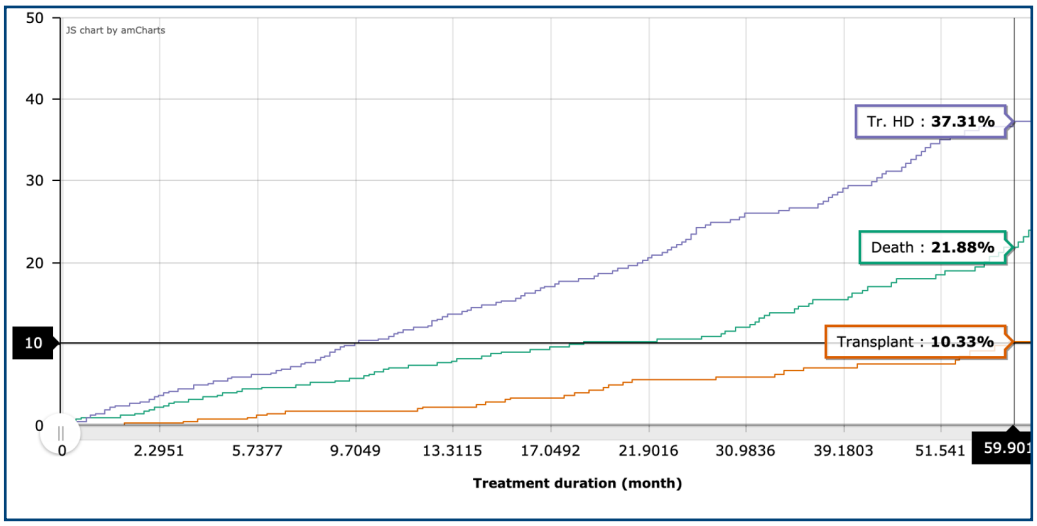

Figure 3. Cumulative incidence of events on PD in MAROCCO in incident patients from 2010 January to 2020 december, using competitive events

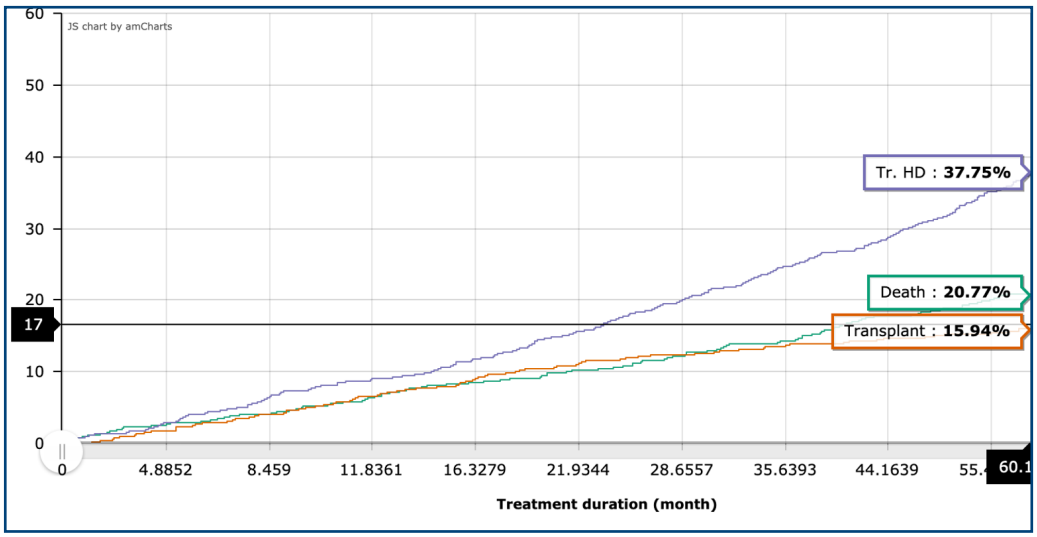

Figure 4. Cumulative incidence of events on PD in TUNISIA in incident patients from 2010 January to 2020 december, using competitive events

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⬇ *Table VI Percentage of the different causes of discontinuation of PD in 2020. This is not the percentage of discontinuation but, in the prevalent patients who left PD in 2020, the causes of discontinuation, transfer or death when they the patients stopped their treatment, died or were transferred to hemodialysis*

	France		Belgium	
Causes_of PD cessation	**Number**	**Percentages**	**Number**	**Percentage**
Transfer to hemodialysis	654	42.3%	53	33.8%
Death	633	40.9%	60	38.2%
Transplanted	240	15.5%	41	26.1%
Renal function recovery	19	1.2%	3	1.9%
Causes_of transfer to hemodialysis	**Number**	**Percentages**	**Number**	**Percentage**
Sub dialysis	200	30.6%	9	17.3%
Other causes not related to technique	93	14.2%	5	9.6%
Péritonitis	87	13.3%	19	36.5%
Other causes related to technique	67	10.3%	3	5.8%
Loss of ultrafiltration	60	9.2%	6	11.5%
Catheter dysfunction or infection	60	9.2%	4	7.7%
Psychological intolerance	30	4.6%	1	1.9%
Pleuro peritoneal communication	19	2.9%	2	3.9%
Patient's incapacity	10	1.5%		
Repeated pulmonary oedema	10	1.5%		
Malnutrition	9	1.4%	1	1.9%
COVID-19	5	0.8%		
failure of helper	3	0.5%		
Cause of death	**Number**	**Percentages**	**Number**	**Percentage**
Other causes not related to technique	380	60,00%	31	51.7%
COVID-19	94	14.9%	5	8.3%
Coronary insufficiency	91	14.4%		
Cancer	28	4.4%	5	8.3%
Malnutrition	20	3.2%	3	5.0%
Other causes related to technique	11	1.7%		
Peritonitis	9	1.4%	1	1.7%

Main apparent consequences of COVID-19 pandemic in PD patients

1 - Prevalence and mortality of COVID-19 symptomatic patients

Patient with a positive PCR without clinical symptoms were not registered as the rate of patients testing varied along the year and regions or countries. So only patients with clinical and or radiographic symptoms of COVID-19 desease were registered.

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France
Number of prevalent patients in 2020 (age>18yrs) : 4305
Number of patients who were Covid-19 Symptomatic : 196 = 4.5 % of prevalent patients
Death from COVID : 61 = 1.4 % of prevalents patients and 63.5 % of symptomatic patients

Belgium
Number of prevalent patients in 2020(age>18yrs) : 441
Number of patients who were Covid-19 Symptomatic : 12 = 2.7 % of prevalent patients
Death from COVID : 4 = 0.9 of prevalent patients and 33 % of symptomatic patients

Marocco
Number of prevalent patients in 2020 (age>18yrs) : 156
Number of patients who were Covid-19 Symptomatic : 16 = 10.2 % of prevalent patients

Death from COVID : 3 = 1.9 % of prevalent patients and 18.7 % of symptomatic patients

Tunisia
Number of prevalent patients in 2020 (age>18yrs) : 246
Number of patients who were Covid-19 Symptomatic : 13 = 5.2 % of prevalent patients
Death from COVID : 2 = 0.8 % of prevalent patients and 15.3 % of symptomatic patients

2 - Number of new PD patients during the last 4 years

The year 2020 was the year of COVID-19 pandemic. We could have expected an increase in the incidence of PD patients as home dialysis should prevent the risks of contaminations when treated in hospital. On the opposite, no increase in number of new patients is observed, there is even a trend in a drop of PD prescription, especially in Belgium (table VII). This is confirmed by the GNFB registry [15] in this issue. Causes are probably multifactorial and deserves to be studied separately.

⬇ *Table VII. Yearley peritoneal dialysis patients incidence*

Years	2017	2018	2019	2020
France	1431	1390	1487	1409
Belgium	163	151	164	114
Marocco	48	50	54	41
Switzerland	30	23	16	17
Tunisia	39	55	41	39

II - HEMODIALYSIS AT HOME

Introduction

Hemodialysis follow-up at home in the RDPLF is recent and dates back to 2012. Unlike PD, this module of the RDPLF-HDD is not exhaustive: according to the REIN registry (Cécile Couchoud, personal communication), by the end of 2020, the number of patients treated with home hemo-

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dialysis (HHD) in France was approximately 600, while only 283 (47 %) were recorded in the RDPLF database as processed by December 31. In terms of national representativeness, the following data should be interpreted with caution, particularly regarding the proportion of patients treated with low dialysate flow rate machines.

Participation of centers and number of patients included

Since 2012, eight Belgian centers have included 274 patients treated with HHD and 52 French centers have included 582 patients.

Main results

Patient profile: The age averages are identical in Belgium and France, respectively, with 49.8 and 50 years, generally 15 years lower than the ages of patients treated with PD. In both countries, the treatment is predominant in men, with identical DP and HHD in Belgium (65 and 66 years, respectively) and significantly higher HHD in France (73% of men in HHD against 65% in DP).

The percentage of diabetics in HHD is also significantly lower than that in DP: 15.5% in Belgium and 11% in France.

Dialysis modalities in HHD in the RDPLF

The number of sessions per week is summarized in Table VIII. The highest weekly frequency in France is linked to an almost exclusive use of low-speed systems (84%), while in Belgium, only 50% are on low bandwidth. The high proportion of low bandwidth in France is probably not representative of all the centers because many HHD centers in the RDPLF are new, with a few patients who only design the HHD in daily low machine debit. Older centers, which do not participate, probably have a higher proportion in conventional HHD.

⬇ *Table VIII. number of hemodialysis sessons per week in 2020 prevalent patients*

	Belgium	France
3 sessions/week	6.6%	10.3%
4 sessions/week	13.1%	5.9%
5 sessions/week	52.6%	10.1%
6 sessions/week	10.9%	59.0%
7 sessions/week	0.0%	4.6%

Causes of return to in center hemodialysis

Table IX summarizes the types vascular access used for home hemodialysis and monitoring of the dialysis session. The use of a central catheter in patients on home hemodialysis is frequent in Belgium while the majority of French centers consider it to be a contraindication; When arterio venous fistula is used, the Buttonhole puncture technique is almost exclusive in Belgium, although it only concerns 44.6% of patients in France.

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There are also significant differences concerning the monitoring of the dialysis session, which

Tableau IX : Vascular access and supervision of the dialysis session at home in Belgium and France

	Belgium	France
Vascular access		
central catheter	52.7%	6.9%
arterio-veinous fistula	47.3%	93.1%
Punction technique with fistula		
classical	8.0%	55.4%
Buttonhole	92.0%	44.6%
supervision of session done by		
patient alone	75.3%	12.0%
family	16.5%	75.2%
extra family person	0.4%	12.1%
nurse	7.8%	0.7%

is mainly carried out by the patients themselves in Belgium, whereas in France it is the family. .

PD transition to HHD

During his or her life in dialysis, a patient is introduced to several forms of treatment. Prescribed at the right time, these different treatments can optimally respond to the medical and social situation at each stage of his or her life.
We looked at the prevalent patients between 2016 and 2020 in terms of the percentages of patients treated with HHD who had experienced PD treatment:

Thirteen percent of patients treated with home hemodialysis in the RDPLF have been previously treated with peritoneal dialysis: we refer the reader to the recent article we published in the BDD about DP to HDD transitions (https://doi.org/10.25796/bdd.v3i3.58393)

This suggested that an optimized sequential approach before transplantation is possible. Thus, an initial treatment with PD makes it possible to save the vascular access if a AVF has not been performed, followed by a transplantation and, in case of transplant failure after several years, an hemodialysis at home treatement wil be easier. In addition, the availability of HHD should make it possible to avoid, in the event of imposibility to continue on PD, the obligatory passage through the center, which could always be a source of destabilization for patients attached to their home.

COVID-19 pandemic and home hemodialyis

The number of HHD patients included in the RDPLF is not yet large enough to allow a reliable analysis of the impact of the SARS-Cov2 epidemic in HHD patients. The data from REIN will provide more precise information, but it is already possible to refer to the recent article published

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in the previous issue [16]. It turns out, however, that during the year 2020 the risk of contamination seems to have been close to half in home hemodialysis compared to patients dialysed in a center

CONCLUSIONS

The annual descriptive results for PD and HHD patients in the RDPLF show numerous differences in prescribed methods, patient profiles, comorbidities, countries and regions. This emphasizes the importance of morbidity or survival studies with more complex adjustments and, in all cases, the maintenance of a critical sense of selection procedures. The availability of all techniques must allow each patient to benefit from the best treatment at the best time at each stage of his or her life.

CONFLICT OF INTEREST

The authors declare no conflict of interest for this article.

REFERENCES

1 - C Verger 1 , J-P Ryckelynck, M Duman, G Veniez, T Lobbedez, E Boulanger, O Moranne
French peritoneal dialysis registry (RDPLF): outline and main results
Kidney Int Suppl 2006 Nov;(103):S12-20. doi: 10.1038/sj.ki.5001911.

2 - Bonnal H, Bechade C, Boyer A, Lobbedez T, Guillouët S, Verger C, Ficheux M, Lanot A.
Effects of educational practices on the peritonitis risk in peritoneal dialysis: a retrospective cohort study with data from the French peritoneal Dialysis registry (RDPLF).
BMC Nephrol. 2020 May 29;21(1):205. doi: 10.1186/s12882-020-01867-w.

3 - Boyer A, Lanot A, Lambie M, Guillouet S, Lobbedez T, Béchade C.
Trends in assisted peritoneal dialysis over the last decade: a cohort study from the French Peritoneal Dialysis Registry.
Clin Kidney J. 2020 May 17;13(6):1003-1011. doi: 10.1093/ckj/sfaa051. eCollection 2020 Dec.

4 - Duquennoy S, Béchade C, Verger C, Ficheux M, Ryckelynck JP, Lobbedez T.
Is Peritonitis Risk Increased in Elderly Patients on Peritoneal Dialysis? Report from the French Language Peritoneal Dialysis Registry (RDPLF).

5 - Guillouët, Sonia. “Peritoneal Dialysis and Center Effect”.
Bull Dial Domic 2020. 3 (4), 197-211. https://doi.org/10.25796/bdd.v3i4.57763.

6 - Issad B, Griuncelli M, Verger C, Rostoker G.
What do we learn about the “Anemia Module” of the French language Peritoneal Dialysis ? Interest and Results.
Bull Dial Domic 2 (3), 143-49. https://doi.org/10.25796/bdd.v2i3.20983.

7 - Lanot A., Bechade C., Boyer A,Ficheux M,Lobbedez T.
Assisted peritoneal dialysis and transfer to haemodialysis: a cause-specific analysis with data from the RDPLF
Nephrol Dial Transplant. 2021 Jan 25;36(2):330-339.doi: 10.1093/ndt/gfaa289.

8 - Lanot A, Bechade C, Verger C, Fabre E, Vernier I, Lobbedez T.
Patterns of peritoneal dialysis catheter practices and technique failure in peritoneal dialysis: A nationwide cohort study.
PLoS One. 2019 Jun 20;14(6):e0218677. doi: 10.1371/journal.pone.0218677. eCollection 2019.

9 - Vernier I, Fabre E, Dratwa M, Verger C. Peritoneal catheter infections : data from the French language peritoneal dialysis registry (RDPLF), risk factors.
Bull Dial Domic 2019. 2 (3), 135-41. https://doi.org/10.25796/bdd.v2i3.21383.

10 - Fried L, Bernardini J, Piraino B. Charlson comorbidity index as a predictor of outcomes in incident peritoneal dialysis patients.Am J Kidney Dis. 2001 Feb;37(2):337-42.

11-Indications et non-indications de la dialyse péritonéale chronique chez l'adulte. Recommandations HAS 16 oct.2008
https://www.has-sante.fr/portail/jcms/c_702937/fr/dialyse-peritoneale-chronique-chez-l-adulte-recommandations

12- Philip Kam-Tao Li, Cheuk Chun Szeto, Beth Piraino, Javier de Arteaga, Stanley Fan, Ana E. Figueiredo, Douglas N. Fish, Eric Goffin, Yong-Lim Kim, William Salzer, Dirk G. Struijk, Isaac Teitelbaum and David W. Johnson. ISPD Peritonitis Recommenda-tions: 2016 Update on Prevention and Treatment. Perit Dial Int September-October 2016 vol. 36 no.5 481-508doi: 10.3747/pdi.2016.00078 (texte français : http://www.pdi-connect.com/content/36/5/481/suppl/DC2

13 - Variability of aseptic peritonitis rates in the RDPLF. Verger C., Veniez G., Dratwa M.
Bull Dial Domic. 2018; 1 (1) 9-13 https://doi.org/10.25796/bdd.v1i1.30

14 -Thieurmel, Benoit, and Martin Masson. 2020. "Development of an Application for Accessing and Analyzing RDPLF Data". Bull Dial Domic 3 (3), 155-68. https://doi.org/10.25796/bdd.v3i3.57943

15 - Lucas Pierre-michel J, Collart F, Baudoux T, Bonvoisin C, De Smet J-M, Devresse A, Mbaba Mena J, Radermacher L, des Grottes J-M. Has Covid-19 reduced the management of end-stage kidney disease in 2020? . Bull Dial Domic [Internet]. 2021Apr.7 [cited 2021Apr.15];4(1):53-4.
Available from: https://doi.org/10.25796/bdd.v4i1.61453

16 - Couchoud C, Verger C. Symptomatic SARS-CoV2 infections in patients treated in France by hemodialysis in an establishment, or at home or by peritoneal dialysis: Data from the REIN and RDPLF registries.. Bull Dial Domic [Internet]. 15déc.2020 [cité 15avr.2021];3(4):213-26.
Disponible sur: https://doi.org/10.25796/bdd.v3i4.59643

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Lists of RDPLF active centers in 2020:

PERITONEAL DIAYSIS

ALGERIA

Peritoneal dialysis centers included in RDPLF

Laghouat (Dr Bounnah)

BELGIUM

Peritoneal dialysis centers included in RDPLF

Ath (Dr Mat), Baudour (Dr Debelle), Bruxelles (Dr Goffin), Bruxelles - Anderlecht (Dr Nortier), Bruxelles / Jette (Dr Francois), Bruxelles 3 (Dr Dratwa), Charleroi (Dr Ho), Edegem (Dr Massart), Hornu (Dr Fomegne), Huy (Dr Bellavia), Leuven (Dr Bammens), Liege (Dr Bovy), Liege (Dr Masset), Marche En Famenne (Dr Van Overm), Mons (Dr Mestrez), Namur (Dr Tintillie), Tournai (Dr Stolear)

FRANCE METROPOLITAN AND FRENCH DEPARTMENTS OF TERRITORIES

Peritoneal dialysis centers included in RDPLF

Agen (Dr Revenco), Aix En Provence (Dr Dervaux), Aix En Provence (Dr Jaubert), Albi (Dr Duhem), Alencon (Dr Cardineau), Amiens (Dr El Esper), Angers (Dr Ilinca), Angouleme (Dr Pujo), Annonay (Dr Marc), Aressy (Dr Basse), Arras (Dr Abd-El-Faata Hamed Abo-Backt), Ars Laquenexy (Dr Mirgaine), Aubenas (Dr Buffard), Auxerre (Dr Jonon), Avignon (Dr Rosati), Avranches (Dr Duquennoy), Bastia (Dr Benzakour), Bayonne (Dr Le Guen), Beauvais (Dr Faucher), Besancon (Dr Bresson Vautrin), Bethune (Dr Cherkaoui), Blois (Dr Prat), Bois Bernard (Dr Brasseur), Bois Guillaume (Dr Edet), Bordeaux (Dr Bachelet), Bordeaux (Dr Nodimar), Bordeaux (Dr Seniuta), Boulogne Sur Mer (Dr Botte-Noel), Bourg En Bresse-Viriat (Dr Diab), Bourges (Dr Poyet), Bourgoin-Jallieu (Dr De Laforcade), Brest (Dr Chaffara), Brive (Dr Beauchamp), Cabestany (Dr Ortiz), Caen Cedex 4 (Dr Castrale), Caen Cedex 9 (Dr Lobbedez), Cahors (Dr Ged), Cambrai (Dr Jomaa), Carcassonne Cedex (Dr Amirou), Chalon Sur Saone Cedex (Dr Dubot), Chamalieres (Dr Enache), Chambery (Dr Morel), Charleville Mezieres (Dr Halin), Chartres (Dr Albert), Cholet Cedex (Dr Djema), Colmar Cedex (Dr Ismer), Compiegne (Dr Desert), Corbeil Essonnes (Dr Ziliotis), Creil (Dr Demontis), Dieppe (Dr Poussard), Dole (Dr Bemmerzou), Douai Cedex (Dr Cardon), Draguignan (Dr Ismail), Dunkerque (Dr Azar), Epagny Metz - Tessy (Dr Ducret), Epinal Cedex (Dr Sekhri), Evreux (Dr Bouffande), Flers Cedex (Dr Lanot), Foix Cedex (Dr Spataru), Gap Cedex (Dr Huet), Haguenau Cedex (Dr Kribs), Hyeres Cedex (Dr Dao), Irigny (Dr Citrarda), La Roche Sur Yon (Dr Target), La Rochelle (Dr Bachelet), La Tronche Cedex (Dr Guergour), Laon (Dr Nakhla), Le Havre (Dr Martin), Le Havre Cedex (Dr Boissinot), Le Kremlin Bicetre (Dr Beaudreui), Le Mans (Dr Crochette), Le Mans (Dr Seret),

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Le Puy En Velay (Dr Barbu), Libourne (Dr Keller), Lille (Dr Lahoche &), Lille (Dr Lessore), Limoges (Dr Dickson), Lisieux (Dr Landru), Lorient (Dr Baleynaud), Lyon (Dr Poux), Macon (Dr Virot), Marseille (Dr Bataille), Marseille (Dr Indreies), Marseille (Dr Sebahoun), Martigues (Dr Boncila), Meaux (Dr Fotsing), Melun (Dr Pourcine), Montelimar (Dr Qin Guill), Montpellier (Dr Gilbert), Montpellier (Dr Noguera G), Mulhouse (Dr Preissig), Muret (Dr Girardot), Narbonne (Dr Vernier), Neuilly Sur Seine (Dr Hufnagel), Nevers (Dr Mahieddin), Nice (Dr Florin), Nimes (Dr Lan Yue W), Niort (Dr Sechet), Nouilly (Dr Visanica), Noumea Cedex (Dr Le Mee), Ollioules (Dr Le Goff), Orleans (Dr Ganea), Paea - Polynesie Francaise (Dr Castellan), Papeete - Polynesie Francaise (Dr Garnier), Paris (Dr Abtahi), Paris (Dr Alkhayat), Paris (Dr Azeroual), Paris (Dr Roueff), Paris (Dr Touam), Perigueux (Dr Genevieve), Perpignan (Dr Parisotto), Poissy (Dr Maroun), Poitiers Cedex (Dr Bauwens), Pontoise (Dr Joseph), Quimper (Dr Rifaat), Quincy Sous Senart (Dr Rostoker), Reims Cedex (Dr Canivet), Rennes Cedex (Dr Genestier), Reze (Dr Testa), Roanne (Dr N'sembani), Rodez (Dr Thomas), Romans Sur Isere (Dr Sirajedin), Roubaix (Dr Guincestr), Saint Brieuc (Dr Le Cacheux), Saint Cyr Sur Loire (Dr Gautard), Saint Lô (Dr Zagdoun), Saint Malo (Dr Hamel), Saint Maurice Cedex (Dr Du Halgouet), Saint Nazaire (Dr Durault), Saint Pierre-La Reunion (Dr Traore), Saint Priest En Jarez (Dr Azzouz), Saint Quentin (Dr Ghemmour), Sainte Clotilde-La Reunion (Dr Aizel), Saintes (Dr Bonarek), Saran (Dr Chaghouri), Sens (Dr Hammadi), Stains (Dr Boulanger), Strasbourg (Dr Bencheikh), Strasbourg (Dr Zaloszyc), Strasbourg (Dr Imhoff), Talant (Dr Majbri), Tarbes (Dr Seriari), Toulon Cedex (Dr Knefati), Toulouse Cedex (Dr Nogier), Tours (Dr Girault-Lataste), Trappes (Dr Fournier), Trevenans (Dr Fournier), Troyes (Dr Levy), Valence (Dr Brucker), Valenciennes (Dr Maisonneu), Vandoeuvre Les Nancy (Dr Coudert-Krier), Vandoeuvre Les Nancy (Dr Magnavacca), Vannes (Dr Mandart & Durand), Verdun (Dr Bindi), Vesoul (Dr Khellaf), Vichy (Dr Aguilera)

LUXEMBOURG

Peritoneal dialysis centers included in RDPLF

Luxembourg-Kirchberg (Dr Braun)

MAROC

Peritoneal dialysis centers included in RDPLF

Casablanca (Dr Mtioui), Casablanca (Dr Soulami), Fes (Dr Rami), Oujda (Dr Bentata), Rabat (Dr Bahadi), Rabat (Dr Benamar)

SUISSE

Peritoneal dialysis centers included in RDPLF

Geneve (Dr Jotterand), Geneve (Dr Martin), Lausanne (Dr Halabi)

TUNISIE

Peritoneal dialysis centers included in RDPLF

Djerba (Dr Zammouri), Monastir (Dr Skhiri), Sfax (Dr Chaker), Sousse (Dr Guedri), Tunis (Dr Ben Abdallah), Tunis (Dr Soumaya)

HOME HEMODIALYSIS

Centres avec des patients d'hémodialyse à domicile incluse dans le RDPLF

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BELGIUM

HHD centers included in RDPLF data base in 2020

Bruxelles (Dr Dratwa), Bruxelles (Dr Goffin), Bruxelles - Anderlecht (Dr Nortier), Charleroi (Dr Ho), Liege (Dr Bovy), Liege Citadelle (Dr Masset), Marche En Famenne (Dr Van Overm), Namur (Dr Tintillie)

FRANCE

HHD centers included in RDPLF data base in 2020

Ajbi (Dr Duhem), Alencon (Dr Cardineau), Angers (Dr Ilinca), Angouleme (Dr Pujo), Avranches (Dr Duquennoy), Beauvais (Dr Faucher), Besancon (Dr Bresson-Vautrin), Bethune - Beuvry (Dr Cherkaoui), Bordeaux (Dr Pommereau), Bordeauxq (Dr Seniuta), Brest (Dr Chaffara), Caen (Dr Castrale), Caen (Dr Ficheux), Chambery (Dr Morel), Cholet (Dr Djema), Colomiers (Dr Pillet), Douai (Dr Cardon), Draguignan (Dr Ismail), Dunkerque (Dr Azar), Evreux (Dr Bouffande), Flers (Dr Ficheux), Gradignan Cedex (Dr Nodimar), Haguenau (Dr Kribs), Hyeres (Dr Van Der Pijl), La Roche Sur Yon (Dr Target), La Rochelle (Dr Bachelet), Le Havre (Dr Boissinot), Le Mans (Dr Seret), Lisieux (Dr Al Moussalla), Lyon (Dr Poux), Lyon-Galland (Dr Galland), Marseille (Dr Sebahoun), Melun (Dr Pourcine), Montpellier (Dr Gilbert), Narbonne (Dr Vernier), Niort (Dr Sechet), Orleans (Dr Ganea), Quimper (Dr Rifaat), Quincy Sous Senart (Dr Rostoker), Reims Cedex (Dr Canivet), Rennes (Dr Laruelle), Reze (Dr Testa), Saint Lô (Dr Zagdoun), Saint Nazaireq (Dr Durault), Saint Priest En Jarez (Dr Azzouz), Saint Quentin (Dr Ghemmour), Sainte Clotilde (Dr Aizel), Toursq (Dr Girault-L), Vandoeuvre Les Nancy (Dr Coudert-Krier), Vannes (Dr Mandart & Durand), Verdun (Dr Diarrasso), Vichy (Dr Aguilera), Villejuif (Dr Hebibi)

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