A Joint Vision of Peritoneal Dialysis in Italy: Census and Italian Registry of Dialysis and Transplantation

Census

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Within the sphere of replacement therapy for chronic kidney disease, peritoneal dialysis (PD) is used the least.

Over the years the Italian Registry of Dialysis and Transplantation (RIDT) has observed the progress of PD at regional and country-wide level, with the limitations which result from an incomplete response. Aimed at individual centers, the national census offers a more granular view, highlighting aspects which cannot be evaluated more generally. Integration of the information provided by the two approaches certainly allows for a more insightful assessment of the state of health of peritoneal dialysis in Italy.

In general, the situation relating to peritoneal dialysis in Italy can be said to be fairly stable in terms of incidence, with approximately 15-16% of patients starting replacement therapy, including maximums of above 20% in the North-East and Le Marche and minimums approaching 5% in some areas of the South, in line with the results of the census. Prevalence is also stable, settling at around 80 patients per year per million between 2014 and 2021 [1]. RIDT results are better than those provided by the census because the sources of the data are different and, in the case of the RIDT, the regions with more peritoneal dialysis are those willing to supply more complete data. However, focusing the attention more on trends than on estimates, it certainly cannot be said that peritoneal dialysis is a replacement modality on the brink of extinction.

Registry data show that, excluding age, primary renal diseases and comorbidities, the offering of peritoneal dialysis varies between regions, and this difference partly explains the variability in incidence, with two extreme regional situations: Veneto (low incidence and high use of peritoneal dialysis) and Liguria (high incidence and low use of peritoneal dialysis) [2]. On the other hand, there was a major increase in incidence of peritoneal dialysis between 2011 and 2016 in nearly all regions, including Liguria and with the exceptions of Veneto and Calabria [3]. In some cases this is the result of a general heightening in awareness; in others, as is very apparent in smaller regions, the increase took place within a few years of experts in PD joining the management of facilities. Where there have been precise regional guidelines, the change has not been so evident, probably because the guidelines have contributed to maintaining rather than incentivizing its development. It therefore seems that training and the views of individual specialists are more capable of changing an organization than regional exhortations. As is happening in the United States with the “Advancing American Kidney Health executive order” [4], giving targets is not enough: wider-ranging support and pathways need to be provided (viz. Australian and Canadian experiences).

In the census, variability analysis shifts from a regional level to individual centers, and this provides further details:

1. The offering of peritoneal dialysis is directly proportional to the size of a center.

2. With essentially the same number of centers per population, in the North the centers have more patients on PD.
3. The centers in the South of Italy and on the Islands that use peritoneal dialysis are on average smaller, but with a higher percentage of patients.

The census data substantially confirm registry findings, in other words that peritoneal dialysis is performed more in the North, but point 3 above is extremely interesting. Regional variability in Italy is also shown through different organizational models with the contrasting impact of public and private healthcare. In general, private healthcare is spreading throughout Italy, but as regards dialysis for the time being this phenomenon is significant above-all in some regions in the Center and the South. The finding that small public centers have a higher percentage of patients on peritoneal dialysis where dialysis is mostly private suggests that peritoneal dialysis is performed almost exclusively by the public sector. Without upsetting organizational models which are now well-established, incentivizing the strengthening and development of this process could grow PD in areas where it less well-represented as well, also because it has been seen that wherever dialysis is typically private – as in the United States – a more comprehensive reimbursement policy has led to only a modest improvement in the offering of PD [4].

The census certainly manages to provide information on the quality of treatment that the registry is not able to observe at all, above-all because the latter collects aggregate data. The only comparable data regards crude mortality rate, which is 12.1% in PD (16.9% in extracorporeal dialysis) in the 2021 registry report compared with 10.1 per 100 pts in the census, and these results are similar taking into account the different measurements (proportion in the registry, rate in the census). It should be underlined that rather than showing that PD is superior to hemodialysis in terms of survival, these data are an indication of the difference in the characteristics of the patients, as amply demonstrated in the literature and – staying in Italy – in the 1998-2015 Report of the Veneto Registry of Dialysis and Transplantation (6). While on the subject, it is interesting that the transplant rate among patients on PD is higher in small centers, which suggests that the choice is even more limited where peritoneal dialysis is performed less, making it the treatment of choice for those with fewer comorbidities.

A joint vision between PD census and RIDT makes it possible to compare different sources and validate their reliability, and to analyze different, yet integrated aspects of the epidemiology of kidney disease requiring replacement therapy in Italy while providing food for thought for the implementation of improvements in the interests of patients.

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