PLANNING FOR THE FUTURE IN THE U.S.

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Plans for the future of chronic dialysis in the United States are in a state of flux and evolution and are not as well developed as those in Britain. The Veterans Administration has the only national plan and now has several centres in operation or in various stages of activation. Grants from the Division of Chronic Diseases of the United States Public Health Service are being made to help communities set up dialysis centres provided the long term financial commitment is made by the community, a proviso which is proving a major deterrent to activation of centres in many areas. The National Institutes of Health has created a special grants division to support research dealing with the problems of dialysis technique. This new division has a most important role in the future of dialysis in the United States because if the research it is to support is at all successful this will result in enormous improvements in this mode of treatment. Despite these beginning efforts there is as yet no overall national plan with respect to the problem of chronic uraemia in the United States and even more serious problems are arising with respect to the question of who gets treatment and who does not.

On the face of it, the demonstrated need for large scale application of chronic dialysis could best be met in a country where medical care is provided by a National Health Service as say in Great Britain. It will be interesting to see over the next several years how successfully the various systems of medical care meet this urgent need.

In looking to the future of chronic dialysis or rather of the treatment of chronic uraemia by all workable means, I do not share the pessimism of the previous speakers. I am optimistic for the following reasons:

1. Chronic uraemia is now treatable and patients need no longer die from it. This fact will rapidly become an overwhelming motivation to provide these treatments to all who can benefit from them. As in the past, human ingenuity will soon succeed in finding ways to make these various forms of treatment so simple and inexpensive that the question of availability will disappear.

2. Progress in this direction which has been made during the first 6 years is impressive and all the more so when we remember that we are still using relatively crude techniques including dialysers which were devised to treat acute renal failure. I believe we are just now beginning to tap the various resources of the world scientific community which can be brought to bear on these problems. When we do—progress will be even more impressive.

3. Dr. Thaysen is rightly concerned about the important role of maintaining indefinitely the high standards of care in a chronic dialysis centre especially the problems of continued interest and high quality performance of the staff. It is my view that this problem as well as a number of the other problems of chronic dialysis including high cost and maintenance of patient morale are finding their solution in home haemodialysis. The real hope for the future as far as the widespread application of chronic dialysis is concerned lies in making home haemodialysis really workable. Shaldon has taken a big step forward in this respect.
by demonstrating the feasibility of unattended nighttime home dialysis. This technique, recently confirmed by our home haemodialysis unit in Seattle, makes it possible for the first time to provide in the home an adequate amount of dialysis without undue strain on family time commitments.

In considering the future with respect to large scale haemodialysis, it is important to remember that a dialysis centre operating as a centre has a fixed capacity and rapidly becomes full with a stable population of patients who continue in the centre year after year. This same unit operating as a training and back-up centre for patients on home dialysis, has a much larger capacity and a population of patients which is ever changing. There can be little question as to which type of centre offers the better attraction as far as professional staff is concerned and provides the kind of operation which can be rapidly expanded. Add to these facts the lower cost of home dialysis and the inherently healthier attitude of the home patient who is himself responsible for his own treatment and it becomes clear that the future success of chronic haemodialysis will depend ultimately on how successful home haemodialysis can become.

If home dialysis is to become the treatment of choice, a serious long range problem will rise with respect to the management of those patients who cannot be treated at home. Here again a possible answer comes from Shaldon’s unit in London where ‘do it yourself’ dialysis is being carried out successfully. In such a unit operations are planned so that the patients arrive at the unit on a time schedule which permits them to put each other on dialysis, help in emergencies and take each other off. All patients sleep through the night unattended by centre staff and protected by the same monitoring system used in the home. The staff of the unit is in no way involved in the dialysis procedure itself and is only responsible for maintenance and preparation of the equipment. Variations on this interesting new pattern of operation may provide a solution to the problems inherent in long term centre type dialysis.

In closing I will simply say once again that I am confident that the problems inherent in providing treatment for all patients with chronic uraemia, which loom so large to-day, will gradually disappear because of the enormous motivation that exists to find their solutions and because the resources and talents needed to solve these problems are already present in the world scientific community which is only just now beginning to turn its attention to them.
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The Chairman: Thank you, Dr. Scribner. These three papers are now open for discussion.

Funck-Brentano (Paris): La dialyse chronique, proposée il y a quelques années par le Dr. Scribner connaît aujourd'hui une diffusion très remarquable. Il est peu de pays qui ne mesure l'intérêt primordial de cette méthode nouvelle. L'emploi de 'machines artificielles' capables de faire survivre des malades urémiques jusqu'alors condamnés à frapper l'imagination populaire. Les pouvoirs publics eux-mêmes sont plus gagnés par ceux moyens et semblent prêts, dans de nombreux pays, à financer la création et le développement de centres d'hémodialyses. Nous ne pouvons que nous en féliciter.

Il nous appartient cependant, à nous médecins, de définir les grands axes du développement de cette entreprise.

Un premier impératif s'impose dans l'immédiat: la création, dans chaque pays de quelques centres pilotes de traitement des urémies chroniques. Ces centres grouperaient en une même unité architecturale le personnel médical et infirmier compétent, l'équipement et les malades.

Ce préalable une fois réalisé (et en France il n'est pas même encore amorcé), il se posera la question du développement, de l'extension de ces centres en fonction des besoins véritables de chaque pays. À la lumière de ce qu'ont écrit les orateurs durant cette session, il apparaît que nos techniques actuelles ne permettront jamais de traiter que quelques centaines de malades par an alors que plusieurs milliers pourraient théoriquement bénéficier de ce traitement. Le coût de chaque malade (je vous prie d'excuser l'introduction de ce facteur extra-médical, mais il me paraît avoir son importance) même réduit aux conditions 'économiques' préconisées par le Docteur Shaldon, demeure encore prohibitif. Traiter avec nos méthodes actuelles de dialyse toute la population de malades urémiques de chaque pays représenterait une fraction importante du budget de la Santé Publique et même une fraction non négligeable du budget de l'Etat. Aussi des hommes aussi enthousiastes mais aussi avertis que le Dr. Scribner sont-ils pris de vertige et n'osent-ils pas nous donner des chiffres précis de prospective.

C'est la raison pour laquelle il me paraît primordial qu'une fraction importante des sommes qui seront affectées au traitement des malades atteints d'urémie chronique soit réservée au développement de la recherche sur les reins artificiels. Depuis quinze ans que le Dr. Koll nous a proposé les premiers reins artificiels la technologie de ces appareils demeure fondamentalement la même. La cellophane continue d'être la seule membrane de dialyse utilisée. Les perfectionnements apportés depuis lors n'ont jamais été que des perfectionnements de détail. Il me paraît aujourd'hui indispensable de repenser complètement les problèmes des membranes de dialyse et d'une façon générale toute la technologie du rein artificiel. Cette voie seule nous permettra d'améliorer la qualité de nos appareils, d'en diminuer l'encombrement, d'en faciliter la manipulation, d'en augmenter la sécurité. Cette voie seule peut conduire à une réduction du coût de chaque dialyse et laisser espérer que, dans les centres d'hémodialyse ou sous la direction de ces centres, tous les malades atteints d'urémie chronique pourront dans chaque pays, être traités sans que l'incidence budgétaire de ce traitement soit excessif.

Je souhaiterais que les membres du panel veuillent bien commenter ce point.

Merrill (Boston): I would like very much to comment on that because I think it is a critically important point.

I must confess that as I listened to Dr. Scribner and to his discussion of the plans in the
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United States, I was struck as was he by perhaps the lack of a central plan for dialysis centres as we have seen in England. That particularly however does not concern me because I am not sure that these sums that are to be spent should be put at this moment in the dialysis centres, simply for treatment.

I concur heartily with what Dr. Funck-Brentano has said and I would like to say something in the sense of the United States’ planning in this regard. I sit on a review board which reviews grant applications for the development of new techniques, particularly membrane technology, and I must confess that I have been surprised and delighted at the response which has occurred to this.

It has come about largely, I think, because the Congress has given to the Public Health Service money, and because the Public Health Service has revised their position on what we used to think was a very nasty word, that is ‘contract research’ where you give money for research to get a job done, not just to a man, but to get a piece of equipment made, in this case artificial kidneys or membranes.

What this means is that large companies such as Dupont, and General Electric etc. are now coming to us and saying: ‘Here, let us work with you. The Public Health Service, if we put in a reasonable grant, is going to give us a reasonable return on our money and, after all, we are in business to make money’. The response in this has been amazing. The people, the engineers, the membrane chemists are interested now whereas before they were doing it simply out of the goodness of their heart and charity. Now it is a business proposition as well as a charitable one and for the good of mankind. The response has really been astounding and very gratifying.

So, I think, in that area at least, we may see in the very near future some very exciting developments which will come about by physicians working hand in hand with engineers and chemists, and I have high hopes in this particular aspect of things. I am delighted that Dr. Funck-Brentano has touched on it.

SCRIBNER (Seattle): I can also comment by simply saying that I agree both with Dr. Funck-Brentano and Dr. Merrill. Certainly the research, even to the more basic level of what it is that has been removed through that cellophane membrane should not be in any way compromised by huge expenditures to get treatment centres in operation.

The problem simply is almost a political, social, ethical one of where do you draw the line. I think almost everybody will agree that the research comes first. How much further do you want to go beyond that is the question.

The CHAIRMAN: Nous sommes arrivés, je crois, à un point crucial de la discussion: celui de savoir comment doivent être répartis les éventuels crédits qui nous seront attribués!

Si l’on peut imaginer et prévoir que la mise au point de nouvelles techniques d’hémodialyse permettront de simplifier les procédés actuels, il n’en demeure pas moins qu’une infrastructure de centres d’hémodialyse demeurerà toujours nécessaire pour commencer le traitement des malades et poursuivre celui des cas compliqués. De plus cette infrastructure apparaît indispensable pour que puisse se développer, à son niveau, la recherche appliquée et fondamentale dont se réclame le Dr. Jean Louis Funck-Brentano. Cette infrastructure est enfin indispensable—et il est urgent d’y penser—pour assurer la formation du personnel médical et infirmier.

Il ne faut donc pas à mon avis, penser purement aux recherches; la création d’un certain nombre de centres d’hémodialyse est indispensable et urgente, particulièrement ceux qui seront rattachés à des centres hospitalo-universitaires: ils seront toujours utiles et indispensables, qu’elle que soit l’orientation ultérieure prise par le traitement des insuffisances rénales chroniques: qu’elle évolue dans le sens de la dialyse à domicile, ou dans le sens de la
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transplantation; comment sera-t-il possible, sans centre d’hémodialyse, de maintenir en survie un nombre suffisant de futurs transplantés.

Aussi l’urgence me paraît double:

– créer rapidement des centres d’hémodialyse dans les centres hospitaliers universitaires et développer ceux qui existent déjà.

– annexer à ces centres des laboratoires de recherches destinés à améliorer les techniques d’hémodialyse et qui aborderont en liaison avec les scientifiques et l’industrie les problèmes de base, posés essentiellement par les membranes dialysantes.

Je crois que c’est une position que tu accepteras Funck-Brentano . . .

Funck-Brentano: Non seulement je l’accepte, mais je crois que tu mets là l’accent sur un point essentiel.

Les techniques d’hémodialyse ne peuvent se développer, pour le plus grand bien des malades, qu’à l’intérieur de structures rationnelles. Ces structures, qui existent déjà aux États-Unis et en Grande Bretagne, sont constituées par les centres d’hémodialyse. Comme toi, je souhaite ardemment que ces centres soient rapidement créés en France et dans d’autres pays.

The Chairman: Any questions from the floor? We shall now take the next point: ‘Relation between regular haemodialysis and transplantation’.

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