In-Center Dialysis Presentation by
Dr. Robert Tseng

By Marco Martin
BAAKP was pleased to welcome Dr. Robert Tseng nephrologist at West Bay Nephrology and Ricardo Sanchez de Tagle Aduna, regional director and financial manager with DaVita to our September 2011 educational forum. The program was a discussion about clinic-based hemodialysis.

Chronic Kidney Disease (CKD) is divided into five stages. The last stage is called End Stage Renal Disease (ESRD) and that is when dialysis or a transplant is needed to stay alive. At the ESRD stage of kidney disease the kidneys have lost nearly all their ability to do their job effectively.

Dr. Tseng’s presentation provided us valuable insights worthy of remembering. We received an overview of the history of hemodialysis as well as kidney disease demographics. Dr. Willem Kolff of Holland concocted a machine during World War 2 that was the genesis of current hemodialysis. In-center hemodialysis began to take shape in the 1960’s and today dialysis centers usually hold 16-34 treatment stations (which is expected to increase in due time). There may also be an isolation station in the center for patients with air-transmitted pathogens or hepatitis B.

Each center has a medical director. Each patient has attending nephrologist who gives all treatment orders and monitors all changes. Medicare requires that a MD visits patients in the unit setting on a regular basis. In a center one can also find nurses, equipment technicians, dieticians and social workers. Patient care technicians (PCT) are the biggest group serving dialysis patients (initiating, monitoring and discontinuing dialysis under RN supervision).

There has been an astounding rise in the number of people, percent wise, needing dialysis from 1979-2008. The increase is more than five-fold. Diabetes and high blood pressure are significant factors for this increase (although there are other causes of kidney disease). Taiwan and Japan have the highest incidences of kidney disease in the world as a percentage of population. There is no one agreed upon reason as to why this is. It is known that societies overeat now compared to prior time periods, and End Stage Renal Disease is on the rise worldwide.

A person normally starts dialysis when they reach stage five of chronic kidney disease. This is about when the kidneys are operating at less than 15% of normal. In the United States, 92% of people choose hemodialysis over its counter-option, peritoneal dialysis, when the time comes to choose a dialysis option. Hemodialysis does carry schedule options. They are: 3 x per week at 3-4 hours per session (traditional), 5-7 x a week at 2 hours per session (short), and 3 x a week at 6 hours per session while the person sleeps (nocturnal).

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Hemodialysis is when a machine called a dialyzer – about the size of a vertical filing cabinet – is connected to a person to act as a filter to remove unwanted waste products from the blood. The machine contains a cylindrical component filled with straw-like filaments. These are the actual bio-synthetic structures that filter the blood of waste molecules. The machine is one of science’s best attempts to replace the work of the kidneys. Being that the kidneys function continuously, a machine cannot match this performance so usually dialysis is a step towards a transplant (the best alternative statistically).

To connect a patient to a dialysis machine, the patient needs a connection from his body to the machine in the form of a flexible tube. There are three main types of access connections: Catheters, Grafts and Fistulas.

Catheters are placed into a vein in the neck, chest or groin. They can be made available for dialysis the day they are inserted. Catheters are not the first choice for dialysis access, for they are at higher risk for infection. Yet they are used in situations where a patient needs emergency dialysis (for example as the result of sudden trauma to the kidneys or the effects of a sudden onset of an autoimmune disease that has attacked the kidneys).

Grafts use an implanted artificial tube to connect the artery and vein. A graft provides better access to the person’s system than a catheter but does have the characteristic of wearing out over time. Another site can be created in this case. A graft is a suitable option for people with bad veins.

The third option is called a fistula, and the doctor seemed to smile upon discussing this particular access type. To create a fistula, an artery and vein are surgically connected in one of eleven places on the body, usually starting on a forearm. It lasts longer than the other two access methods. Currently there is discussion in the medical community about doing away with the graft since the fistula seems to have an absolute advantage over it.

Occasionally if the access method doesn’t “mature” there will be a need for a second surgery. Also there is always a varying level of risk of infection from any access type due to skin bacteria.

There was a famous study completed in 1981 whose goal was to answer the question “How much dialysis does a person need?” The guidelines that ensued are the gold standard still in use today. Among these guidelines is the KT/V measure. Recent science has demonstrated that the more one has dialysis the better the outcome. Specifically, science compared changing the three times a week dialysis schedule to a six times a week dialysis schedule (with the same number of hours of dialysis). The three times a week constraints are technical and economical, not medical. For example, the three times a week schedule takes into account the need for other patients to come in and use the dialysis machines at a dialysis center. Patient’s having dialysis six times a week showed a reduction in heart size (since large is bad). This schedule also improved patients’ chemistry (lab) reports, health grades, and an overall reduction in death rates was also noted. The future may have kidney patients using home hemodialysis machines and performing dialysis six times a week while they sleep. This would ensure enough repetitions for enough hours and at a time that would less interfere with normal life.

Diet is a critical element of treatment while on dialysis. Since people with end stage kidney disease don’t urinate much, what goes in does not come out easily. Foods that are healthy for a normal individual can be dangerous to the kidney patient. For example there is an inverse correlation between longevity and high phosphorus. Dialysis does not remove phosphorus so this must be limited through diet. The opposite is true for protein. Since dialysis removes protein quite well, patients must consume enough protein (as directed by their doctor and dietician). In fact, the dietician is responsible for helping to manage anemia, phosphorus, calcium, and dry weight in particular. Salt must always be limited for this is not altered by any stage of kidney disease.

Part of the value of a BAAKP presentation is that the public attendees can ask questions of our presenters. Dr. Tseng in fact took the time to field many questions from our attendees. On behalf of the BAAKP and the kidney patient community, I thank Dr. Tseng for allotting time to spend a productive afternoon dispensing valuable knowledge that is beneficial to us all.

To learn more about the BAAKP, our forums, our support groups and how you can attend, visit us at www.baakp.org. All events are open to the general public. As an added note, a video of the presentation can also be found on our website.

† The National Cooperative Dialysis Trial
Mila Kelman is a Licensed Clinical Social Worker who has been working with dialysis patients for the last 10 years. She responded to the BAAKP’s request for volunteers after reading in the newsletter that BAAKP has decided to start a kidney patients Support Group. Mila says “After attending the first meeting of the kidney patients support group, I felt that I can make a meaningful contribution as a professional and also benefit as an individual who’s family member was recently diagnosed with kidney disease. I like the fact that BAAKP and its Steering Committee is a strictly volunteer organization. I look forward to working with this wonderful group of people who help others while helping themselves.”

Can You Help a Fellow Kidney Patient?

We are looking for volunteer drivers to help a patient who lives in Mountain View and has insurance that only contracts with UCSF for kidney transplants. He is able to drive, but needs transportation to UCSF following kidney transplant surgery. This would be temporary until he is authorized to start driving again after surgery. Insurance doesn’t cover transportation in this case and county transport cannot be used because the route involves crossing county lines. Please contact Mila Kelman at mila@baakp.org for more information.

Thank You to Our Speakers and Sponsors!

First of all, we owe a huge thank you to the representatives from DaVita for organizing this event and securing our guest speaker. We are grateful to all of them for their donations of time to prepare and present this event. Arranged by Kurt Koptisch of DaVita, speaker Dr. Robert Tseng of West Bay Nephrology Associates in Burlingame, www.wbnephrology.com gave a very well received talk, as did Ricardo Sanchez de Tagle Aduna who spoke about DaVita’s role in dialysis. Also present to answer questions were Pamela Tseng, and Ellen Ruhl, renal dieticians. DaVita also provided an actual dialysis chair setup for all to see!

We are grateful for the door prize gifts that were donated by: JJ & F Market (520 College Avenue in Palo Alto), Baneth’s Pharmacy (900 Willow Road in Menlo Park), and Sigona’s Farmers Market (2345 Middlefield Road in Redwood City and Stanford Shopping Center in Palo Alto). Also appreciated is The Willows Market (60 Middlefield Road, Menlo Park) for donating wine gifts for the speakers. And a special thank you goes to DaVita who provided the yummy kidney-friendly refreshments prepared by Eric’s Gourmet in Menlo Park; they were fabulous! And as always a special thank you to Becky Beacom and the folks at the Palo Alto Medical Foundation, for providing the perfect venue. Without the support of these donors and our communities, the BAAKP could not continue with these first-rate presentations and our mission to educate and support Bay Area kidney patients.

This newsletter is not intended to be a substitute for advice from your medical professionals. Please consult your physician or other medical professionals about any changes or additions you make to your kidney care.

Introducing Our Newest Steering Committee Member

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Other Kidney Support Groups

| AAKP  
American Association of Kidney Patients | T.R.I.O  
|------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------------------------|
| Has many resources available both on their website & through their publications.  
3505 E. Frontage Rd.  
Suite 315  
Tampa, FL 33607  
(800) 749-2257  
www.aakp.org | Silicon Valley Chapter  
Meets on the 2nd Thursday of each month at 7:30 pm. El Camino Hospital, Conference Room G, 2500 Grant Road, Mountain View, CA 94040  
www.bayareatrio.org  
(408) 353-2169 | For general PKD information, call:  
1-800-PKDCURE  
For information about local groups, go to:  
www.pkdcure.org/  
sanfranciscochapter  
For chapter specific questions, please send email to:  
sanfranciscochapter@pkdcure.org | Has many resources available and sponsors many events.  
For more info:  
www.kidneyca.org  
(415) 543-3303  
National Kidney Foundation  
www.kidney.org |
The California Transplant Donor Network to Speak January 2012

On Sunday, January 22, 2012 the California Transplant Donor Network (CTDN), located in Oakland, will disclose how the kidney allocation system works. Is there really a “List” and where am I on it? As part of UNOS (United Network for Organ Sharing) where does CTDN fit in?

These and other questions will be answered by our guest speakers from CTDN who will discuss the numerous steps involved in kidney transplant prior to surgery. From the selection of the donor to the harvesting of the kidney to the selection of a recipient, we look forward to learning what leads up to that call in the middle of the night! CTDN helps 175 hospitals in 41 Northern and Central California and Northern Nevada counties offer the option of organ and tissue donation to families whose loved ones have died, coordinates deceased organ recovery and placement, and provides public education.

This FREE event will take place at the Palo Alto Medical Foundation, 795 El Camino Real, 3rd floor Hearst Conference Center, Palo Alto, CA 94301 on Sunday, January 22, 2012 from 1 PM to 4 PM. There will be ample time for audience questions, social interaction and patient support. Kidney-friendly refreshments will be served! To reserve your seat, please email us at info@BAAKP.org or call us at (650) 323-2225.